A TALMUDIC PERSPECTIVE ON OLD TESTAMENT DISEASES, PHYSICIANS AND REMEDIES

by

GILLIAN PATRICIA WILLIAMS

submitted in fulfilment of the requirements for the degree of

MASTER OF ARTS

in the subject

BIBLICAL ARCHAEOLOGY

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF M LE ROUX

NOVEMBER 2009
DECLARATION

I declare that ‘A TALMUDIC PERSPECTIVE ON OLD TESTAMENT DISEASES, PHYSICIANS AND REMEDIES’ is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

................................................ ................................................
SIGNATURE                          DATE
(MS G P WILLIAMS)
ACKNOWLEDGEMENTS

I would like to thank the University of South Africa for the study bursary that enabled me to write this dissertation.

I am grateful to Professor Magdel le Roux who supervised this dissertation. She is a constant source of encouragement with her advice and an example to follow with her very hard work and dedication. Her patience is legend!

I wish to thank Kathleen Airey, now resident in London, my dear friend and erstwhile colleague of many eventful years at the Trade Marks Office, Pretoria. Despite her present busy work schedule, she has been most supportive and gave of her precious time to check one of the longest sections of this dissertation.

I want to thank Yvonne Lewin of Cape Town who very kindly offered her time and patience in checking several shorter sections of this work.

A very heartfelt thanks to Anthea Harris of Cape Town, who when hearing of this dissertation, kindly offered to lend me her precious copy of Berkow & Talbott’s The Merck Manual of Diagnosis and Therapy, which deepened my understanding of the diseases documented in this work.

I would like to express my thanks to my two special ladies, Elizabeth Maxama and her daughter, Jacqueline Rasmeni. With their characteristic unfailing cheerfulness and smiling faces, they freed me from many household chores. Without their help I would not have successfully completed this dissertation on schedule.
DEDICATION

I wish to dedicate this work to my family for their love, help and patience.

Firstly, my Cape Town family:

To my dearest husband, Malcolm, thank you for your unfailing support and willingness to assist, no matter what time of the day or night it was! Your knowledge of the Torah and Talmud is remarkable!

To my dearest son, Alexander, thank you for your constant and positive enquiries as to the progress of this work and for your silence when you correctly perceived there were glitches and frustration because progress was slow! Also for finding innovative ways to speed up the process!

Secondly, my Pretoria family:

To my dearest son, Sean and daughter-in-law, Yolande, my very sincere thanks and appreciation to you both for your hospitality during the many times we came to stay with you in Garsfontein so that I could attend to various aspects of this dissertation and for the use of your special car that facilitated our transport, I am most grateful!
The ancient Near Eastern cultures and the Babylonian Talmud are examined to ascertain whether they can elucidate Biblical descriptions of disease (many of which are mentioned by the Talmudic rabbis in the course of their discussions) to render a better understanding of the Biblical text.

Archaeological evidence can verify the existence of tuberculosis, gout and leprosy in Old Testament times because these diseases leave specific lesions on ancient bones.

The ancient Israelites used amulets and incantations to ward off or treat illnesses despite Biblical prohibitions. This use was echoed in both the ancient Near Eastern cultures and in Talmudic times because some rabbis realised their effectiveness, but the majority doubted their usefulness. Idolatry, necromancy and sorcery were practiced and demons played a role in illness. Physicians, healers, herbal remedies, therapies and folk medicine in Biblical and Talmudic times are investigated.

**Key terms:**

Ancient Near East, Old Testament diseases, Talmudic medicine, herbal remedies, archaeology, leprosy, gout, tuberculosis, ancient Israel, amulets, incantations, demons.
### TIMELINE

<table>
<thead>
<tr>
<th>Archaeological Periods</th>
<th>Approximate Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stone Age</td>
<td>-10000 – 4000 BCE</td>
</tr>
<tr>
<td>Chalcolithic Age</td>
<td>4000 – 3150 BCE</td>
</tr>
<tr>
<td>Early Bronze Age</td>
<td>3150 – 2200 BCE</td>
</tr>
<tr>
<td>Middle Bronze Age</td>
<td>2200 – 1550 BCE</td>
</tr>
<tr>
<td>Late Bronze Age</td>
<td>1550 – 1200 BCE</td>
</tr>
<tr>
<td>Iron Age I</td>
<td>1200 – 1000 BCE</td>
</tr>
<tr>
<td>Iron Age II</td>
<td>1000 – 800 BCE</td>
</tr>
<tr>
<td>Iron Age III</td>
<td>800 – 587 BCE</td>
</tr>
<tr>
<td>Babylonian/Persian</td>
<td>587 – 330 BCE</td>
</tr>
<tr>
<td>Hellenistic</td>
<td>330 – 63 BCE</td>
</tr>
<tr>
<td>Roman</td>
<td>63 BCE – 324 CE</td>
</tr>
<tr>
<td>Byzantine</td>
<td>324 – 636 CE</td>
</tr>
<tr>
<td>Islamic</td>
<td>636 CE -</td>
</tr>
</tbody>
</table>

---

1 This timeline was adapted from Bimson et al (1994:24).
TIME CHART OF BIBLICAL KINGS THAT APPEAR IN THIS DISSERTATION

THE UNITED MONARCHY

<table>
<thead>
<tr>
<th>Approximate Year</th>
<th>Monarch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1050 – 1011 BCE</td>
<td>Saul</td>
</tr>
<tr>
<td>1011 – 971 BCE</td>
<td>David</td>
</tr>
<tr>
<td>971 – 931 BCE</td>
<td>Solomon</td>
</tr>
</tbody>
</table>

THE DIVIDED MONARCHY FEATURING THE JUDAH KINGS

<table>
<thead>
<tr>
<th>Approximate Year</th>
<th>Monarch</th>
</tr>
</thead>
<tbody>
<tr>
<td>911 – 870 BCE</td>
<td>Asa</td>
</tr>
<tr>
<td>870 – 848 BCE</td>
<td>Jehoshaphat (co-regent 873 BCE)</td>
</tr>
<tr>
<td>848 – 841 BCE</td>
<td>Jehoram (co-regent from 853 BCE)</td>
</tr>
<tr>
<td>841 BCE</td>
<td>Ahaziah</td>
</tr>
<tr>
<td>841 – 835 BCE</td>
<td>Athaliah</td>
</tr>
<tr>
<td>835 – 796 BCE</td>
<td>Joash</td>
</tr>
<tr>
<td>796 – 767 BCE</td>
<td>Amaziah</td>
</tr>
<tr>
<td>767 – 740 BCE</td>
<td>Azariah (Uzziah; co-regent from 791 BCE)</td>
</tr>
<tr>
<td>740 – 732 BCE</td>
<td>Jotham (Co-regent from 750 BCE)</td>
</tr>
<tr>
<td>732 – 716 BCE</td>
<td>Ahaz (co-regent from 744 BCE; senior partner from 750 BCE)</td>
</tr>
<tr>
<td>716 – 687 BCE</td>
<td>Hezekiah</td>
</tr>
</tbody>
</table>

2 This time chart is approximate, was adapted from Bimson et al (1994:117-8) and the dates may vary slightly from those appearing in the body of the text.
LIST OF PHOTOGRAPHS

Figure 1: The seal of the Sumerian physician Ur-lugal-edinna, who is symbolised by the forceps shown on the right hand of the figure (Kinnier Wilson 1982:348).

Figure 2: Mandrake fruit being offered at a banquet (Reeves 2001:56).
Figure 3: Wall relief depicting surgical instruments from the temple at Kom Ombo, Egypt (Reeves 2001:27).

Figure 4: Circumcision ceremony depicted on the wall relief from the mastaba of Ankh-ma-Hor (Reeves 2001:30).
Figure 5: Wooden statue of a man servant. His duties could pre-dispose him to later suffering from osteo-arthritis (Reeves 2001:40).

Figure 6: Nesperahan’s mummy showing the angulation of the spine due to collapse of the spinal vertebrae and the psoas abscess in the lower right abdomen (Nunn 1996:74).
Figure 7: Asklepios (on the left) is depicted with a sacred snake and Hygieia (on the right) lovingly feeds a morsel to her pet snake (Jackson 1988:171).

Figure 8: Healing in the abaton – Asklepios curing a sleeping patient, while Hygieia stands ready to assist him (Jackson 1988:144).
Figure 9: A Greek doctor at work preparing his patient for blood-letting. (The bleeding cups hang on the wall). His dwarf assistant shows the patients to their places (Jackson 1988:67).

Figure 10: A marble relief showing a folding-case of surgical instruments. Five scalpels are shown with bleeding cups on either side of the case (Jackson 1988:115).
Figure 11: A wounded soldier is depicted having an arrowhead removed from his thigh by a doctor (Jackson 1988:127).

Figure 12: The depiction of a woman doctor (*medica*) appearing on her tombstone (Jackson 1988:87).
Figure 13: Roman surgical instruments, possibly of the same type as those used by the doctor (*medicus*), who consulted from home. These were discovered in the House of the Surgeon at Pompeii (Jackson 1988:114).

Figure 14: The midwife, Scribonia Attice, and her assistant help a labouring woman seated on a birthing chair (Jackson 1988:99).
Figure 15: The right foot of a gout sufferer depicting the characteristic destruction of the joint surfaces, especially that of the big toe (Jackson 1988:179).

Figure 16: A bubo of bubonic plague appears beneath the arm of this patient (Tenney 1963:219).
Figure 17: A Guinea worm (*Dracontiasis*) is visible beneath the skin surface of the upper arm (Tenney 1963:220).

Figure 18: X-ray showing a large osteoma situated on the right side of an adult skull, excavated at a site near Lima, Peru (Ortner & Putschar 1981:379).
Figure 19: X-ray showing the button tumour, situated on the frontal bone of a female skull excavated from Pachacamac, Peru (Ortner & Putschar 1981:379).

Figure 20: Figurine of a negro man demonstrating the effects of Pott’s disease. His exhaustion is painfully clear and the ‘pigeon chest’ is a result of the illness (Jackson 1988:182).
Some skin diseases are very similar to leprosy in appearance

Figure 21: A patch of typical psoriasis (Marks 1981:13)

Figure 22: Borderline leprosy (Jacyk 1986:17)
A skin abnormality can be confused with leprosy

Figure 23: Birth mark (Hypopigmented naevus; Jacyk 1986:41)

Figure 24: Tuberculoid leprosy (Jacyk 1986:2)
Infectious diseases of the skin can also be confused with leprosy

Figure 25: Ringworm (*Tinea capitis*) of the face (Jacyk 1986:43)

Figure 26: Borderline leprosy (Jacyk 1986:15)
Different kinds of leprosy contrasted with psoriasis

Figure 27: Tuberculoid leprosy (Jacyk 1986:3) Like King Uzziah, this patient’s leprosy first manifested on his forehead (2 Chr 26:19-20).

Figure 28: A patient with lepromatous leprosy depicting the loss of her eyebrows and eyelashes, characteristic of the illness (Jayck 1986:28).
Figure 29: A severe case of psoriasis on the hands—possibly reminiscent of Miriam being ‘as white as snow’ (Nm 12:10; Marks 1981:17).

Figure 30: A case of borderline leprosy where thin, almost white scaling of the lesions on the forearm can be seen (Jayck 1986:16).
# TABLE OF CONTENTS

TITLE PAGE  
DECLARATION  
ACKNOWLEDGEMENTS  
DEDICATION  
SUMMARY AND KEY WORDS  
TIMELINE  
TIME CHART OF BIBLICAL KINGS THAT APPEAR IN THIS DISSERTATION  
LIST OF PHOTOGRAPHS  

## CHAPTER ONE  
INTRODUCTION  

1.1 BACKGROUND .................................................................................. 1  
1.2 HYPOTHESIS AND AIM .................................................................... 4  
1.3 METHODOLOGICAL CONSIDERATIONS ........................................ 5  
1.4 SOURCES ......................................................................................... 8  

## CHAPTER TWO  
MEDICINE AND DISEASE IN THE ANCIENT NEAR EAST  

2.1 INTRODUCTION ................................................................................ 11  
2.2 MESOPOTAMIAN MEDICINE AND DISEASES .................................. 12  
2.2.1 Introduction .................................................................................. 12  
2.2.2 Magic and medicine ...................................................................... 13  
2.2.3 The Medical texts and letters ........................................................ 14  
2.2.4 Plants and other substances used by the ancient  
Mesopotamian healers ........................................................................ 16  
2.2.4.1 Garlic (*Allium sativum*) ........................................................... 18  
2.2.4.2 Greek juniper (*Juniperus phoenica*) ........................................ 18
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.4.3</td>
<td>Leeks (<em>Allium porum</em>)</td>
<td>18</td>
</tr>
<tr>
<td>2.2.4.4</td>
<td>Onions (<em>Allium cepa</em>)</td>
<td>18</td>
</tr>
<tr>
<td>2.2.4.5</td>
<td>Pomegranate root (<em>Punica granatum</em>)</td>
<td>19</td>
</tr>
<tr>
<td>2.2.4.6</td>
<td>Poppy seeds (<em>Papaver somniferum</em>)</td>
<td>19</td>
</tr>
<tr>
<td>2.2.4.7</td>
<td>Sulphur &amp; Solanum fruit</td>
<td>19</td>
</tr>
<tr>
<td>2.2.5</td>
<td>Mesopotamian physicians</td>
<td>20</td>
</tr>
<tr>
<td>2.2.5.1</td>
<td>Education and medical training</td>
<td>20</td>
</tr>
<tr>
<td>2.2.5.2</td>
<td>The duties and fees of a physician</td>
<td>21</td>
</tr>
<tr>
<td>2.2.5.3</td>
<td>The status of a physician</td>
<td>22</td>
</tr>
<tr>
<td>2.2.5.4</td>
<td>A physician’s seal</td>
<td>22</td>
</tr>
<tr>
<td>2.2.6</td>
<td>The Mesopotamian midwife</td>
<td>22</td>
</tr>
<tr>
<td>2.2.7</td>
<td>Specific diseases</td>
<td>22</td>
</tr>
<tr>
<td>2.2.7.1</td>
<td>Epilepsy</td>
<td>23</td>
</tr>
<tr>
<td>2.2.7.2</td>
<td>Parasites</td>
<td>23</td>
</tr>
<tr>
<td>2.2.7.2(a)</td>
<td>Bilharziasis (<em>Schistomiasis</em>)</td>
<td>23</td>
</tr>
<tr>
<td>2.2.7.2(b)</td>
<td>Roundworms (<em>Ascariasis</em>)</td>
<td>24</td>
</tr>
<tr>
<td>2.2.7.2(c)</td>
<td>Tapeworm (<em>Taenia echinococcus</em>)</td>
<td>25</td>
</tr>
<tr>
<td>2.2.7.3</td>
<td>Lung disease – tuberculosis</td>
<td>25</td>
</tr>
<tr>
<td>2.2.7.4</td>
<td>Leprosy</td>
<td>26</td>
</tr>
<tr>
<td>2.2.8</td>
<td>Conclusion</td>
<td>27</td>
</tr>
<tr>
<td>2.3</td>
<td>EGYPTIAN MEDICINE AND DISEASES</td>
<td></td>
</tr>
<tr>
<td>2.3.1</td>
<td>Introduction</td>
<td>28</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Magic and medicine</td>
<td>28</td>
</tr>
<tr>
<td>2.3.3</td>
<td>Some important medical papyri</td>
<td>31</td>
</tr>
<tr>
<td>2.3.3.1</td>
<td>The Ebers papyrus</td>
<td>31</td>
</tr>
<tr>
<td>2.3.3.2</td>
<td>The Edwin Smith papyrus</td>
<td>32</td>
</tr>
<tr>
<td>2.3.3.3</td>
<td>The Kahun papyrus</td>
<td>32</td>
</tr>
<tr>
<td>2.3.3.4</td>
<td>The Berlin papyrus</td>
<td>32</td>
</tr>
<tr>
<td>2.3.3.5</td>
<td>The Hearst and Brooklyn Museum papyri</td>
<td>33</td>
</tr>
<tr>
<td>2.3.4</td>
<td>Healing temples and the ‘House of Life’</td>
<td>33</td>
</tr>
</tbody>
</table>
2.3.5  Pharmacists, prescriptions and drugs ............................................... 34
2.3.5.1  Mandrake (Mandragora officinarum) ................................................. 38
2.3.5.2  Fir tree resin (Albies cilicia) .............................................................. 38
2.3.5.3  The aloe plant (Aloe vera) and cinnamon (Cinnamonium zeylanicum) ................................................................................................. 38
2.3.5.4  Fleabane (Inula graveolens) and sulphur wort (Peucedanum galbaniflora) ......................................................................................... 39
2.3.5.5  Pomegranate root (Punica granatum) .................................................. 39
2.3.5.6  Poppy seeds (Papaver somniferum) ..................................................... 39
2.3.5.7  Copper .................................................................................................. 39
2.3.5.8  Honey ................................................................................................. 40
2.3.5.9  Beer ..................................................................................................... 40
2.3.6  Physicians .............................................................................................. 40
2.3.6.1  The training of physicians ................................................................. 41
2.3.6.2  The duties of a physician ................................................................. 42
2.3.6.3  The status of a physician ................................................................ 43
2.3.6.4  The physician’s fees ........................................................................ 44
2.3.6.5  The physician’s liability ................................................................... 44
2.3.7  Midwives and nurses .......................................................................... 44
2.3.8  Circumcisers ........................................................................................ 45
2.3.9  Physiotherapists .................................................................................. 45
2.3.10 Specific diseases ............................................................................... 46
2.3.10.1 Arthritis and osteo-arthritis .............................................................. 46
2.3.10.2 Human parasites ............................................................................. 46
2.3.10.2(a) Bilharziasis (Schistosomiasis) ..................................................... 47
2.3.10.2(b) Other intestinal parasites ............................................................ 47
2.3.10.3 Snake bite ....................................................................................... 48
2.3.10.4 Tuberculosis ................................................................................... 49
2.3.10.5 Leprosy (Hansen’s disease) ............................................................. 50
2.3.11 Conclusion .......................................................................................... 51
2.4 GREEK MEDICINE AND DISEASES

2.4.1 Introduction ................................................................................................................................. 51
2.4.2 Magic, healing and the supernatural hero ................................................................................ 52
2.4.3 Medical texts ................................................................................................................................. 55
2.4.4 The healing temples of Asklepios ............................................................................................. 57
2.4.5 Hellenistic botanists ................................................................................................................... 60
2.4.6 Materia medica ............................................................................................................................. 61
  2.4.6.1 Melilot (Sweet clover/Melilotus officinalis) ......................................................................... 61
  2.4.6.2 Opium poppy (Papaver somniferum) .................................................................................. 61
  2.4.6.3 Common polypody (Polypodium vulgare) ........................................................................... 61
  2.4.6.4 Dittany (Origanum dictamus) ............................................................................................ 61
  2.4.6.5 Greek rue (Anethum graveolens) ......................................................................................... 62
2.4.7 Physicians ..................................................................................................................................... 62
  2.4.7.1 The training of physicians ................................................................................................. 62
  2.4.7.2 The duties of physicians ....................................................................................................... 63
  2.4.7.3 The physician’s fees ............................................................................................................. 64
  2.4.7.4 A physician’s liability ............................................................................................................ 64
  2.4.7.5 Surgery and cautery ............................................................................................................. 65
  2.4.7.6 Doctors and dissection ......................................................................................................... 65
2.4.8 Midwives ...................................................................................................................................... 66
2.4.9 Blood-letting ............................................................................................................................... 66
2.4.10 Specific diseases ......................................................................................................................... 67
  2.4.10.1 Gout, arthritis and osteo-arthritis ...................................................................................... 67
  2.4.10.2 Epilepsy ............................................................................................................................... 68
  2.4.10.3 Parasitic infestations .......................................................................................................... 68
  2.4.10.4 Snakebite ............................................................................................................................. 69
  2.4.10.5 Tuberculosis ......................................................................................................................... 69
  2.4.10.6 Leprosy ................................................................................................................................ 70
2.4.11 Conclusion .................................................................................................................................. 71
CHAPTER THREE
PHYSICIANS, MIDWIVES, BLOOD-LETTERS AND CIRCUMCISERS IN THE
BIBLE AND TALMUD

3.1 INTRODUCTION ............................................................................. 91
3.2 PHYSICIANS ................................................................................... 93
  3.2.1 Physicians in Biblical times ........................................................... 93
  3.2.2 Magic and medicine in the Bible and Talmud............................... 96
  3.2.2 Physicians in the Talmud .............................................................. 99
3.3 EDUCATION AND MEDICAL TRAINING IN THE BIBLE
   AND TALMUD.................................................................................. 101
3.4 DUTIES OF A PHYSICIAN IN THE BIBLE AND TALMUD .............. 102
  3.4.1 Archaeological evidence ............................................................... 104
3.5 MILITARY PHYSICIANS.................................................................. 105
3.6 PHYSICIAN’S FEES IN THE BIBLE AND TALMUD ....................... 106
3.7 PHYSICIAN’S RESPONSIBILITY AND LIABILITY IN THE BIBLE
   AND TALMUD.................................................................................. 106
3.8 PROMINENT TALMUDIC PHYSICIANS........................................ 107
  3.8.1 Asaph Ha-Rofe ............................................................................. 107
  3.8.2 Mar Samuel................................................................................... 108
3.9 BLOOD-LETTERS IN THE BIBLE AND TALMUD ......................... 110
  3.9.1 Archaeological evidence ............................................................... 113
3.10 CIRCUMCISERS IN THE BIBLE AND TALMUD ......................... 114
  3.10.1 Archaeological evidence ............................................................... 120
3.11 MIDWIVES IN THE BIBLE AND TALMUD................................. 121
  3.11.1 Archaeological evidence ............................................................... 123
3.12 CONCLUSION............................................................................... 123
CHAPTER FOUR
BIBLICAL DISEASES IN THE LIGHT OF TALMUDIC PERSPECTIVES

4.1 INTRODUCTION ................................................................. 126
4.2 KING ASA’S ILLNESS ......................................................... 127
4.2.1 Introduction ............................................................... 127
4.2.2 Background information on Asa ................................. 128
4.2.3 Biblical references to Asa’s disease ......................... 130
4.2.4 Treatments in Biblical times ................................. 132
4.2.5 Archaeological evidence ....................................... 134
4.2.6 Talmudic perspectives on gout and arthritis ........ 135
4.2.7 Treatments from the Talmud ............................ 136
4.2.8 Dioscorides’ and Pliny the Elder’s treatments .... 138
4.2.9 Conclusion ............................................................. 139

4.3 THE ILLNESS OF KING HEZEKIAH ............................ 140
4.3.1 Introduction ............................................................. 140
4.3.2 Background information ....................................... 141
4.3.3 Biblical references to his illness ...................... 142
4.3.4 Treatments in Biblical times .......................... 149
4.3.5 Talmudic perspectives ............................. 151
4.3.6 Treatments in Talmudic times .................... 152
4.3.7 Conclusion ............................................................. 155

4.4 PARASITIC WORM INFESTATION AND THE ILLNESS OF KING
JEHORAM ................................................................. 155
4.4.1 Introduction ............................................................. 156
4.4.2 Background to the illness of King Jehoram ........... 157
4.4.3 Biblical references to Jehoram’s illness .......... 158
4.4.4 Remedies for parasites in Biblical times .......... 161
4.4.5 Archaeological evidence for parasites ........................................ 163
4.4.6 Talmudic perspectives on Jehoram, intestinal worms
and their causes........................................................................... 164
4.4.7 Remedies used for parasites in Talmudic times..................... 165
4.4.8 Conclusion ............................................................................ 166

4.5 SNAKE BITE .............................................................................. 167
4.5.1 Introduction ........................................................................... 167
4.5.2 Biblical viewpoints on snakes in general............................. 169
4.5.3 Moses and the Nehushtan – The Bronze or Copper Serpent ...... 171
4.5.4 Treatments for snake bite in Biblical times........................... 174
4.5.5 Archaeological evidence ....................................................... 177
4.5.6 Talmudic perspectives on the Nehushtan, snakes
and snake bite............................................................................ 178
4.5.7 Remedies for snake venom and snake bite ....................... 182
4.5.7.1 Talmudic remedies............................................................ 182
4.5.7.2 Dioscorides’ remedies...................................................... 183
4.5.8 Conclusion ............................................................................ 184

4.6 KING SAUL’S MYSTERIOUS MALADY ................................. 185
4.6.1 Introduction and background to Saul’s mental state ............. 185
4.6.2 Saul’s depression as a result of posttraumatic stress
disorder ....................................................................................... 190
4.6.3 The enemy herem principle.................................................. 193
4.6.4 Biblical viewpoints on the life of Saul ................................. 194
4.6.5 Treatments for depression and epilepsy during Biblical
times .......................................................................................... 200
4.6.6 Archaeological evidence of skull/brain tumours that could
cause epilepsy ......................................................................... 203
4.6.7 Talmudic perspectives on Saul, his possible depression
and epilepsy............................................................................. 204
4.6.8 Treatments in Talmudic times ....................................................... 206
4.6.9 Conclusion .................................................................................... 209

4.7 TUBERCULOSIS AND FEVERS ..................................................... 211
4.7.1 Introduction ................................................................................... 211
4.7.2 Background information on tuberculosis ....................................... 212
4.7.3 Biblical references to tuberculosis and fevers ............................... 214
4.7.4 Archaeological evidence for tuberculosis ..................................... 217
4.7.5 Treatments in Biblical times for tuberculosis and fevers ................. 220
4.7.6 Talmudic perspectives on tuberculosis and fevers ......................... 223
4.7.7 Treatments for fever and tuberculosis in Talmudic times ................. 226
4.7.7.1 Remedies from the Talmud ........................................................ 226
4.7.7.2 Pliny’s remedies ......................................................................... 229
4.7.7.3 Dioscorides’ remedies ................................................................. 230
4.7.8 Conclusion .................................................................................... 231

4.8 'LEPROSY' – FIVE BIBLICAL CASE STUDIES ............................... 233
4.8.1 Introduction ................................................................................... 233
4.8.2 The stigma of tzara’at ................................................................. 238
4.8.3 Biblical viewpoints of leprosy (tzara’at) in Leviticus
  13 and 14 ...................................................................................... 241
4.8.4 Biblical leprosy (tzara’at) – Five case studies ................................. 246
4.8.4.1 Miriam ........................................................................................ 247
4.8.4.2 Uzziah King of Judah ................................................................ 252
4.8.4.3 Naaman ..................................................................................... 258
4.8.4.4 Gehazi ........................................................................................ 262
4.8.4.5 The four leper heroes of Samaria .............................................. 264
4.8.5 Archaeological evidence ............................................................... 266
4.8.6 Biblical and ancient Near Eastern treatments
and remedies ........................................................................................................ 270
4.8.7 Talmudic perspectives ........................................................................ 273
4.8.8 Treatments in Talmudic times ..................................................... 277
4.8.9 Conclusion ................................................................................... 280

CHAPTER FIVE
CONCLUSION

5.1 TALMUDIC AND ANCIENT NEAR EASTERN PERSPECTIVES ON OLD TESTAMENT DISEASES, PHYSICIANS AND REMEDIES ........................................................................................................ 283
5.1.1 Physicians ..................................................................................... 284
5.1.2 Blood-letters .................................................................................. 288
5.1.3 Circumcisers ................................................................................. 289
5.1.4 Midwives ....................................................................................... 291
5.1.5 King Asa’s illness .......................................................................... 292
5.1.6 King Hezekiah’s illness .................................................................. 294
5.1.7 Parasites and the illness of King Jehoram .................................... 295
5.1.8 Snake bite ..................................................................................... 296
5.1.9 King Saul’s mysterious malady ..................................................... 302
5.1.10 Tuberculosis and fevers .............................................................. 300
5.1.11 ‘Leprosy’ ...................................................................................... 302
5.1.12 Materia medica of the Bible, Talmud and ancient Near East ........................................................................ 306
5.1.12.1 Cedar wood (Cedrus libani) ..................................................... 306
5.1.12.2 Cumin (Cuminum cyminum) .................................................... 306
5.1.12.3 Date palm (Phoenix dactylifera) ............................................... 307
5.1.12.4 Fig (Ficus carica)...................................................................... 307
5.1.12.5 Garlic (Allium sativum) .......................................................... 307
5.1.12.6 Greek juniper (Juniperus phoenica) ........................................ 308
5.1.12.7 Mandrake (Mandragora officinarum) ....................................... 308
5.1.12.8 Myrtle (Myrtus communis) ....................................................... 309
5.1.12.9 Olive oil (Olea europaea) ................................................................................. 309
5.1.12.10 Onion (Allium cepa) ....................................................................................... 309
5.1.12.11 Pomegranate (Punica granatum) ............................................................... 310
5.1.12.12 Rose (Rosa canina) ....................................................................................... 310
5.1.12.13 Willow (Salix safsaf) .................................................................................... 311

APPENDICES
A BIOGRAPHIES OF SOME IMPORTANT TALMUDIC RABBIS .......... 312
B MEANINGS OF TALMUDIC TRACTATES USED IN THIS DISSERTATION ................................................................. 320
C A SHORT EXPLANATION OF THE TALMUD AND MIDRASH........ 331
D HERBAL MEDICINE AND HOMOEOPATHY ............................................... 335

ABBREVIATIONS ............................................................................................................ 340
BIBLIOGRAPHY ............................................................................................................. 341
CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND

The focus of this study is the Hebrew Bible (Old Testament). Biblical descriptions of disease are ambiguous which renders the diagnosis of an illness difficult. The reason for this is because the Bible is not a medical textbook and the ancient view was that healing was God-given. (In similar vein, the peoples of the ancient Near East also believed that illness arose from a supernatural source.) As a result of this the Biblical authors intimate that it was almost a waste of time to consult a medical practitioner. The Talmud indicates the opposite – physicians fulfilled a vital healing role in society. There are many ambiguities in Biblical text which commentators have tried to interpret and explain. The Talmud might have something to offer in this regard since it is the earliest Jewish interpretation of the Hebrew Bible. The Talmudic rabbis discussed the Biblical text in great depth and where there was a difference of opinion, the majority decision prevailed. In this way many Biblical ambiguities were elucidated, although it is fair to say that some may have remained unclear.

The Talmud is a written commentary on the Torah by the rabbis of Talmudic times\(^1\), who discussed and debated many aspects of the Biblical passages (including medical matters), to provide an explanation on aspects of the text that they found ambiguous, troublesome or difficult to interpret. The Talmud is the result of rabbinical thought, opinions and debate. These varied depending on whether the rabbi was a mystic, a more rational thinker or merely superstitious. Judaism is based on rabbinic interpretation of the Biblical text. Without the Talmud to elucidate the Bible, modern Judaism would be very different to what it is today.

---

\(^1\) Approximately 200 CE – 500 CE (Berman 1989:11).
There are two *Talmudim* (Talmuds): The Jerusalem Talmud (*Yerushalmi*) and the Babylonian Talmud (*Bavli*). Armstrong states that the first one was completed in the 5th century CE in Palestine and the second in the 6th century CE in Babylonia (2007:97). Armstrong claims that the Babylonian Talmud is more prominent since Babylonia eventually replaced Jerusalem as the intellectual hub of the Jewish world (2007:98) although the rabbis of Jerusalem and Babylon frequently exchanged views and ideas (2007:97).

A researcher not schooled in the intricacies of Talmud, would find it difficult to obtain specific information from the Talmudic text. As an example, if one wanted to ascertain what all the Sabbath rules are, the task would entail reading through the entire tractate *Shabbath* to access them. They can only be found among the discussions and explanations of Biblical text, interrupted by other subjects, anecdotes, arguments and topics as they came to the minds of the different rabbis involved in those deliberations. The Talmudic rabbis often lost sight of their original theme or question. The result would be that one or more of the rabbis would have to intervene (much like a chairman would do in such an instance, to steer the meeting back to the original topic) and resume their discussion. The original Talmud has no index to enable a word or subject search. It is also not possible to find an index of Biblical verses quoted in the Talmud. In the past, the only way to access such information would be to read through all the Talmudic tractates.

I used an English translation of the Babylonian Talmud (Soncino Classics CD Rom Version 2004) which includes such an index thus greatly facilitating my research. A key word, for example, ‘leprosy’ would reveal all the tractates where the word appears. An English translation however, also appears as a set of separate volumes, which includes the index. This operates much like the key word search on the CD Rom Version. The English translation on the CD Rom Version does not include an index of Biblical verses quoted in the Talmud.
I have consulted the Babylonian Talmud for this study because it is regarded as being more authoritative and more extensive in its *Mishnah*\(^2\) commentaries than the Jerusalem Talmud, which was completed first (Armstrong 2007:97). Armstrong claims that the writers of the New Testament believed it completed the Old Testament. In the same way the *Bavli* (Babylonian Talmud) perfected the *Tanakh*\(^3\) (2007:99). A complete list of Talmudic tractates with their English equivalents can be found in Appendix B.

The rabbis of the Talmud became very knowledgeable regarding human anatomy as a result of their careful scrutiny of animals to ascertain whether they were *kosher* before being sacrificed on the Temple altar. The Bible demanded that only a perfect animal was acceptable as a sacrifice to God (Lv 9:2). The rabbis applied this knowledge to their discussions of human illness and disease. Biographies of the important rabbis mentioned in this dissertation are found in Appendix A. In my opinion there is a scientific basis to some of the medicine and treatments used to cure the diseases during those times. There are references to medicine both in the Bible and Talmud that could be useful to us today, especially in the field of herbal treatment. This is important because so many millions of the world’s population cannot afford or do not have access to Western medicine (Riddle 1993:xv).

I believe that this study is important both in the Southern African and international context because there is a growing interest in herbal medicines and homeopathy, one of the reasons being that the medication is non-toxic in the doses prescribed by a qualified practitioner. Although there are many allopathic Western medical practitioners who still view these alternative treatments with scepticism, general acceptance of these remedies is more positive today than twenty or thirty years ago. It would be valuable to know how the ancients treated the scourges of

---

\(^2\) The *Mishnaic* period was approximately 30 BCE – 200 CE (Berman 1989:11).

\(^3\) Scherman & Zlotowitz state that the Hebrew Bible consists of the *Torah* (the first five books of the Bible), *Neviim* (Prophets) and *Kesuvim* (Writings) and called by the Hebrew acronym *Tanakh* (1998:xvii; cf Armstrong 2007:92).
diseases such as tuberculosis, gout, arthritis and leprosy to name but a few because these still plague humanity at present.

1.2 HYPOTHESIS AND AIM

My hypothesis is that the Talmud does provide useful insights on the Biblical text relating to disease and illness, that ‘physicians’ were active in Biblical times and that the ‘doctors’ prescribed medication and treatments for their patients when required. Much of their medical and plant knowledge is still relevant and useful for us today in that many remedies used in ancient times is still used by herbalists for the same complaint. Despite the prohibition in the Bible against magic and necromancy (Dt 18:10-11), the ancient Israelites engaged in these practices to ward off or treat illnesses by using amulets and incantations. Although banned by halakhah, medical amulets were used in Talmudic times because some rabbis realised that they were effective, although the majority doubted their usefulness.

The aim of this study is to investigate whether the Talmud (meaning ‘study’ in Hebrew) and the ancient Near Eastern cultures can render more insight into or explanation of specific diseases, medical treatment and doctors mentioned in the Biblical text. The possibility is that this study will reflect that the ancients were far more knowledgeable in medical matters than they are given credit for, although scholars such as Muntner (2007(b):722) emphasises that the Talmud is not a medical textbook either despite the many medical discussions found in its pages.

My aim is to further identify where possible, certain diseases which leave signs on skeletal remains such as gout, tuberculosis and leprosy that probably afflicted people during Biblical and Talmudic times. By reference to archaeological evidence, found in Europe and Israel, I hope to show that those diseases existed during both Biblical and Talmudic times.
Some plants used medicinally by the Egyptians and Assyrians in the second millennium BCE are investigated. Jacob, W postulates that these plants also had similar medicinal uses in Biblical times because they were indigenous to the peoples of Egypt and Assyria (1993:32, 39). My view is that such knowledge was a process of enculturation by the different groups and most certainly one of oral knowledge passed down through generations of healers.

Ancient medicines, treatments or cures utilised in Biblical or Talmudic times that would still be useful to us today will be examined, despite the advances that Western health care has made over the past 1500 years. As the Bible is mute on so many remedies, it is reasonable to infer that medications were traded between the countries of the ancient Near East, including medicinal plants that came to Egypt during the second millennium BCE.

1.3 METHODOLOGICAL CONSIDERATIONS

Some Biblical passages are suggestive of disease and in some, illness is only alluded to. Several such texts are investigated to ascertain the possible nature of the illness concerned because the text is ambiguous and supports several probabilities. The disease is further clarified where possible by reference to Biblical commentaries, medical viewpoints, the opinions of medical historians and archaeological evidence. No detailed exegesis of the Biblical text is carried out in this study since it is not an exegetical investigation. The medical practices of the ancient Israelites are not mentioned in the Bible text but it is possible to learn much about this through study of other countries of the ancient Near East such as Mesopotamia, Egypt, Greece and Rome. All these peoples influenced the inhabitants of early Israel.

The Talmudic text is scrutinised to obtain rabbinic views and opinions that will hopefully elucidate the Biblical text in question and to consider medications and treatments mentioned in the Talmud. Where the rabbinical literature is sparse on
treatments and medication, I refer to the works of the Greek botanist, Theophrastus\textsuperscript{4}, Pliny the Elder\textsuperscript{5}, Josephus\textsuperscript{6} and Dioscorides\textsuperscript{7}, a Greek pharmacist and doctor in the Roman army, to ascertain what their prescriptions might have been for the disease in question. These writers lived in the same time period that the Talmud was redacted and it is almost impossible to believe that no medical enculturation between the different peoples of the ancient Near East took place. In the case of herbal treatments in the Bible and Talmud, I ascertain whether any of these are still used today for similar conditions.

Chapter Two deals with ancient Near Eastern medicine in brief outline. Archaeological evidence has made us aware that not only trade took place between the different countries, but there were also commercial and communication links. It follows logically that the medicinal practices of the early Jews must also have been influenced by those of the other nations of the ancient Near East such as Egypt and Assyria.

It is Powell’s view (1993:47) that there has been little progress in the identification of Mesopotamian medicine and pharmacology; the only evidence that is available is in the form of cuneiform tablets that have still not been properly interpreted since their first explanatory publication in 1958.

The ancient Egyptians were exceptional record keepers. Many of their documents from the Old Kingdom (3100 BCE – 2300 BCE), reveal that their medical practitioners were held in great esteem and there were many specialists e.g. eye-specialists, stomach-specialists and specialists of the internal organs to name but a few. These correspond to our modern ophthalmologists, gastroenterologists and endocrinologists or internists respectively. Greek medicine was influenced by those early Egyptian doctors.

\textsuperscript{4} He lived from c. 371-287 BCE (Wehrli 1967:999).
\textsuperscript{5} His full name was Gaius Plinius Secundus (c. 24-79 CE; Mair & Fletcher 1967:54).
\textsuperscript{6} His full name was Flavius Josephus (c. 38-93 CE; Chadwick 1967:89).
\textsuperscript{7} His full name was Pedanius Dioscorides (c. 40-90 CE; Osbaldeston & Wood 2000:xiv).
Ancient Roman medicine was largely a combination of divination and herbal treatments as physicians also functioned as priests. Scarborough claims that the Romans were initially, very reluctant to accept the Greek doctors who practiced in Rome and refers specifically to Cato in this regard. Cato was at first very anti-Hellenistic but grew more receptive of Greek ideas later in life (Scarborough 1968:55). The inevitable combination of Roman and Greek medicine resulted in a far more diverse Roman health care system with great emphasis placed on the maxim - ‘a healthy mind in a healthy body’.

Chapter Three deals with the education and training of physicians, midwives, blood-letters and circumcisers. It also examines the role, status, liabilities and duties of all these healers both in the Bible and Talmud.

Chapter Four highlights insights gained by the scrutiny of Talmudic tractates to ascertain whether any can elucidate the Biblical textual references to disease. The mental affliction of King Saul is considered and possible explanations are put forward for his malady. King Asa’s foot disease is dealt with as it appears in the Bible followed by some Talmudic insights appertaining to his painful complaint gained in this study. King Jehoram’s problem is mentioned in the Bible but the question as to the exact nature of his illness remains unclear.

Snake bite is examined with special reference to the brazen serpent mentioned in Numbers and some explanation for it’s almost ‘magical use’ is indicated by reference to the Talmud. The scourge of tuberculosis that has plagued humankind for eons is discussed. Talmudic medication and treatment used for this disease is explained and whether it elucidates the Bible in any way. King Uzziah was mentioned as suffering from tzara’at (Biblical leprosy) by the Chronicler and lived with the disease for the rest of his life. The Talmudic sages give more insights into leprosy and possible reasons for its affliction. Sadly, it will be seen that the stigma attached to this disease has continued until the present.
Chapter Five is the concluding chapter and deals with the question of whether this Talmudic study and the investigation into the ancient Near Eastern practices has resulted in any medical insights or explanations of Biblical text dealing with the illnesses mentioned.

There are four appendices: the first is a biography of important Talmudic rabbis; the second, an explanation of the Talmudic tractates, the third provides information on the Talmud and Midrash, while the fourth deals briefly with herbal medicine and homoeopathy.

1.4 SOURCES


The Talmudic tractates are taken from the Soncino translation of the Babylonian Talmud (CD Rom version 2004) and Epstein’s printed version of the Talmud published in 1952.

Kolatch’s Who’s Who in the Talmud (1981) and Berman’s Steinsaltz edition of The Talmud is used to write the explanation of the Rabbis of the Talmud and the meaning of the Talmudic Tractates, while the explanation of Midrash is taken from Encyclopaedia Judaica CD Rom and Snowman’s A short history of Talmudic medicine (1974).


Medical guides by Anderson (19[68]) and Berkow & Talbott (1977) provide valuable background information on diseases.
Archaeological information for this dissertation, too many to mention here, can be found in various journal articles and books by authors such as Yoeli (1955, 1985); Haas (1970); Zivanovic (1982); Zias (1989, 1991, 1999); Cahill (1991) Craffert (1998, 1999) and Shanks (2007) are also utilised as well as an unpublished thesis by Greeff (2005).

Authors such as Kinnier Wilson (1967); Scarborough (1968, 1969); Biggs (1969), Jackson (1988); Grmek, (1989; translated by Meullner); Nunn (1996); Nutton (2004); Retief & Cilliers (2005) and Halioua & Ziskind (2005) are invaluable in the research of the medicine in the ancient Near East.

Information on Biblical diseases was found in books and journals by Rosner (1975, 1977, 1979, 1993 and 2000); not forgetting his opus magnus Julius Preuss’ *Biblical and Talmudic Medicine* published in 1978. Other authors like Kottek who penned *Medicine and Hygiene in the works of Falvius Josephus* (1994) and Zias (1991) are of great importance.

Extra-Biblical sources are consulted: those such as the Babylonian medical texts as discussed by Kinnier Wilson and Oppenheim and the Ras Shamra texts as described by Wiseman. Biggs seems to concentrate on those of Mari. There are many Egyptian papyri in museums all over the world elucidated by Reeves and Nunn that give information on disease and treatments in ancient Egypt.
CHAPTER TWO
MEDICINE IN THE ANCIENT NEAR EAST

2.1 INTRODUCTION

The medicine and healers of the ancient Near East will be discussed to ascertain to what extent Jewish medical practices were influenced by those of their neighbouring countries. The Bible is largely silent on the medical practices of the early Israelites, but it is possible to glean a good deal of information by referral to countries such as Mesopotamia, Egypt, Greece and Rome, all of which had an influence on the inhabitants of early Israel and vice versa.

Ancient medicine and modern day homoeopathy have much in common in that the patient was treated holistically – body and mind were taken into consideration and the illness was dealt with symptomatically (Guthrie & Rhodes 1992:775). In ancient Mesopotamia and Egypt, magic and religion were inseparable and medication was administered to the patients while the on-lookers were chanting and dancing (Guthrie & Rhodes 1992:775).

Nunn is of the opinion that the use of Greek medicine had already infiltrated the older Egyptian culture by 525 BCE – the Greek medical schools at Croton, Cyrene, Cnidus and Cos flourished until about 330 BCE (1996:12).

Greek medicine contains elements of Babylonian, Indian and Chinese medicines according to Guthrie & Rhodes and there was a slow and subtle shift from the world of magic to that of science (1992:778). This was because the early Greek philosophers were curious and these authors aver that Asklepios, the healing god, could have lived and performed miracles as early as approximately 1200 BCE (Guthrie & Rhodes 1992:778). Remains of healing temples have been found at Epidaurus, Cos and Athens. Guthrie & Rhodes maintain that this cult of dream
healing co-existed with Christianity (1992:778). Similar to a modern spa resort, the healing sanctuary was most likely surrounded by peaceful gardens and water features (Guthrie & Rhodes 1992:778).

Roman medicine was in reality Greek medicine that had been ‘transplanted’ in Rome. Initially most Romans were suspicious of the Greek doctors that had settled there. They were enticed by the offer of Roman citizenship to all foreign doctors by Julius Caesar. Many Romans still preferred their indigenous folk medicine to the more sophisticated treatment of the Greek doctors and mention is made of the Greek doctor, Galen (c.130-200 CE) a follower of Hippocrates, who arrived in Rome in 164 CE and practised medicine in that city (Guthrie 1976:95).

Religion played a very important role in medicine and this will be discussed. The Roman army played a significant part in the training of doctors. The first Roman ‘doctors’ were senior military men with much practical experience in medical matters – today we would refer to them as paramedics. Specific diseases and herbal remedies will be discussed along with the role that the midwives and healing spas played in Roman healthcare.

2.2 MESOPOTAMIAN MEDICINE AND DISEASES

2.2.1 Introduction

A brief discussion of the medical texts discovered in Asia Minor circa 2000 BCE will be given as well as the interrelation between magic and religion. Herbal medicine originated from the local flora. The training of doctors and their status in their society will also be discussed. Medical seals, amulets and magic played an important part in medicine. The specific diseases of epilepsy, lung diseases, bilharziasis and intestinal parasites will be briefly examined in this chapter and also in Chapter Four when they are investigated in the Bible and Talmud.
2.2.2  Magic and medicine

Like their neighbours the Egyptians, the inhabitants of ancient Mesopotamia, believed that a patient was 'attacked' by a disease in the form of spirits, demons or ghosts (Powell 1993:52). Goltz (in Powell) however argues that this is not so and believes instead that illness and spirits are linked but that the origin of sickness lies in the theology of the time. He, however, does not elucidate his point of view further (1993:52). Biggs, who shares the same view as Goltz, maintains that not all diseases were attributed to evil spirits or divine wrath for the effects of heat, cold and indigestion were noted in the Babylonian and Assyrian medical texts (1969:96). The gods were obviously so important that diseases were named after them: e.g. ‘The disease of Ishtar’ – unfortunately the specific illness is not mentioned (Kinnier Wilson 1982:349).

Biggs maintains that diviners treated illnesses by prayers, libations and incantations but doctors never resorted to magic but only used potions, ointments, cataplasms\(^1\), enemas and bandages (1969:95). Oppenheim postulates that magic and medicine were generally applied separately but there were times when the two were used concurrently as they jointly produced a more effective remedy (1962:103; cf Biggs 1969:96). According to Biggs, a disease that was considered incurable was not treated (1969:95).

Amulets used in Mesopotamian ‘folk medicine’ were worn or hung round the neck, an example of which can be found in the Royal Ontario Museum in Toronto. This appears to have been used to ward off snake bites and scorpion stings (Kinnier Wilson 1982:349). He continues that there is an artist’s representation of Lamashtu, a female evil spirit on the amulet with symbols of a

\(^1\) Poultice (Coulson et al 1980:127).

### 2.2.3 The Medical texts and letters

Biggs maintains that magic and medicine were incorporated into the medical texts (1969:95). The earliest Mesopotamian medical texts dated c. 2000 BCE were written in Sumerian (Civil in Biggs 1969:101). Only two cuneiform texts remain but neither refers to magical practices according to Powell (1993:57). Later texts written in the same language were found at Hattusa in Asia Minor dating back to the 14th century BCE but scholars are unsure whether they are original Sumerian artefacts or copies made by a Babylonian scribe (Biggs 1969:96).

Finet (in Biggs 1969:96) states that hundreds of letters that dated from the 17th century BCE were found in Mari. He goes on to say that the texts mention doctors renowned for their methods of treatment, and gives as an example the case of a patient suffering from an ear abscess that did not respond to previous treatment (Finet in Biggs 1969:96). The patient was referred to another physician for a second opinion but the text does not say if a cure took place (Finet in Biggs 1969:96). The physicians realised that certain illnesses were contagious. One of the Mari letters found specifically prohibited a sick woman from sharing her bed or her accommodation with others (Biggs 1969:96).

Several letters from the Neo-Assyrian period were found where magic and medicine were successfully combined to treat members of the royal court (Biggs 1969:97). Biggs mentions the case of King Esarhaddon (reigned 680-669 BCE) whose superstitious beliefs lead him to insist that his medication be tested on his staff before being administered to him or his son (1969:97).

\(^2\) Snake bones found in Babylonian houses seem to indicate that they were kept as domestic pets (Kinnier Wilson 1982:349).
The two Assyrian cities of Assur and Nineveh yielded hundreds of cuneiform tablets to the archaeologist's patient excavations which were probably housed at the famous library of Assurbanipal dating from 1000-612 BCE (Biggs: 1969:95). These fall into three categories (Kinnier Wilson 1967:191):

- The therapeutic 'medical texts' from the Old Babylonian period with only slight changes throughout the centuries;
- 'The Symptoms' consisting of about forty tablets which detail the prognosis and diagnosis of various diseases but the information is disappointingly fragmented and not fully understood; and
- Miscellaneous texts that add to the corpus of existing knowledge of ancient Mesopotamian medicine useful to the researcher.

These texts are made up of 'units' which all begin in a similar fashion 'if a man has a pain in his head' (or other symptom) and the medication to be used is noted with exact detail and ends with 'he will get well' (Oppenheim 1962:101). If a case was hopeless, it was not treated (Oppenheim 1962:101) but there is no detail as to how that decision was made. Biggs believes that much of the medical treatment depended on astrology to ascertain the best time for undertaking a cure (1969:99).

Goltz (in Powell) states that between seventy and eighty percent of Mesopotamian pharmaceuticals still cannot be identified with any certainty and of the twenty percent that can, a large number are doubtful (1993:47).

Powell believes that there was very little difference between the practice of medicine and that of magic in the cuneiform texts (1993:50). These are very hard to interpret owing to the remaining fragments that require careful piecing together and the enormous task of the manual copying (1993:51). Yet he notes with some surprise that the much older Sumerian texts probably from the 3rd Dynasty of Ur (21st century BCE) do not mention magic at all but the author gives no quotation
from the texts to elucidate further (Powell 1993:57). This also applies to medical
texts from the Old Babylonian period (c.2000-1600 BCE; Powell 1993:57). Powell
maintains that the *materia medica* could also be found in texts dealing with
illnesses believed to have been caused by demonic entities (1993:52). It would
appear that there was a difference between a doctor (*azu*) and a diviner (*asipu*) –
both were healers but the doctor had more status than the diviner (Kinnier Wilson

The fact that there are very few texts from 6th century BCE are mentioned by
Powell (1993:58) and he quotes Oppenheim saying that medical studies were
possibly transmitted by scribes to the students at that time (who also learnt by
experience in the field). Powell states that more research in this field is warranted
but he acknowledges the problems associated with the very brief references to
the diseases on the cuneiform tablets. This adds to the perplexity of their
understanding together with the difficulties that researchers experience in
handling the brittle clay (1993:58). Like Oppenheim, Powell advocates co-
operation between specialists in ancient Mesopotamian studies and their
counterparts in medicine, pharmacology and botany to help unravel the textual
adopts that further research be carried out by co-operation between the
different experts and trusts that this task will be fulfilled by the next generation of

2.2.4 Plants and other substances used by the ancient
Mesopotamian healers

Powell explains that knowledge of the flora in Mesopotamia seems to be primitive
compared to what we know about that of Egypt, Greece and Italy (1993:48). He
explains that the Mesopotamian climate is not conducive to the preservation of
plant remains. Conserving specimens is time consuming, expensive and requires
the co-operation of those who specialise in other related disciplines e.g.
palaeobotany. The latter is not always practical because of the expense and time involved and the shortage of specialists in the field. Another problem is that the climate is not as conducive to plant remnants as that of Egypt (1993:48).

Powell suggests that a variety of indigenous herbs, animal by-products such as urine, faeces, semen, blood and tallow and some mineral salts (1993:60) while alkali (obtained by reducing a plant to ash) was used for washing the body (Powell 1993:59). Oppenheim, Powell and Biggs indicate that the products were boiled or ground, some were made into decoctions whilst others were dried and powdered (1962:102; 1993:61; 1969:100). Oppenheim continues that the medicines were mixed with bases like honey, beer and vinegar even animal fat was used as a medicinal base (1962:102). Medication was usually ingested orally or anally (Powell 1993:61) but it was also applied to the skin and bandaged in position (Oppenheim 1962:102).

Doctors prepared their own prescriptions from their home stocks or from other physicians; some were brought fresh straight from the fields and swamps (Powell 1993:60). Powel (1993:62) believes that healing tampons containing some type of oil, possibly even that of cedar wood (Cedrus libani) were made from woollen wads that were inserted into the nose, ear, vagina and rectum while dry medication was simply blown into the nose or ears using a reed or metal tube (Powell 1993:62; Biggs 1969:100). Powell elucidates that medicated tallow candles containing the herbal medication were used to produce fumes for inhalation by the patients much like modern day steam inhalations (1993:62). He is convinced that these so called fumigations stimulated expectoration, but Goltz (in Powell) suggests that they were carried out as magic rituals and not for medical purposes (1993:63).
2.2.4.1  **Garlic (Allium sativum)**

A poultice of garlic (*Allium sativum*) seems to have been used to soothe toothache. The crushed cloves were probably mixed with oil or beer (Jacob, W 1993:36). Garlic contains pain relieving properties (Singh 2006:49).

2.2.4.2  **Greek juniper (Juniperus phoenica)**

Greek juniper, native to most of the Mediterranean, was ingested for urinary complaints including incontinence. It also had laxative effects and was applied externally to relieve aching joints and burns (Jacob, W 1993:36, but Jacob warns that excessive use can cause abortions (1993:36). Juniper berries have diuretic and anti-inflammatory properties and are still used to treat minor urinary complaints (Kramer 2006:120).

2.2.4.3  **Leeks (Allium porum)**

Jacob, W explains that leek juice (*Allium porum*) was mixed with castor oil (*Ricinus communis*) and applied to ringworm, a fungal infection of the skin, while the castor oil (which has anti-inflammatory properties) dealt with itchy skin and scalp conditions and urinary problems to name but a few (1993:36; cf Jacob, I 1993:85; Singh 2006:223). Leeks are a good substitute for garlic both belong to the same genus – they both have the name *allium* in common and both possess antiseptic and anti-inflammatory properties (Kramer 2006:94).

2.2.4.4  **Onions (Allium cepa)**

Onion was known since early times in ancient Egypt to possess both antibiotic and soothing properties. It was used to treat wounds and boils, to relieve snake bites and also massaged into stiff muscles (Jacob, W 1993:37).
2.2.4.5  *Pomegranate root (Punica granatum)*

The ground root of the pomegranate (*Punica granatum*), native to Persia was mixed with beer or wine and ingested together with a laxative used to eradicate intestinal worms (Jacob, W 1993:37). Van Wyk et al maintain that it is an excellent remedy for tape worm because of their high pelletierine content (2009:206).

2.2.4.6  *Poppy seeds (Papaver somniferum)*

Jacob, W relates how wailing babies were calmed by poppy seed (*Papaver somniferum*), probably in the form of a decoction. They were also used for digestive and urinary problems, while a poultice of the root was applied to bodily swellings (1993:37). Poppy seeds have been found to contain anti-spasmodic properties consequently they would have been effective in providing pain relief (Singh 2006:199).

2.2.4.7  *Sulphur and Solanum fruit (Solanum nigrum/Black nightshade)*

Sulphur was prescribed for a specific skin disease although its name is not indicated and Solanum fruit was recommended for a mother experiencing a difficult birth (Kinnier Wilson 1982:350). Dioscorides (5:124) attests to the use of sulphur and to the poisonous black nightshade berries (4:73) that were used as an effective pain killer and hallucinogenic. Black nightshade is used today mainly for skin problems (Singh 2006:239). Chiej maintains that black nightshade has been in use for centuries. The berry juice calming and its analgesic properties made it invaluable for toothache (Chiej 1988:290).
2.2.5  Mesopotamian physicians

There is very little information on the training, literacy and social standing of a physician, but Biggs maintains that the doctor was regarded as a craftsman such as a boat builder (1969:97). By analogy, the penalties for medical negligence were similar to those incurred by a shipbuilder, who manufactured a defective vessel that sank according to the legal code of Hummurapi (Biggs 1969:98). Biggs does not indicate what the actual punishment was.

One of the very few sources *The tale of the poor man of Nippur* by Gurney (*Anatolian Stud.*, 1956, 6:145ff) describes the average physician: a clean shaven head, dressed in simple clothes, who took his medication, libation jar and censer with him when he made house calls (Oppenheim 1962:105-6). Mention is made of a woman physician employed at the Larsa administration but she is not named by Oppenheim (1962:107). Most of the doctors, according to Oppenheim, were palace officials who worked for the king, his harem and family and the royal servants (1962:107). Guterbock (in Biggs 1969:96.) believes however that the Hittite royal court employed both Egyptian and Babylonian physicians.

2.2.5.1  Education and medical training

Biggs postulates that a physician was a technician (1969:98) but such information is very scant and Oppenheim states that a doctor’s medical training was not specified nor standardised resulting in some being far more skilled than others (1962:106; cf Biggs 1969:98). Oppenheim and Biggs presume that medical students made their own copies of the medical texts and in that way preserved them for more than a thousand years (1962:107; 1969:99). Some of the texts mention women physicians (including one in Asia Minor) but there is no further information (Biggs 1969:98).
2.2.5.2 The duties and fees of a physician

Surgery was reserved for the most extreme cases and even in those cases was only performed when the surgeon was certain that he could save the patient with minimum risk to both of them. Despite the dangers for patient and physician alike, operations must have taken place because eunuchs were still castrated in the royal household during the Middle Assyrian period (13th – 10th century BCE; Powell 1993:56). Castration was a dangerous operation with a huge mortality rate according to Biggs (1969:100). He continues by saying that circumcision was not performed in Mesopotamia and blood-letting is not mentioned (Biggs 1969:100-101). Since the Bible states that Abraham, originally from Haran, Mesopotamia, was commanded by God to circumcise himself aged ninety nine (Gn 17:24), it can be surmised that circumcision was not practised in Mesopotamia, although Plaut is of a different opinion. He (2006:109) states that Assyrian soldiers from the third millennium appear to be circumcised judging from pictorial references to them but he does not elucidate this further (Plaut 2006:109).

The code of Hammurapi limited the fees that a doctor could charge for setting bone fractures, treating wounds and surgical procedures (Biggs 1969:100). Medication was introduced into the ears and nose by reed tubes. Although there is no mention of a catheter, bronze and lead pipes were used to lead liquid remedies into the urethra (Biggs 1969:100).

There is no evidence of human dissections (1969:101) although a Caesarean section was performed on a dying pregnant woman to save her baby – normally such procedures were carried out on slaves (Biggs 1969:101). Biggs is certain that the pulse was known but no importance was attached to it during this time (1969:101).
2.2.5.3 The status of a physician

Herodotus (*Histories, 1,197*) was not very impressed with Mesopotamian physicians and relates how the Babylonians would bring the sick to the market place so that the people passing could give advice and suggestions regarding their treatment (Oppenheim 1962:104; Biggs 1969:94).

2.2.5.4 A physician’s seal

Kinnier Wilson mentions a seal presently housed in the Louvre, Paris that belonged to a Sumerian physician named Ur-lugal-edinna (Figure 1 in the List of Photographs) depicting religious symbols (in this case a pair of maces) and a standing deity that appears to be blessing a doctor, represented by his forceps (1982:347). This amulet was purchased by the late Professor Meek of the Toronto University from a United States dealer, believed to be dated to the first millennium BCE and it seems to have come from Nippur (Kinnier Wilson 1982:349, footnote 38). The author adds that it was only in later Babylonian times that medical diviners, with their specialised magical incantations came to the forefront to assist in the healing arts (Kinnier Wilson 1982:347).

2.2.6 The Mesopotamian midwife

Von Soden (in Biggs 1969:101) is convinced that midwives existed but states there is very little evidence in the texts to substantiate this view, although an incantation for an easy birth has been found in the cuneiform texts.

2.2.7 Specific diseases
2.2.7.1 Epilepsy

Epilepsy has been selected for discussion as tumours have been found on the cranium of skeletal remains. These can appear inside the skull where they can exert pressure on the surface of the brain leading to epilepsy (Zivanovic 1982:139).

Kinnier Wilson is convinced that Tablet XXV of the Sultantepe Tablets 1, presently situated in the British Museum, describes the symptoms of epilepsy rather accurately – falling to the ground, foaming at the mouth, the muscular spasms and eye movements (1982:351, footnote 52). Kinnier Wilson (1982:351) adds that a description of the ‘aura’ that usually warns a patient of an imminent attack is included, which is described in the Tablet as a cold feeling in the fingers and toes and then mentions the patient’s involuntary ‘epileptic cry’ for the first time. These symptoms describe a serious epileptic attack with loss of consciousness (grand mal)\(^3\) as described by Anderson 19[68]:385. There is also another forewarning of an attack mentioned in this tablet – it is not named but described: When a patient knowingly sought a quiet place where they would be away from curious eyes just before the attack overcame them (Kinnier Wilson 1967:202). It is perfectly understandable in my view, that anyone would be embarrassed by such an affliction and would prefer solitude when the fit started.

2.2.7.2 Parasites

(a) Bilharziasis\(^4\) (Schistomiasis)

This disease is still a scourge in the Middle East caused by the schistosoma parasite which is a fluke or flatworm (Anderson 19[68]:288). It is harboured in water canals and drains where it depends on the small freshwater snail (bulinus

\(^3\) The French word for a major attack.

\(^4\) Named after the German physician Theodor Bilharz (1825-1862).
truncates)\textsuperscript{5} to complete its cycle (Kinnier Wilson 1982:357). Zakaria found fossilised remains of these snail shells in the wall bricks of Babylon (at Tell Aqeir) and also in the ziggurat at Aqar Quf 30 km west of Baghdad in 1959; and his findings were later published in the Journal of the Faculty of Medicine in Baghdad (1982:357).

Symptoms of bilharziasis include severe bladder inflammation (which also causes a purulent discharge), small tumours and bladder stones that develop as a result of the body’s defence mechanism which encloses the parasite’s eggs in uric acid crystals, phosphates and calcium (Kinnier Wilson 1967:195). It is this that results in the sufferer passing blood-tinged urine, mucous and pus (Anderson 19\textsuperscript{68}:289). Kinnier Wilson (1982:358) mentions the Akkadian word *musu* that appears in the urinary texts is related to blood (*haematuria*) and bladder stones (*calculi*) but does state where this was found.

Lloyd Davies is of a similar opinion to Kinnier Wilson (1993:25) and gives an example of two mummies both dating from 20\textsuperscript{th} Dynasty (c. 1185-1084 BCE) where the *ova* (eggs) of the *schitosomiasis haematobium* were found along with fossils of the snail (*bulinus truncates*; 1993:25). The authors are surprised that this disease was never mentioned in the Hebrew Bible (*Tanakh*) because it was such a scourge in the ancient Near East (Lloyd Davies 1993:26).

(b) Roundworms (*Ascariosis*)

Kinnier Wilson believes that a roundworm is depicted on an amulet from Nippur now in the Ontario Museum of Archaeology, dated to 1\textsuperscript{st} millennium BCE (1967:194) but he does not indicate when the amulet was found. It is associated to roundworm infestation\textsuperscript{6} by a depiction of a long worm that appears to be

\textsuperscript{5} The worms discharge *larvae* into the water via the bladder where they pass into a snail where they develop into independent *cercariae* of the parasite that enters the body via the skin pores, migrates to the bladder, lungs or liver and produces worms (Anderson 19\textsuperscript{68}:288; Berkow & Talbott 1977:152).

\textsuperscript{6} Roundworms can reach a length of 35 cm (Kinnier Wilson 1967:194).
emerging from what can only be the anus of the figure shown (Kinnier Wilson 1967:195). Muazzam describes symptoms of roundworm infestation as being ‘weary, sleepless and exhausted’, similar to those found on a tablet, published by Nougayrol in 1947 and describes the sallow skin tone of the patient that is very obvious when the parasites enter the liver’s bile ducts (Kinnier Wilson 1967:195). These symptoms are also mentioned by Anderson when he describes roundworm infestation (19[68]:281).

(c) Tapeworm (*Taenia echinococcus*)

This intestinal parasite usually preys on dogs, wolves, jackals and foxes but humans are infected through their dogs (Kinnier Wilson 1967:196). These worms can be found predominantly in sheep livers and the ancient priest-diviners were well aware of them through their liver divination (1967:196; cf Craffert 1998:114). He describes the embryos as resembling flattened ‘chick peas’ (Kinnier Wilson 1967:197). Dogs that eat the sheep livers pass the parasite on to man via their hair or skin – the parasites often remain in sand where children play and the parasites pass by hand-mouth contact (Kinnier Wilson 1967:197). Sheep were probably eaten on special occasions in Mesopotamia and the dogs enjoyed the remnants of the feast (Kinnier Wilson 1967:197).

2.2.7.3 Lung disease - Tuberculosis

Tuberculosis has been selected because when untreated, it causes a characteristic hunchback formation of Pott’s disease. Gill discovered that a large proportion of mummies in Upper Egypt (with 25 of the 85 studied; between the Middle Kingdom *circa* 2050 BCE and the Late Period *circa* 500 BCE) showed signs of tuberculosis (Gill 2008: http://ancienthistory.about.com/od/mummies/qt/TBinMummies.htm).
It is not known exactly what type of lung disease was referred to in the medical texts of Babylonia as the only references are to pain and tightness in the chest, and the coughing up of phlegm. Kinnier Wilson is however certain that pneumonia, which was very common, must have been prevalent and extremely problematic (1967:199). He continues to say that those who suffered from parasitic infestation were always liable to contract a lung infection presumably due to their low resistance to disease (Kinnier Wilson 1967:199). There is mention of a disease dubbed the 'Evil Cough' thought to be serious, probably pneumonic plague or even tuberculosis but the answer is uncertain (Kinnier Wilson 1967:200).

2.2.7.4 Leprosy

Leprosy leaves characteristic lesions on the bones of those infected with it. Evidence of this has been found during excavations in Naestved in Denmark by Moller-Christensen that date from early medieval times⁷ (circa 476 CE; Zivanovic 1982:231).

Kinnier Wilson is convinced that Hansen's disease (Mycobacterium leprae) existed in ancient Mesopotamia and he bases his view on some lines of an Old Babylonian omen text published by Kocher & Oppenheim in 1958 (1982:355):

42. If the flesh of a man shows white spots⁸ (pusu) and
43. is dotted with nuqdu⁹ marks
44. this man is rejected by his deity
45. (and) rejected by mankind.

---

⁷ The middle ages was the time between ancient and modern times and is usually regarded as the period between the fall of the Western Roman Empire (5th century CE) and the beginning of the Renaissance (middle of the 15th century CE; Coulson et al 1980:536).
⁸ Tubercular or 'nerve' leprosy that forms whitish or depigmented areas where there is strong bodily resistance to the disease (Kinnier Wilson 1982:354).
⁹ Lepromatous or 'nodular' leprosy that forms skin nodules where there is little or no bodily resistance by the patient to the disease (Kinnier Wilson 1982:354).
Kinnier Wilson is convinced that the ‘white spots’ describe tubercular leprosy that form patches noticeably lighter than the surrounding skin, while the *nuqdu* refers to the lepromatous leprosy that forms large and irregular nodules on the face and body (1982:355). This scholar states that the above description can only refer to a case of ‘mixed’ leprosy (*dimorphous*) where both types manifest (1982:355; cf Berkow & Talbott 1977:126).

Kinnier Wilson adds that the earliest records from India contain descriptions of a Sanskrit work entitled *Susruta-samhita* (‘The Collection of Susruta’) first published in the *Indian Medical Gazette* (1942 No. 77:180) and reprinted in the *Leprosy Review* (1947, No. 18:54). It describes modern leprosy but it is most unfortunate that the date of the Sanskrit work is uncertain (1982:363, footnote 82).

### 2.2.8 Conclusion

Researchers such as Biggs and Goltz maintain that diseases in Mesopotamia were treated by magic, utilising prayers, incantations and amulets while doctors treated their patients with medication such as ointments, potions and enemas. Oppenheim believes that magic and medicine were also used concurrently.

The medical texts from Assur and Nineveh probably housed in the Assurbanipal library have resulted in a better understanding of the ancient treatments although most of the pharmaceuticals cannot yet be positively identified. The Mesopotamian doctors were also pharmacists and probably manufactured their own prescriptions from the local fauna and flora. The scholars whose works were consulted stated how difficult it is to recognise a disease as described in the cuneiform texts as the diagnoses are worded in such a way that is not fully understood by modern doctors (Biggs 1969:101). The majority of experts believe that much more research is vital to enable medical historians to fully understand the medical history of ancient Mesopotamia.
2.3 EGYPTIAN MEDICINE AND DISEASES

2.3.1 Introduction

Magic and religion were inseparable from medicine in the time of the ancient Egyptians (Nunn 1996:96) who believed that disease was caused by supernatural forces (gods) or that demonic agents were embedded in the diseased flesh of a patient (Walker 1993:87). Egyptians turned to doctors and magicians for healing as each used different methods – the doctors used herbs and the magicians employed amulets (Nunn 1996:98,110).

Egyptian pharmacology and doctors will be discussed – their training programs, salaries and liabilities for negligence. The healing temples and House of Life will be described as well as the functions of paramedics, pharmacists, nurses, midwives and circumcisers. Specific diseases such as tuberculosis and leprosy and the medications prescribed to treat them will be discussed. Although not a disease, snake bites will be mentioned due to the Egyptian attitude towards snakes and the magical connotations they associated with these reptiles. Important medical papyri will also be referred to.

2.3.2 Magic and medicine

Halioua & Ziskind state that religion and magic featured prominently in the everyday lives of the ancient Egyptians (2005:7). Nunn (1996:96) explains that most people sought help from the gods as a matter of course because they believed that disease was caused by ‘illness spirits’ which wished them harm. These deities had their agents who carried out their wishes and penetrated the victim’s body, causing the symptoms of disease (Walker 1993:87). The agents are described by Walker as ‘symptom demons’ and were believed to affect only a part of the body, fastening themselves into the flesh of the victim (1993:87).
Curing the patient involved loosening the stranglehold of the symptom demons on the victim and banishing them from their body using incantations (1993:87; cf Halioua & Ziskind 2005:8). Nunn believes that demons could also be used to magically bring misfortune on one’s enemies (1996:96). Walker maintains that disease was recognised as chastisement for disobeying the gods (1993:87) and Nunn is certain that this same belief held sway in Europe for many centuries particularly in the case of epilepsy, a disease regarded as being ‘sacred’ (1996:96). Nunn’s explanation is ambivalent when he says that in the same way as epilepsy was deemed to have a supernatural origin, so was the healing thought to come from the gods (1996:96).

Nunn states that people looked to the gods for aid in treating disease because it was probably more comfortable, less painful and costly than the treatments available at the time and could be initiated through incantations and magical means (1996:96). Nunn continues to say that there were doctors who were magician healers as well and that conventional remedies were used in conjunction with magic (1996:98).

Nunn mentions that there were three main types of amulets available: The first type being amulets in the form of animals or parts of the body whose qualities the wearer wanted to imitate, such as a lion symbolising strength; secondly there were phylactic types appearing in the form of animals that the wearer wished to avoid, for example a snake, and lastly theomorphic amulets in the form of a god to prevent illnesses – e.g. a girdle of Isis would be worn to prevent a miscarriage (1996:110).

The primary goddess of the Egyptian pantheon was Isis, a solar goddess (Geddes & Grosset 2001:409). She had siblings Osiris, Seth and Nephthys (Geddes & Grosset 2001:444) and her Mother Goddess cult at Philae was still active after the advent of Christianity (Nunn 1996:97). Isis, the sister and wife of Osiris, could inflict illnesses but was able to counteract these (Walker 1993:89-
Walker adds that her unique magic involved those who were bitten by snakes or stung by scorpions (1993:89). Walker also refers to the Metternich Stela and relates how Isis, preceded by seven scorpions, approached a noblewoman’s home only to be rudely refused entrance. However, she and her entourage were given hospitality by a kind country woman nearby (1993:89). He continues to say that the scorpions took offence and wanted to take revenge. They sent their leader Tefen to sting the noblewoman’s son, who became very ill as a result (1993:89). Walker explains that Isis later treated the boy with her magic (1993:89), while Nunn elucidates that Isis massaged the boy’s throat, while calling on Tefen’s poison to emerge and he recovered (1996:108). The noblewoman showered the humble country woman with gifts as atonement and thanked Isis profusely. This story, according to Walker was an illustration that the arachnid’s sting was punishment for the noblewoman’s refusal to render kind hospitality to a god:

The distinguished lady had been suffering and distressed during one night. She had tasted the effect of her utterance – her son had been bitten. She (now) brought her possessions to make up for the fact that she had not opened [her gate] to me. [Walker 1993:89].

Other gods that caused infectious disease were Sakhmet, a lioness goddess whose cult flourished in Memphis (Walker 1993:88), Seth the storm god, brother of Isis, who posed a danger to pregnant women because he had torn himself free from his mother’s womb (Walker 1993:91).

If it was not known which god was responsible for the illness, the sufferer could approach any god to enlist their aid including their local god or Amun ‘the hidden god’, being one of the eight deities of the Ogdoad (Creation; Walker 1993:94; Geddes & Grosset 2001:320).

Horus, the healing god was called the ‘chief physician in the house of Re (Ra) and the following quote invoking his name would be read to a victim of a scorpion sting to magically remove the venom:
Behold I am Horus, the physician soothing the God,
Flow forth from the bodily parts (from the Hieratic Papyri\textsuperscript{10},

Another healing deity mentioned by Walker was Anubis, the god of embalming
who treated the bodies of the deceased (1993:97) and he continues to explain
that just as a sick body would be medicated to heal and preserve it, so a corpse
was mummified to preserve it from putrefaction (1993:97).

Thoth was the god of recording and maintenance of the sacred medical texts
both written and oral, which formed part of Egyptian law and was also called
‘Lord of Books’ and physicians would attempt to emulate Thoth by reciting the
magical spells while administering ‘holy’ remedies to their patients (Walker
1993:97).

It is interesting to note that the Egyptian deities were not infallible and could also
become sick or could be killed by other gods. Walker relates how Seth blinded
Horus and killed Osiris because he was jealous of Osiris’ love for Isis (1993:95).
He goes on to explain that the gods could either heal themselves or have the
other gods heal them (Walker 1993:95). In the case outlined above Isis had a
breast abscess which she cured by herself.

\section*{2.3.3 Some important Medical Papyri}

\subsection*{2.3.3.1 \textit{The Ebers papyrus}}

The Ebers papyrus, named after Georg Ebers, was discovered in Thebes in
1860. It documents ailments like the common cold, muscle pain and headaches,
while prescribing treatments for wounds and burns, remedies for vermin and the
diagnosis of tumours (Reeves 2001:49).

\textsuperscript{10} Housed in the British Museum (Walker 1993:97).
2.3.3.2  

The Edwin Smith papyrus

Reeves describes the Edwin Smith papyrus, named after the American Egyptologist who purchased it in Luxor in 1862. It was probably a copy of a more ancient work originally written in 2500 BCE when the pyramids were being built (2001:51-2). This papyrus provides evidence that the doctors of the time were aware of the pulse and believed that the heart was the source of life (Reeves 2001:51-2). Reeves (2001:52) claims that this papyrus was probably the first to describe the human brain.

2.3.3.3  

The Kahun papyrus

The Kahun medical papyrus was found by the archaeologist Petrie and dates from the Old Kingdom (2613-2181 BCE). Comprising only three pages it is housed in the Petrie Museum of Egyptian Archaeology at University College, London and a new translation was published in 1975 (Reeves 2001:53). It deals with women’s diseases and pregnancy and describes a contraceptive mixture that was popular at that time comprising crocodile dung combined with sour milk (K21) or honey blended with a small amount of natron and placed into the vagina (K22; Reeves 2001:53).

2.3.3.4  

The Berlin papyrus

The Berlin papyrus, dated between 1350 and 1200 BCE, was discovered in a jar in Saqqara by Heinrich Brugsch early in the last century and is housed at the Berlin Museum. It provides information on childbirth and infant care in ancient Egypt (Reeves 2001:53-4).
2.3.3.5 The Hearst and the Brooklyn Museum papyri

The Hearst papyrus contains prescriptions and spells and the Brooklyn Museum papyri published in 1966-7 deals with snakes and snakebites (2001:54). Treatments included a mixture of magic and medicine. The papyri also describe the suffering of victims, especially miners (who probably could not surface fast enough for treatment) and the papyri regard the snake as a manifestation of the god Horus (Halioua & Ziskind 2005:143).

2.3.4 Healing temples and the ‘House of Life’

Reeves quotes Clemens, a writer from Alexandria in *circa* 200 CE, who said that over forty medical books were written during the Early Dynastic period (3050-2613 BCE) by priests of the time and that they were kept in the temple libraries (2001:21). They dealt with disease in general, surgery, remedies, female and eye diseases. Unfortunately none of these tomes are extant (2001:21) and Reeves adds that they probably served as reference works for students (2001:25; cf Walker 1993:100). Nunn believes that much of the medical papyri, specifically the Edwin Smith papyrus was probably written during the Old Kingdom period (2613-2181 BCE; 1996:11).

Brooke indicates that there were numerous healing temples in ancient times that attracted many people (1993:8; cf Reeves 2001:23) and that the temples at Heliopolis and Sais became medical schools (Brooke 1993:8-9). Walker states that there were important training centres at places like Abydos, Amarna, Memphis and Thebes to name but a few (1993:100). A ‘House of Life’ or training centre in major cities could be found complete with a garden to produce healing herbs used by the physicians for their prescriptions (Reeves 2001:23). Although a ‘House of Life’ formed part of the healing temples, they were completely separate institutions (Halioua & Ziskind 2005:22). Halioua & Ziskind relate how patients often bathed in the waters that had been poured over statues of the
gods forming large pools (2005:138; Nunn 1996:111) before proceeding into ‘sleep therapy’. Reeves speculates that a drug such as opium or mandrake was administered to induce a ‘twilight sleep’ during which healing and exorcism would hopefully take place (2001:24).

The patients were expected to bring the gods gifts of food or precious metals according to their means and Reeves postulates that other more invasive treatments might have been administered while the patients were under sedation (2001:24). Reeves explains that sometimes a small image of the bodily part that needed healing would be left at the temple after the patients had returned home in the hope that a ‘distance healing’ might transpire (2001:25). Protective amulets, often in the form of knotted cords, were worn by patients and statues of the gods occupied special places in a home (Reeves 2001:25).

Despite the fact that they probably never had any experience in dissection of cadavers, Reeves is convinced that the doctors had a good knowledge of human physiology due to their embalming experience where there no doubt they would have examined many injuries (2001:26).

**2.3.5 Pharmacists, prescriptions and drugs**

According to Walker (1993:98) Re or Ra (also known as Atum or Ra-Atum) was the principal god, whom the Egyptians believed created the magical medical spells but Ra was also a chemist and developed the healing recipes for diseases.

Nunn mentions that the ancient Egyptians must have relied on the ‘placebo effect’ and when medication was administered to them they presumed that a cure was inevitable and this is true today especially of patients with chronic pain (1996:137). Nunn believes that the ancient medical practitioners and chemists actually had little knowledge of the causes of the diseases that they encountered making treatment difficult (1996:137). He also states that they utilised few
chemicals and natural herbs with limited healing effects in comparison to modern Western medicine (1996:137).

The healing benefits of the plants were limited because the different properties found in the plant had not yet been isolated and the fact that the Egyptians used so many herbs simultaneously meant that they did not always know which plant had positive healing attributes (Nunn 1996:137). Nunn maintains that in modern times, any drug has to undergo scientific tests and clinical trials before it can be regarded as effective (Nunn 1996:138; cf Van Wyk & Wink 2004:9). It is not known whether such testing took place in antiquity but Nunn admits that many patients were probably cured, while others just found temporary relief. Nunn puts this down to the TLC (tender loving care) and the positive attitude of the healers (1996:138).

Halioua & Ziskind believe that the medication was prepared according to exact prescriptions written by a doctor in accordance with the medical texts and that beer, wine, water and honey were used as solvents for the drugs, probably also to render them more palatable (2005:33). Medication took the forms of ointments, gargles, pills, lozenges, plasters, eye and ear drops, toothpastes and inhalants (Halioua & Ziskind 2005:33) – all very sophisticated and much like modern times.

The plants used included aloe, castor oil, figs and brewers yeast; honey was recognised as having an anti-bacterial effect and used on wounds (Halioua & Ziskind 2005:33). Dioscorides mentions honey’s well documented use in his Materia Medica (2:12). Fresh meat was the first aid treatment of choice for a raw wound while the authors state that carob, melilot (Melilotus officinalis/Sweet clover), valerian (Valeriana officinalis), onion, leeks and garlic were known and used by many (Halioua & Ziskind 2005:37).

The first known pharmacist was Pa-her-pedjet whose name was found on an ostracon (a potsherd kept for the writing of short texts, drawings or letters) at Deir el-Medina. It recorded the absenteeism of sick workers and instances where the
chemist himself was away from work, preparing his own medication (Nunn 1996:132).

Reeves (2001:60) mentions a New Kingdom pharmacist, *lwty*, with his own pharmacy who may have served as a physician to Rameses I (1293-1291 BCE). Like him doctors concocted their own prescriptions that were closely guarded secrets, often obtained from teachers and family members; occasionally the prescription was written on the medicine container (2001:60). The herbs were probably collected personally by the doctor so that physicians became renowned for their medication (Reeves 2001:61). Reeves (2001:61) believes that the physicians carried their drugs in a carrying case similar to those found presently in the Berlin Museum dated to the Eleventh Dynasty (2060-1991 BCE).

Reeves (2001:61) mentions the character ℞ or Rx, that all doctors use today to denote the word ‘prescription’ which originates from a graphical representation of the ‘Eye of Horus’ (see below). Zotti however claims that it is an abbreviation for the Latin verb *recipere* ‘to take’ (Kidd 1984:279) or *recipe* ‘take thou’ and is an injunction to the pharmacist by the doctor detailing the medicinal ingredients to be used in the prescription (1999: http://www.straightdope.com/columns/read/1641/what-does-the-pharmacists-symbol-rx-mean). Zotti gives two other meanings of the symbol: the first one was that Rx was a corrupt form of the astrological sign for the Roman god Jupiter and was used to render the medicine effective. Zotti explains that the Eye or *wadjet* of Horus became a powerful amulet in ancient Egypt, worn to ward of illness. The right Eye of Horus represented the sun and the left eye, the moon. Zotti relates the legend of how Horus fought Seth, his evil uncle as revenge for the latter’s

11 Represented by a capital ‘R’ with its lower right leg crossed (Reeves 2001:61).

12 The imperative singular form of the verb (Kidd 1984:279).

13 The left Eye of Horus became associated with the amulet while the right eye represented the moon (Zotti 1999: http://www.straightdope.com/columns/read/1641/what-does-the-pharmacists-symbol-rx-mean).
murder of his father, Osiris. During their battle, Seth tore out Horus’ eye and destroyed it but the god of wisdom, Thoth found and repaired it, returning it to Osiris who gave it back to his son, Horus. This would appear to be the origin of the ‘Evil Eye’.

The Eye of Horus with the hieroglyphs for the fractions of the prescription (Reeves 2001:61).

Reeves (2001:57) states that many medicinal plants were introduced to Egypt during the Dynastic Period and can still be found growing there e.g. henna (Lawsonia inermis) from Persia probably used not for colouring hair, but for hair loss (Ebers Papyrus 50). Reeves (2001:57) explains that to date there are still many unknown Egyptian words that have not yet been translated that denote certain plants but the artists’ depictions of the flora are not true representations. These factors make it difficult to identify the remedies used for various ailments.
2.3.5.1  **Mandrake (Mandragora officinarum)**

Reeves explains that the mandrake plant (*Mandragora officinarum*) which contains the narcotics atropine and scopolamine, grew almost wild in Palestine in ancient times and was later used in Egypt from the time of the New Kingdom (1570-1070 BCE; 2001:55). This poisonous plant causes unconsciousness when mixed with wine or beer and the Egyptians believed it possessed fertility and aphrodisiac properties that promoted conception (2001:55). The plant is depicted on an Eighteenth Dynasty (1570-1293) tomb mural housed in the British Museum where it illustrates the fruit being served at a banquet (Reeves 2001:56; Figure 2 in List of Photographs).

2.3.5.2  **Fir tree resin (Albies cilicia)**

Reeves (2001:55) maintains that the resin of the fir tree (*Albies cilicia*) was used as an antiseptic and embalming material. In addition it was used to dislodge roundworms (Ebers Papyrus 77) and to clean septic wounds (Ebers Papyrus 522b).

2.3.5.3  **The aloe plant (Aloe vera) and cinnamon (Cinnamonium zeylanicum)**

Reeves (2001:55) claims that the aloe plant (*Aloe vera*) which came from East Africa was used to treat sinus conditions, while cinnamon (*Cinnamonium zeylanicum*) from Punt\(^{14}\) (in ointment form) was used to treat gum ulcers (Ebers Papyrus 553) and its bark was used as incense. In modern times aloe vera is used in skin products (Kramer 2006:31) while cinnamon has anti-spasmodic, anti-inflammatory and analgesic and is very useful for dyspepsia (Kramer 2006:69).

\(^{14}\) Punt was probably a part of the northern and eastern coast of the Somalia (Lewis 1967:893). The ancient Egyptians sent naval expeditions there to search for exotic products (Bahn 1992:414).
2.3.5.4 Fleabane (Inula graveolens) and sulphur wort (Peucedanum galbaniflora)

The fleabane plant (Inula graveolens) possessing anti-bacterial and insecticide properties and sulphur wort (Peucedanum galbaniflora), a resin with a pleasing fragrance, were burnt as incense (Reeves 2001:57).

2.3.5.5 Pomegranate root (Punica granatum)

Reeves (2001:57) believes that the pomegranate root (Punica granatum) containing tannin, used to dislodge roundworms from the bowel was probably an Asian import from the time of the New Kingdom (1570-1070 BCE).

2.3.5.6 Poppy seeds (Papaver somniferum)

The word spn according to Reeves (2001:58) is presumed to be poppy plant seeds (Papaver somniferum) which contain opium and morphine. This was used as a remedy in ancient times to calm children. Reeves maintains that a decoction of the plant was mixed with fly dung scraped off the wall to a paste and taken for four consecutive days (2001:58; cf Halioua & Ziskind 2005:83).

2.3.5.7 Copper

Reeves maintains that copper inhibits the invasion of the staphylococci bacteria to a certain extent and the copper carbonate found in the Sinai peninsula was ground to a paste and used to clean wounds (2001:58).
2.3.5.8  *Honey*

Reeves claims that honey is a superior bactericide that draws fluid from the diseased cells upon which it is smeared, causing them to atrophy – the bee’s pharyngeal glands secrete honey which contains antibiotic properties (2001:59).

2.3.5.9  *Beer*

Reeves (2001:60) maintains that the Egyptians were very fond of beer and it was used as a solvent for medicine. The yeast that it contained was applied to boils and ulcers. It also possesses properties that are believed to soothe stomach problems (Reeves 2001:60).

2.3.6  *Physicians*

There were doctors who functioned on different levels forming a hierarchy (Reeves 2001:21):

- The ordinary doctor or *sinw*
- The supervisor doctor or *imy-r sinw*
- The chief doctor or *wr sinw*
- The eldest of doctors or *msw sinw*
- The inspector of doctors or *shd sinw*
- The overseer of all the doctors of Upper and Lower Egypt (Reeves 2001:21; cf Halioua & Ziskind 2005:16).

Reeves explains that the Egyptians differentiated between their physicians and surgeons on the one hand and the exorcist-healers who were priests of the goddess Sekhmet on the other hand (Reeves 2001:21).
Reeves (2001:21) claims that the most famous of all doctors was Imhotep, the vizier, architect and chief physician to Pharaoh Zoser (Djoser) who ruled during the Third Dynasty (2686-2649 BCE) and was later identified with the Greek healing god Asklepios. Iry was the head of the doctors at the royal court at Giza during the Fourth Dynasty (2613-2498 BCE) – he had many titles including ‘eye doctor of the palace’ and ‘guardian of the royal bowel movement’ (Reeves 2001:22). Reeves (2001:22) believes that women were represented in the medical field (although not as numerous as the men), one notable example being Peseshet who lived during the late Fourth or early Fifth Dynasty (2498-2345).

Reeves reveals that each physician was a specialist and worked under the auspices of a patron deity e.g. Isis, the solar goddess who was responsible for the liver and Taurt who was the childbirth goddess (2001:22). This can be substantiated by Pliny the Elder who quotes Herodotus (in 450 BCE) saying that all Egyptian doctors were specialists: there were so-called stomach doctors (gastro entomologists), eye (optometrists) and teeth doctors (dentists) to name only a few. Pliny believes that these reports from Egypt were true but greatly exaggerated (Halioua & Ziskind 2005:13).

2.3.6.1 The training of physicians

Brooke (1993:11) states that Queen Hatshepsut (1503-1482 BCE) should be credited with the creation of three medical schools each with their own medicinal herb garden (Reeves :23) and that there were women physicians who practiced during the time of Queen Neferirika-ra circa 2730 BCE.

The medical schools, where the students received training in magic and medicine (Halioua & Ziskind 2005:22) were usually attached to the healing temples, and Brooke (1993:23) believes they could be found at places like Heliopolis and Sais while Walker (1993:100) adds that there were more at Abydos, Amarna,
Memphis and Thebes. Nunn however maintains that these were not medical schools but rather being scriptoria for compiling books on religion (1996:131).

Halioua & Ziskind suggest that the training probably took place in two phases: The first was group training at a ‘House of Life’ and the second was a kind of internship where the junior doctor was apprenticed to their father or other relatives to learn the trade through practical experience (2005:21; cf Nunn 1996:129).

2.3.6.2  The duties of a physician

Halioua & Ziskind maintain that a doctor would first examine a patient’s urine and faeces in minute detail then give a diagnosis, where they would then explain the illness to the patient (2005:25-6). This would be followed by the prognosis where the outcome would be detailed as to whether it was life-threatening or not – similar to the practices of modern doctors (Halioua & Ziskind 2005:26). Patients were treated with a combination of magic and medicine and the terminally ill were taken care of (Halioua & Ziskind 2005:26).

Reeves explains how cauterisation was utilised to control excessive bleeding whereby the surgical knife (made of copper or bronze) was heated in a fire so that bleeding was kept to a minimum while cutting took place (2001:49-50). Reeves (2001:27) adds that doctors used instruments, depictions of which can be seen on the walls of the temple, Kom Ombo, in Upper Egypt that date from the Roman period (332 BCE – 395 CE; Figure 3 in the List of Photographs).

Reeves states further that doctor’s duties included the cleaning of infected wounds with a mixture of animal fat, fir oil and crushed peas. Reeves (2001:27) points out that the doctors were aware of the differences between a wound that was infected and one that was not, as hieroglyphs for each were different (Ebers papyrus 522b). Halioua & Ziskind (2005:132) maintain that fractures were treated
by re-aligning the bones and immobilizing those using splints and bandages (Edwin Smith papyrus 34-36). The Hearst papyrus 223 documents that the break was set in plaster made from milk, barley or acacia leaves, water and gum Arabic\textsuperscript{15}. Reeves (2001:28) believes that during the Fifth Dynasty (2498-2345 BCE) a bone fracture was set using tree bark as a splint and bandaged often applying linen adhesive tape (Reeves 2001:26, 28). Halioua & Ziskind believe that the adhesives were made from bees wax and resin from the cedars of Lebanon (\textit{Cedrus libani}; 2005:38).

Poultices were used with clay, sawdust or wax to draw out poisons, and phlegm from the chest was treated with a myrtle poultice (\textit{Myrthus communis}) to treat pneumonia or pleurisy (Berlin papyrus 142; Dioscorides 1:155, who also advises it “for those who spit blood”; Reeves 2001:28). Reeves states that wounds were possibly stitched with copper suture needles according to information she found in the Edwin Smith papyrus (2001:26).

2.3.6.3 \textit{The status of a physician}

Halioua & Ziskind illustrate that the Egyptian physicians were held in high regard by other peoples of the ancient Near East through a story of Hattusili III, a king of Hatti, who requested medical assistance from physicians of Rameses II for his sterile sister Matanazi (just after the battle of Kadesh; Halioua & Ziskind 2005:181). Rameses complied and arranged for her to receive the necessary drugs, but was doubtful whether his doctors could help her conceive because she was already sixty years old (Halioua & Ziskind 2005:181).

\textsuperscript{15} Also known as \textit{Gum acacia}. The tree sap hardens into a resin which is grown in Arabia, Egypt and Western Asia since ancient times (http://en.wikipedia.org/wiki/Gum_arabic).
2.3.6.4 The physician’s fees

Some doctors were public servants who worked for the state, in return they received a monthly salary plus bonuses in copper and natron, according to the Vatican papyrus of the Nineteenth Dynasty (1295-1185 BCE; Halioua & Ziskind 2005:19-20). Halioua & Ziskind say that the royal physician, who owned land and lived much like the priests, scribes and highly skilled labourers, obviously received a better salary than those who treated the middle classes (2005:20; cf Nunn 1996:121 and the Greek historian Diodorus Siculus, Book I, 82).

2.3.6.5 The physician’s liability

Halioua & Ziskind believe that the physicians observed their medical ethics very strictly in accordance with their ancient writings, preserved in the ‘Houses of Life’ because the doctors regarded the writings as sacred and inspired by the gods (2005:26).

2.3.7 Midwives and nurses

According to Geddes & Grosset the information on midwives is scant – babies were born at home assisted by the midwives who used a birthing stool for the mother. The baby was born through the hole in the stool on which the mother sat or squatted and was caught by the midwife (2001:339). After the umbilical cord had been cut, the placenta was either buried on the doorstep of the house or eaten completely or partially by the mother (Geddes & Grosset 2001:339). Brooke, however records that childbirth took place in the temple of Isis and the date of birth was predicted by astrologers who could also foretell problems that might occur (1993:7).

The ancient Egyptians understood the term ‘nurses’ to refer to wet-nurses or those that cared for infants (Nunn 1996:132).
2.3.8 Circumcisers

A scene depicting a circumcision ceremony can be found on a wall relief at Saqqara on the *mastaba* of Ankh-ma-Hor from the Sixth Dynasty (2345-2181). Circumcision usually took place between the ages of six and twelve years according Geddes & Grosset, who also maintain that the procedure was performed for hygienic reasons (2001:339).

There is evidence to suggest that some form of pain relief was provided to the boys before the operation took place. This is suggested by words found on a doorway relief of Ankh-ma-hor, vizier of Pharaoh Teti from the Old Kingdom (2613-2184). It seems to refer to what Dioscorides called the ‘Memphis stone’ (marble found near Memphis). It appears that this rock was ground up into smaller pieces and rubbed onto the site of the operation to numb the area (5:158). Nunn however doubts very much whether the application of this powdered stone had any painkilling effect (1996:169) and mentions that the identity of the circumciser depicted in the scene is unclear (1996:171; Figure 4 in the List of Photographs).

Geddes & Grosset quote Herodotus as saying that female circumcision was not practiced and to date no circumcised female mummy has ever been found (2001:339).

2.3.9 Physiotherapists

Nunn records that there are scenes in the burial chambers near the pyramid of Teti at Saqqara depicting Ankh-ma-hor and Khentika from the Sixth Dynasty (2345-2181 BCE) which seem to illustrate therapists engaged massaging the hands and feet of persons, perhaps their patients and these scenes are strongly suggestive of physiotherapists or even that of reflexologists engaged in their work. Nunn does not indicate when this discovery was made (1996:133).
2.3.10 Specific diseases

2.3.10.1 Arthritis and osteo-arthritis

Evidence of these bone conditions was found in a wooden statue indicating a deformed and bent man carrying a huge water jar on the back of his neck (housed in the Liverpool Museum) dating to the Eighteenth Dynasty (1570-1325 BCE; Reeves 2001:40; Figure 5 in the List of Photographs). Reeves is convinced that such back posture would have caused the depicted man to suffer from osteo-arthritis (2001:40). Reeves describes an X-Ray from a mummy in the Natural History Museum in Chicago that clearly illustrates deformities of the spinal vertebrae (thoracic), a clear indication of an arthritis or osteo-myelitis sufferer and she cites as an example the mummy of Merneptah (Reeves 2001:41). Halioua & Ziskind state that the mummy of Amenhotep I manifests signs of spinal arthritis and that of Rameses II indicates joint erosion and calcification (2005:99). Halioua & Ziskind claim that treatment was probably in the form of ointments made of animal and vegetable fats and oils as well as animal marrow and spleen, which was applied to the affected area (2005:99). Celery, onions, juniper berries and even mud was in common medicinal use (Halioua & Ziskind 2005:99).

2.3.10.2 Human parasites

A calcified Guinea worm (Dracunculiasis) was discovered in one of the mummies embalmed about 1000 BCE from the Manchester Museum Mummy Project (No. 1770; Nunn 1996:70). This mummy had both legs amputated just above and below the knee respectively causing Nunn to postulate that this could have occurred as a result of unsuccessful attempts to remove the Guinea worm (1996:70). Halioua & Ziskind mention another mummy from Parennefer’s tomb in Western Thebes that also contained this parasite but the date of the mummy is not mentioned (2005:27).
(a) **Bilharziasis (Schistosomiasis)**

Reeves elucidates that evidence of bilharziasis (in the form of calcified ova) was found in the kidneys of mummies in 1910 by Sir Marc Armand Ruffer and she continues that the symptoms include chronic exhaustion and blood filled urine (2001:34). Napoleon’s army reported that Egypt was a land of menstruating men but does not elucidate further in this regard (Nunn 1996:69)! Other symptoms were abnormal male breast enlargement (*gynaecomastia*) from cirrhosis of the liver due to blood fluke infestation (*Schistosoma*) and enlarged scrotal sacs due to the pressure of fluid retention in the abdomen (2001:34; cf Berkow & Talbott 1977:971; Nunn 1996:69). Reeves gives examples of mummies that manifest such symptoms including that of Rameses V and the depictions of enlarged breasts on male labourers found on Mehu’s tomb at Saqqara dating to the Sixth Dynasty (2345-2184 BCE). Reeves explains that *gynaecomastia* should not be confused with the enlargement of breast tissue due to old age (2001:34).

(b) **Other intestinal parasites**

Intestinal parasites were very much part of ancient life as many people were infested with them. Reeves cites an example of a most wretched teenage weaver called Nahkt, from the royal court of Pharaoh Sethnakhte of the Twentieth Dynasty (1185-1182 BCE). His mummy was found to contain tapeworm (*Taenia*), pork roundworm (*Trichinella spiralis*) and bilharziasis (*Schistosoma haematobium*) when it was examined at the Toronto University in 1974. Nahkt was terribly ill and must have felt ghastly for Reeves states that there were red blood cells in his bladder, he had cirrhosis of the liver and his spleen had ruptured – no wonder he died somewhere between fourteen and eighteen years old (2001:36; cf Nunn 1996:69).

---

16 Bilharziasis is still a scourge in Egypt as recent statistics released by the World Health Organisation show that in 1993 twelve percent of the population is infected (Nunn 1996:68).
Halioua & Ziskind found reference to incantations both in the Ebers (61) and Berlin (189) papyri that the embalmers might have utilised to treat themselves for accidental parasite contamination acquired during their work (2005:174). Nunn (1996:106) quotes Pliny the Elder, who was doubtful as to whether incantations actually helped when he said that the wise or learned rejected the idea but most people accepted it subconsciously (Natural History 28:3). Halioua & Ziskind (2005:174) believe that the crushed root of the pomegranate (Punica granatum) was steeped in beer overnight and drank the following morning to treat tapeworm and roundworm (cf Ebers 63). Nunn (1996:72) adds wormwood\(^\text{17}\) (Artemisia absinthium) to this list (cf Dioscorides 3:26).

Tapp (in Nunn 1996:71) states that threadworm larvae (Strongyloides) were found in the mummy of Asru dating to about the Twenty-fifth Dynasty (713-656 BCE)\(^\text{18}\).

Evidence of roundworm infection (Ascaris lumbricoides) was found in a mummy identified as PUM II, that was unwrapped by Cockburn and his colleagues during 1975 in the United States but no other details are given (Nunn 1996:71).

2.3.10.3 **Snake bite**

Nunn believes that the ancient Egyptians were terrified of being bitten by snakes and did their best to prevent this by the use of amulets, magic texts and incantations. He mentions as an example the Metternich stela (an upright stone slab kept in the New York Art Museum), covered with magical spell engravings including a representation of the child Horus always associated with snakes and scorpions (1996:108). Snake bite was treated in various ways: The knife treatment mentioned in Brooklyn papyri (47.218.48, 47.218.85) which was

---

17 Named after Artemisia, queen of Caria a healer who had a good knowledge of medicinal plants and died about 355 BCE (Brooke 1993:14).
18 This mummy also formed part of the Manchester Museum Mummy Project Tapp (in Nunn 1996:71).
probably to excise the bite and prevent the poison spreading. Salt was then added to reduce swelling or even cautery (cutting with a hot knife) took place (Nunn 1996:188). Other remedies used were onions (Allium cepa; associated with the gods Horus, Ra and Serqet) mixed with beer, possibly carob (Ceratonia siliqua) and some variety of terebinth which Nunn (1996:189) postulates is Pistacia terebinthus.

2.3.10.4 Tuberculosis

The leprosy bacteria (Mycobacterium leprae) and that of tuberculosis (Mycobacterium tuberculosis) are of the same genus as the first word of their scientific names imply. Reeves maintains that the first sufferers of the Mycobacterium type probably contracted tuberculosis as it was far more common than leprosy (2001:33). Reeves quotes Manchester saying that early humankind probably first contracted tuberculosis from their bovine herds and there is evidence of Pott’s disease in the mummy of a 21st Dynasty (1070-945 BCE) priest called Nesperehan, because of a typical psoas muscle abscess in the lower right abdomen (2001:33; cf Nunn 1996:74; Figure 6 in the list of photographs). Tuberculosis, like leprosy, is very difficult to diagnose pathologically because the bacilli only remain in morbid tissue for a very short time (Halioua & Ziskind 2005:145). Reeves explains that there are other changes in the lungs that can mimic tuberculosis such as fungus infection, or anthracosis, a disease caused by inhaling carbon dust from smoke pollution (cooking) and from the fires and oil lamps so common at the time (2001:34).

There were at least forty cough remedies in Egypt including honey, cream, milk, carob (Ceratonia siliqua), date palm wine (Phoenix dactylifera; Dioscorides 5:40) and melilot (Trifolium melilotus corniculata). Halioua & Ziskind explain that the latter remedy was used with a hot cumin drink (Cuminum cymminum) to treat

---

19 Untreated tuberculosis can result in Pott’s disease in a small percentage of cases (Reeves 2001:33).
persistent coughing (2005:87) or a cough mixture made of turpentine oil (\textit{Pistacia terebinthus}; Dioscorides 3:68).

2.3.10.5 \textit{Leprosy (Hansen’s disease)}

Leprosy, also known as Hansen’s disease is caused by the bacteria, \textit{Mycobacterium leprae}, and was named after the Norwegian doctor, Hansen, who discovered it in 1868. Biblical leprosy or in Hebrew \textit{tzara’at}, was a generic name given to skin diseases in general which might have also included Hansen’s disease (Reeves 2001:33).

Reeves believes that leprosy (Hansen’s disease), already prevalent in China by the first millennium BCE was introduced into Egypt via Alexander the Great’s armies on their way home from India in 327-326 BCE (2001:33; cf Haloiua & Ziskind 2005:127). Reeves (2001:33) as well as Haloiua & Ziskind (2005:127) state that there is archaeological evidence of signs of modern leprosy (Hansen’s disease) on the skeletal remains of four adult European type males found at the Dakhleh Oasis in Egypt in a cemetery dating back to the Greek Period (332 BCE-30 CE). Haloiua & Ziskind (2005:127) claim that this diagnosis was made by Dzierzykray-Rogalsky in 1980. To further substantiate this there is mention of a skin thickening condition or swelling (\textit{anut}) believed by the Egyptians to be caused by the dry coughs of the god Khonsu in the Ebers papyrus (Eb. 877; Haloiua & Ziskind 2005:126). This description is slightly reminiscent of the nodes of lepromatous leprosy, a type of modern leprosy described by Berkow & Talbott (1977:126-7). As this was a predominantly Negroid burial place, Reeves postulates that the four men were buried there because they were leper outcasts from their own community in Alexandria (2001:33).

Reeves indicates that there are other remains of Coptic Christian leprosy sufferers dating back to the 4\textsuperscript{th} century CE found in Nubia, at el-Bigha as early as 1910. Although these have been re-examined by Moller-Christensen, Rowling &
Sandison, Reeves gives no further detail (2001:33). Nunn is convinced however that the mummies date from the 6th century CE and that no Mycobacterium leprae (Hansen’s disease) organisms were ever found in the remains (1996:74). It is Nunn’s opinion however, that none of the above-mentioned scholars are aware of any mummy that manifested signs of lepromatous leprosy but postulates that these Coptic Christians were possibly refused mummification because they lived in isolation whilst alive (1996:74). Reeves states that the organism which causes leprosy does not remain long in morbid tissue (2001:33).

2.3.11 Conclusion

Egyptian medicine was inextricably interwoven with magic and religion. It was in my view a very sophisticated system in that it took many forms e.g. pills, plasters, suppositories. The paramedics provided an auxiliary support service to assist the many doctors throughout the centuries during which they functioned. It is gratifying to know that many of their remedies are still in use today as an alternative herbal therapy such as pomegranate rind for roundworms. Unlike that of Mesopotamia, most of the recorded Egyptian knowledge can be read and understood by scholars enabling the knowledge preserved in the Medical papyri to be disseminated.

2.4 GREEK MEDICINE AND DISEASES

2.4.1 Introduction

According to legend, Greek medicine began with Asklepios (who may have had mortal existence in 1200 BCE) and his two sons – Podalarius and Machaon said to be surgeons in the Greek army (Guthrie 1967:94B). The healing sanctuary near the temple at Epidaurus will be discussed as well as supernatural healings. The physicians and paramedics, including the midwives, who plied their trade in
ancient times, will be dealt with as well as some diseases that confronted them and their treatments.

2.4.2 Magic, healing and the supernatural hero

Apollonios of Tyana\textsuperscript{20} lived in the 1\textsuperscript{st} century CE. Armstrong (1967:123) claims that he was born in Cappadocia at the beginning of the Christian era and survived into the reign of the Roman Emperor, Nerva.\textsuperscript{21} Apollonios' fame originated from his biography written by Philostratus and commissioned by Empress Julia Domna\textsuperscript{22} (Armstrong 1967:123). The biography, \textit{The Life of Apollonios} written about 218 CE, was described by Armstrong as being unreliable and over-romanticised. It describes Apollonios as an austere, itinerant, miracle man and the account was not well acclaimed (1967:123). But the book resulted in Apollonios being venerated by the Romans in the later Roman Empire. Armstrong (1967:123) states that Emperor Caracalla\textsuperscript{23} erected a shrine to him and donated funds for a temple to be built in his honour (Cartlidge & Dungan 1980:205). He postulates that Hierocles of Nicomedia, an anti-Christian author, based the miracles of Apollonios on those of Jesus of Nazareth. Armstrong believes that both Philostratus and Julia Domna\textsuperscript{24} expected that the biography being similar to a gospel would weaken the Christian faith but this never happened (1967:123).

Apollonios was believed to be the son of Zeus by the locals in Tyana, partly human and partly divine (Cartlidge & Dungan 1980:206). When he was born, Philostratus (Book I. 5 in Cartlidge & Dungan 1980:211) says that a bolt of

\textsuperscript{20} This sage called Apollonius in Rome, should not be confused with the Greek god Asklepios (see 2.4.4 below).
\textsuperscript{21} His full name was Marcus Cocceius c 35-98 CE who ruled only two years 96-98 CE (Crook 1967:232).
\textsuperscript{22} The second wife of the Emperor Septimus Severus Alexander who ruled 222-235 CE (Morris 1967(c):129)
\textsuperscript{23} His full name was Marcus Aurelius Antonius Caracalla 188-217 CE and ruled 211-217 CE (Morris 1967(a):858).
\textsuperscript{24} Julia Domna, the mother of Emperor Caracalla, died in 217 CE (Morris 1967(c):129).
lightning struck the earth and rebounded skywards. Cartlidge & Dungan (1980:206) believe that ‘The Life of Apollonios’ was based on fact but had a fictional and supernatural theme. It mentions miracles, dreams and teleportation experienced by Apollonios as well as exorcisms, disappearances from the earth and his subsequent re-appearance from heaven after his death to convince a doubtful disciple of the soul’s immortality (Cartlidge & Dungan 1980:206).

Cartlidge & Dungan (1980:215) relate how Apollonios abstained from consuming alcohol and refrained from engaging in sexual activities. He wore only simple linen clothing, grew his hair long and walked barefoot. He lived in the temple of Asklepios outside Aigai where crowds flocked to see him. After the death of his father, Apollonios donated his father’s assets to his family claiming that he had no need for material wealth (Cartlidge & Dungan 1980:213). Cartlidge & Dungan mention that Apollonios travelled to India, Babylon, Greece and Pamphylia25 (1980:215).

One of the teleportation experiences recorded by Philostratus is explained by Cartlidge & Dungan (1980:228) as follows: Reports of a plague in Ephesus reached Apollonios, who realising the urgency of the situation, teleported himself there instantly (1980:228). He insisted that the people of Ephesus stone a certain old beggar to death. The townsfolk were naturally very reluctant to do this as the old man was pleading for his life; but they reluctantly obeyed Apollonios, killing the man (in Cartlidge & Dungan 1980:228). The story is further enhanced by the account that the old man had taken the form of a huge mad-dog which was later found to be hidden under the stones used by the townspeople to kill the demon.

Philostratus also mentions how Apollonios exorcised a young man, who kept interrupting his presentation at a public lecture in Athens. Apollonios realised that he was demon possessed (in Cartlidge & Dungan 1980:229-230). Philostratus

25 A small country situated on the Mediterranean coast between Lycia and Cilicia, south of Pisidia in present day Turkey (Brice 1967:198).
records that Apollonios healed sufferers with eye infections, the crippled and the paralytic (Book III. 39 in Cartlidge & Dungan 1980:226).

Two more of Apollonios’ miracles mentioned by Philostratus are described by Cartlidge & Dungan below:

- A pregnant woman with a history of difficult births was magically healed by Apollonios in the following way: Apollonios instructed her husband to put a rabbit in his shirt and to restrain it there until his wife was ready to deliver the baby. He was instructed to release the animal simultaneously with the birth of the child (Philostratus Book III.39, in Cartlidge & Dungan 1980:226).

- A young Roman woman had died on the eve of her wedding. Apollonios who was amongst the mourners, ordered that her bier on which the coffin was resting be placed on the ground. He restored her to life by touching her and whispering something inaudible to the mourners, in her ear. The bride-to-be got up and Apollonios refused to accept the reward of 150 000 silver pieces offered to him by her family, but gave it instead to the bride for her dowry (Philostratus Book IV. 45, in Cartlidge & Dungan 1980:231).

There are several accounts of Apollonios’ death. The most interesting one is described by Philostratus as follows: Apollonios resided in Crete where he was venerated as a god. One lonely night he went to the temple of Artemis where he was arrested by the guards under suspicion of being a sorcerer because the vicious guard dogs did not attack him. Another charge brought against him was that of being a thief. The temple caretakers maintained that he had drugged the dogs in order to steal the temple treasures. Despite this, he managed to escape his prison chains and had locked himself inside the temple. When the guards managed to open the temple doors, Apollonios was no longer there. Legend has
it that he had ascended to heaven (Philostratus, Book VIII, 30, in Cartlidge & Dungan 1980:241).

Apollonios had godly status even after the Roman Empire became Christian. Cartlidge & Dungan tell of how the Emperor Julian the Apostate\textsuperscript{26}, so called because he preferred to worship the old Roman gods (including Apollonios). Cartlidge & Dungan maintain that despite being raised in the Christian faith, he tried unsuccessfully to re-introduce pagan worship to his Empire (1980:207). At the beginning of the 5\textsuperscript{th} century CE Emperor Severus placed a statue of Apollonios in his personal sanctuary (Armstrong 1967:123).

2.4.3 Medical texts

Guthrie claims that by the time of Hippocrates medicine was slowly moving away from magic towards science, but this process lasted for several centuries (1967:94B).

Craffert (1998:138) states that Hippocrates, born in Cos,\textsuperscript{27} is best remembered for the Hippocratic Oath. He is the founder of modern medicine, as well as the Corpus Hippocraticum which was originally thought to have been penned by him but was in fact written over a period of a century by different people. Nutton discusses some of Hippocrates' works (2004:239). Two are mentioned here: ‘Fractures and Joints’ and ‘Epidemics, Prognostic and Aphorisms’.

Peck (1967:459) describes Diocles\textsuperscript{28} as second in importance to Hippocrates. He was a Greek physician of Carystus in Euboea who relocated to Athens where he produced works on animal anatomy, human physiology and dietetics as well as physiology, embryology and medical botany. He postulates that Theophrastus

\textsuperscript{26} Flavius Claudius Julianus 332-363 CE (Thompson 1967:129).
\textsuperscript{27} Circa 460-370 BCE (Craffert 1998:138).
\textsuperscript{28} 4\textsuperscript{th} century BCE (Peck 1967:459).
may have used his work when he wrote his famous botanical encyclopaedias (Peck 1967:459).

Aristotle\textsuperscript{29} a pupil of Plato,\textsuperscript{30} had much to contribute to medicine being a famous biologist, who wrote on anatomy and taught Alexander the Great,\textsuperscript{31} but the most famous physiologist was Erasistratus\textsuperscript{32} a grandson of Aristotle, according to Pliny the Elder (\textit{Natural History} 29:5 in Healy 1991:261). Guthrie explains that Alexandria in Egypt became the new front for Greek culture when a medical school was founded there in \textit{circa} 300 BCE (1967:95).

Nutton maintains that Herophilus\textsuperscript{33} was an Alexandrian physician – an anatomist of renown and very knowledgeable. He founded a school of anatomy in Alexandria (2004:132-3). He undertook many post mortems and produced works for the midwives of his time. His other works included commentaries of the works of Hippocrates and causes of sudden death (The Editors of \textit{EB}1967:446).

Buttrey (1967:565) describes Asclepiades of Birthynia, as a Greek physician who was born in 124 BCE and practised in Rome towards the end of the 2\textsuperscript{nd} century BCE. Widely travelled and a protagonist of the corpuscular theory, he believed that disease resulted from irregularities in the movement of corpuscles throughout the body. Asclepiades would recommend a healthy diet, water therapy, stimulating body massage and exercise. Part of the cure would entail drinking wine, purges and blood-letting (Buttrey 1967:564). He claims that Asclepiades attracted many students and was regarded as being the first physician to use music therapy to treat the mentally ill (Buttrey 1967:565).

\textsuperscript{29} 384-322 BCE (Guthrie 1967:95).
\textsuperscript{30} 429-347 BCE (Guthrie 1967:95).
\textsuperscript{31} 356-323 BCE (Walbank 1967:571).
\textsuperscript{32} 3\textsuperscript{rd} century BCE (\textit{Nat. Hist.} 29:5 in Healy 1991:261).
\textsuperscript{33} Born at Chauldon \textit{circa} 300 BCE (The Editors 1967:446).
Galen\textsuperscript{34} born to a wealthy family in Pergamon studied medicine in 146 CE. Prendergast claims that he visited Greece, Celicia, Phoenicia, Palestine, Crete, Cyprus and Alexandria during his early years (1967:1083). He went to Rome in 149 CE and was a physician to the Emperor Marcus Aurelius Antonius\textsuperscript{35} and his son, Commodus\textsuperscript{36} and probably died in Sicily in about 200 CE although this is not certain (Prendergast 1967:1083). Galen penned many books in Attic Greek and was a renowned anatomist and physiologist, describing the hand in great detail in his work \textit{On the uses of the Parts of the Body of Man} (Prendergast 1967:1083). Nutton mentions some of his other works: \textit{Method of Healing} that describe the basic principles of medicine (2004:223), \textit{On the Opinions of Hippocrates and Plato} where he discussed the views of the latter two, but especially those of Plato on anatomy (Nutton 2004:223). Other works included were: \textit{Anatomical Procedures} which described dissections and \textit{On the Anatomy of Muscles} which title is self explanatory (Nutton 2004:232).

\textbf{2.4.4 The healing temples of Asklepios}

Jackson (1988:140) relates the legend of the Greek god Asklepios\textsuperscript{37} the physicians’ god. His father was Apollo and his mother a mortal, Coronis, daughter of king Phelgyas of Trikka, Thessaly in northern Greece. Asklepios was taught the healing art by the centaur, Chiron (Jackson 1988:140). Asklepios, a miracle worker, incurred the wrath of Zeus who killed him. Jackson avers that as his cult grew, so did the many legends about him (1988:142). He was depicted as a well built, middle aged man wearing a long cloak holding a staff entwined by a sacred snake that was fed by his daughter Hygieia (Jackson 1988:142). Jouanna says the snake, which was regarded as a symbol of luck, fertility and rebirth, was one of his pets (1992:37; cf Jackson 1988:171; Figure 7 in the List of Photographs).

\textsuperscript{34} Circ\textit{a} 129-200 CE (Prendergast 1967:1083).  
\textsuperscript{35} Originally Marcus Aurelius Antonius Augustus ruled 161-180 CE (Crook 1967:857).  
\textsuperscript{36} Originally Lucius Aelius Aurelius ruled 180-192 CE (Morris 1967(b):159).  
\textsuperscript{37} Known as Aesculapius in Rome (Jackson 1988:140).
Rousselle maintains that healing temples were established first at Epidaurus early in the 4th century BCE (Rousselle 1985:339) and by 400 BCE others had followed at Cos and Pergamum. Jackson believes that this trend continued well into the early 3rd century BCE (1988:143; cf Rousselle 1985:340). The healing took place in the *abaton*\(^{38}\) where the patients slept the night preceded by a sacrifice, ritual bath (Rousselle 1985:340; cf Craffert 1998:146-147) and possibly prayer to the god. Brooke believes that the patients were hypnotised or received potions (possibly even snake venom) to enable them to sleep so that the gods would appear to heal them in a dream (1993:13; Figure 8 in the List of Photographs).

Rousselle is certain that the type of ailments cured were those of a psychosomatic nature such as female sterility (1985:341), as well as sufferers of bowel abscesses, intestinal worms (1985:342) and those who were paralysed. Rousselle attaches a more psychological meaning to these dreams rather than a literal one (1985:343). He suggests that most of these complaints were hysterical reactions to certain repressed fears and guilt. Rousselle suggests that once a woman had dreamt she had been impregnated by the god, Asklepios, her anxiety to fall pregnant lessened. This would in reality, enable her to conceive without difficulty because divine births, such as the one of Alexander the Great, were commonplace (Rousselle 1985:341). If a patient dreams of intestinal worms in a dream Rousselle interprets that as symptoms of extreme anxiety (such as others harming the dreamer) but that the problem was solved by the chasing the wrongdoer away (1985:343).

Rousselle 's view of a paralysed man who overcame obstacles and walked in his dream, was that the patient had regained his self confidence and walked again soon after his dream treatment (1985:344). Many of these cures were the result of autosuggestion in Rousselle’s opinion (1985:344-345). Walton mentions the case of Aelius Aristides and suggested that the patients were probably in some

---

\(^{38}\) A secluded place near the sanctuary where the patients slept the night (Rousselle 1985:340).
kind of self induced trance (in Rousselle 1985:340). Rousselle believes that emotional problems like grief and envy are not curable and that the patient him/herself should engage in some soul searching to find the cause.

The incident of Aeschines is well known, but Rousselle does not indicate in which town this took place – he was very curious about the healing stories he had heard and climbed a tree to get a better look through the leaves to see if he could glimpse any unconscious patients – it is probable he had heard how people had dreamed of sexual intercourse with snakes and this spurred him on to spying (Rousselle 1985:344). In an unfortunate turn of events, the hapless Aeschines fell out of the tree and injured his eyes on a stake in the ground nearby and was himself later healed after sleeping in the abaton, says Rousselle (1985:344; cf Nutton 2004:109).

Angeletti et al believe that those who went to the healing temples of Asklepios were healed by the god, who took the form of a snake but it is more likely that the healer was a priest who had a sacred serpent (1992:223). According to Jackson, the god Asklepios was always depicted as an old man with a staff, encircled by a snake (1988:139). The sacred snakes were probably of the genus *Elaphe*, either *Elaphe longissima* (referred to as the Aesculepian snake) or *Elaphe quatuorlineata*. Angeletti et al (1992:223) claim that both types were well suited to captivity and cite Hippocrates (*De decenti ornatu* 6; Angeletti et al 1992:228, footnote 1), Pausanias (in his description of Greece; 2.27.3-4, 2.28.1; Angeletti et al 1992:228, footnote 4) and Pliny the Elder (*Natural History* 8.11; Angeletti et al 1992:228, footnote 8). Majno (in Angeletti et al) relates how texts were found near a healing sanctuary at Epidaurus which documents a man suffering from a malignant sore on his toe. The man was taken outside the temple and once he was asleep, a snake emerged from the abaton and healed the man by licking his toe and then retreated back to the abaton (1992:223). There is a second bas-relief from Amphiaraos depicting two young boys, one with a snake’s mouth on
his shoulder while the other boy appeared to be asleep. This appears to support Majno’s view (Angeletti et al 1992:224).

Angeletti et al find that the saliva of these snakes contains amino acids called polypeptides that stimulate wound healing because they contain a certain growth factor, otherwise known by the abbreviation EGF (1992:223). Biological tests have confirmed this and the saliva has been used successfully on lesions, surgical wounds, burns, gastro-intestinal ulcers and tendon injuries (Angeletti et al 1992:224).

Rousselle (1985:348) explains that the cult of Asklepios at Epidaurus, Cos and Pergamum continued into the late 4th century CE but the beginning of the 4th century CE saw many of the sanctuaries being closed down or even destroyed by the Christians under Emperor Constantine. Craffert (1998:146) maintains that the remains of one such sanctuary can be found in Jerusalem in the vicinity of the old Pool of Bethesda. Holy shrines still exist today: Lafourcade says that the shrine of the Virgin Mary, who appeared at Lourdes to Marie Bernarde Soubirous39 no less than eighteen times between 11 February and 16 July 1858, is the most famous healing spa visited by at least two million pilgrims annually (1967:361).

2.4.5 Hellenistic botanists

The most famous botanist was Theophrastus (c. 371-287 BCE) one of Aristotle’s pupils, who produced an encyclopaedia of medicinal plants (Nutton 2004:141). Dioscorides, a Silician Greek, and contemporary of Pliny the Elder (c. 40-90 CE) probably studied pharmacology at Tarsus and used the famous Alexandrian library to compile his great work, according to Osbaldeston & Wood (2000:xiv, the translators of the book, De Materia Medica written by Dioscorides). He was able to research medical indigenous plants while he was a doctor in the Roman

39 1844-1879 better known as St. Bernadette (Joyce 1967:522).
army and his book became the most important botanical work used by pharmacists up to the late 17th century CE (Osbaldeston & Wood 2000:xv, xxvii; Nutton 2004:141) and several of his manuscripts written in the Arabic language still exist today in the Middle East (Osbaldeston & Wood 2000:xxv).

2.4.6 Materia medica

2.4.6.1 Melilot (Sweet clover; Melilotus officinalis)

Both Theophrastus (VII 15, 3) and Dioscorides (3:40) document the use of melilot roots as an antidote for poisonous bites (Rosner 1979:8).

2.4.6.2 Opium poppy (Papaver somniferum)

Theophrastus (I, 12, 2) recommended its use as a soporific and Dioscorides (4:64) used it in a syrup form to calm crying infants (Rosner 1979:26).

2.4.6.3 Common polypody (Polypodium vulgare)

This is a plant of the fern family and the name means ‘having many feet’. The rhizome contains tannin which was used for diarrhoea by both Theophrastus (9, 13, 6) and Dioscorides (4:186; Rosner 1979:52).

2.4.6.4 Dittany (Origanum dictamus)

This plant was used probably in a decoction form to treat wounds in antiquity and is mentioned by Theophrastus (9, 16, 1-3) and Dioscorides (3:32; Rosner 1977:166).
2.4.6.5 Greek rue (Anethum graveolens)

This Greek species of rue was used as a general tonic in antiquity and to treat eye disorders, recommended by Theophrastus (1, 3, 9-10) and Dioscorides (3:45; Rosner 1979:186).

2.4.7 Physicians

2.4.7.1 The training of physicians

According to Jouanna (1992:39), medical schools had been established from about the 5th century BCE at the cities of Cos and Cnidus, and at the smaller towns of Croton and Cyrene where a doctor would teach his own sons and those of his friends and relatives. In this way local knowledge was passed from one generation of medical people to another. Plato states that those at Cos would have had expert tuition by Hippocrates who was a lecturer there (Protagoras 311 b-c). By this time it was no longer a requirement that a physician should come from a family of doctors (Jouanna 1992:46).

Jouanna maintains that the students’ final medical examination took place at a gathering of lay people where the candidate addressed the crowd on certain elements of their training and experience, such as who their teacher was, as well as their own ability and success in their chosen profession (1992:79). Questions from the audience had to be answered by the student and Jouanna says that the student’s skill in public speaking was paramount to impress the crowd and oust possible rivals40 (1992:80).

Brooke relates the story of a Greek lady doctor, Agnodice, who attended medical school in Alexandria disguised as a man during the Classical period because it

---

40 This is reminiscent of a legal trial by a jury of lay people where the attorney has to convince the jury of the accused’s innocence by his oratory skill.
was a criminal act for women to study medicine during that time (1993:13). She mentions that many women had refused to be treated by male physicians and died as a result (Brooke 1993:13). Horrified by this, Agnodice was prepared to risk death to save lives and her popularity resulted in her being unmasked by jealous male colleagues. As a result she was taken to court where she received the death sentence relates Brooke, but was saved by her women patients. Many of them who were very rich and influential marched to the court and threatened to take their lives if she was killed (1993:14). Brooke explains that the judges relented because some of their family members were her patients. Agnodice was directly responsible for the amendment of the Greek law permitting women to become doctors but they were restricted to the treatment of women and children (Brooke 1993:14). Rosner echoes this by confirming Greek women were examined and treated by women physicians (1978:12).

2.4.7.2 The duties of physicians

Jouanna relates how doctors would secure themselves a room to treat patients at the local market place (1992:75; Figure 9 in the List of Photographs). A doctor’s daily work consisted of house-calls often with his students and assistants in tow carrying his black bag; he would examine his patient and then give his prognosis regarding the illness to the waiting, worried friends and relatives (Jouanna 1992:99).

Nutton states that Hippocrates was knowledgeable in physiology and usually used a bench to manipulate a fractured limb into its original position with the use of a bench much like that of a modern chiropractor or osteopath; he was able to differentiate between a small bone fracture and that of a dislocation (Hippocrates, Instruments of Reduction 38: IV, 382-6 L; 2004:93 footnote 60:346).
2.4.7.3 The physician’s fees

Physicians were paid for their services – some were criticised for their greed by Heraclites who said that several patients were actually tortured and still had to pay the doctors fees. Aristotle said that the doctors should only receive payment when the patient was cured (Jouanna 1992:119). Sadly even during the time of Hippocrates, only the rich could afford medical treatment although some doctors treated the indigent for free (Jouanna 1992:119-120). Nutton confirms that there was no obligation to do this on the part of the doctor (2004:87).

2.4.7.4 A physician’s liability

Rosner believes that there was no liability on the part of the physician if he wilfully caused the death of one of his patients because early Greek law considered him innocent (1978:31). Jouanna confirms this by adding that the doctor simply lost his reputation and that was in all likelihood why there was such a shortage of reputable doctors (1992:78).

The Hippocratic doctor was guided by ethical principals to uphold life and the ultimate good; not to harm, but help (Jouanna 1992:125). Despite this being echoed in the Hippocratic Oath, Jouanna maintains that abortions took place by unscrupulous doctors who would administer poison in a lethal dose, but the doctor was then liable to possible prosecution and even the death penalty (1992:129). Jouanna cites the case of a rich Athenian man who was prosecuted because one of his choir members died after he gave them some throat medication. It would appear as though he had over-medicated one of them. There is no indication as to whether the choir master was given the death penalty (Jouanna 1992:129).
2.4.7.5 Surgery and cautery

Despite Dioscorides’ description of the use of henbane and white mandrake as anaesthetics in the 1st century CE, Jouanna postulates that patients must have experienced pain during surgery (although this was never mentioned in the Hippocratic Corpus), consequently speed on the part of the surgeon was essential (1992:128). The slower operators had to hold the patients down and give them a pain respite during the procedure (Jouanna 1992:128). It is difficult to pinpoint exactly when herbal anaesthetics were first used on patients but Pliny the Elder’s writings refer to the use of the mandrake plant for that purpose during the 1st century CE (Natural History 25:150) well after the time of Hippocrates who died in 370 BCE. A marble relief from the Asklepieion in Athens during Roman times indicates the type of surgical instruments utilised by the physicians in Greece. These are in depicted in Figure 10 in the List of Photographs.

According to Jouanna, cautery was performed as a last resort, the areas targeted were mainly on the head below and behind the ears, the forehead and corners of the eyes – those who survived were very badly disfigured (1992:181). It was believed that disease caused bile and phlegm to flow through the blood vessels and that cautery could successfully block it thereby affecting a cure (Jouanna 1992:161). Unfortunately Jouanna avers that some patients did not survive over zealous cauterisation (1992:161).

2.4.7.6 Doctors and dissection

Jouanna states that human dissection was not practised during the time of Aristotle or Hippocrates but only in Hellenistic times at Alexandria, Egypt (1992:308). Jouanna claims that the Hippocratic doctors were generally very circumspect about the acquisition of their anatomical knowledge (1992:309).

---

41 Cautery was process of sealing a bleeding wound using a surgical knife that had been heated probably in a fire (Coulson et al 1980:130).
Animals however, were dissected so that their internal organs could be examined to predict the future (Jouanna 1992:308; Ezk 21:21). Jouanna is convinced that physicians became knowledgeable on human anatomy in this way, similar to the priests of Biblical times. There must have been some diseased animals that were examined for comparison. Despite this setback the doctors were aware of bodily organs such as the liver, kidneys and spleen but they believed that the diaphragm separated the body into two cavities – the upper and lower (Jouanna 1992:308). Nutton states that dissection in Greek times was taboo – merely touching a dead body was outlawed by the religious laws of the time, because it was believed that a cadaver was still a human being and worthy of respect (2004:129). This view persisted in Greece but not in Alexandria where the ancient Egyptians embalmed their dead (2004:129). Retief & Cilliers believe that Erasistratus was able to dissect cadavers as early as the 3rd century BCE in Alexandria (2005(d):263). Galen preferred to dissect monkeys like the Barbary ape because they are physically akin to humans (Galen 14, 627; Nutton 2004:231).

2.4.8 Midwives

Jouanna says that midwives assisted at births and that this duty usually fell to an older woman42 experienced in birthing who was acquainted with folk medicine so she could provide pain relief or expedite the birth (1992:122). Appreciated by the physicians, they often co-operated with the midwives during a difficult birth and Jouanna mentions an account of a premature baby being born in the seventh month of the mother’s pregnancy and surviving (1992:122).

2.4.9 Blood-letting

Jouanna believes that blood-letting must have been an established practice before the birth of Hippocrates (1992:161). Such a scene was depicted on a 470

42 Socrates’ mother was a midwife (Jouanna 1992:122).
BCE vase now in the Louvre, Paris and the favourite spots were situated behind the knees, below the tongue and anywhere on the head (Jouanna 1992:161). In principle, bleeding was only performed on healthy patients lest they weaken from the procedure, although Jouanna mentions the case where blood-letting was performed on a pregnant woman and she was bled from the ankles (1992:161).

2.4.10 Specific diseases

2.4.10.1 Gout, arthritis and osteo-arthritis

Gout leaves unmistakeable marks on human bones according to Grmek. A skeleton of a middle aged man was found at Lerna dating back to the Middle Bronze Age (1989:72). His big toe was found to contain uric acid deposits a sure sign of gout, caused by a genetic metabolic disorder confirmed by a yellow-purple coloured mark on his left elbow (Grmek 1989:73). Grmek documents a more recent discovery of another man with gout found buried in a sarcophagus in Cirencester in Gloucestershire, whose remains date back to the 2nd century CE (1989:73).

Pliny the Elder (Natural History 26:100) regarded gout as a ‘foreign ailment’ which developed as a result of the Roman lifestyle tendency to overeat at banquets according to Seneca (Epist. 95). Grmek states that recent medical research has found that gout is an inherited disorder and that the Greek climate and certain aspects of the Mediterranean diet predispose many in modern times to urinary stones (1989:73). Paleopathological evidence has traced it through remains found in Europe and Egypt but nothing has yet been found in Greece according to Grmek (1989:74). The reason Grmek gives for this is that it is very hard for researchers to trace such a small stone in human remains after so many years (1989:74).
Grmek believes that arthritis and osteo-arthritis affected many during the Middle Bronze Age and skeletal evidence was found at Asine (Greece), in the form of a fracture that did not heal in its original position causing permanent damage to the joint because it was constantly used in a misaligned state (Grmek 1989:79). Grmek states that a good example of repetitive strain disorder (RSD) was found at Lerna in Greece (1989:79). He explains that the remains belonged to a weaver whose shoulder was destroyed due to RSD caused by working long hours with it constantly in the same position (1989:79). He adds that arthritis can also be the result of rheumatic fever, which does not leave any marks on the bones but he concludes that it may not have existed in antiquity (Grmek 1989:79).

2.4.10.2 Epilepsy

Epilepsy was treated in the abaton by the god, Asklepios. He would heal his patient by pressing his magic ring into all the orifices of their head reminiscent of applying pressure to certain points on the head (Jouanna 1992:201). Although a Hippocratic doctor did not recommend such treatment, he would have been aware of the abaton cures maintains (Jouanna 1992:201). Jouanna believes that the two forms of healing co-existed (1992:202). The difference between the two healing options was in the fact that the doctor did not acknowledge that the healing was divine intervention or the result of a dream cure in the abaton whereas a religious healer would do so (Jouanna 1992:202).

2.4.10.3 Parasitic infestations

Grmek (1989:86) postulates that malaria was endemic in Greece much like bilharziasis was in Egypt and he is convinced that malaria leaves signs on bones. Unlike the Egyptians, the Greeks did not embalm their dead making it difficult to detect the presence of parasites in archaeological remains. Grmek is convinced however, that the early Greek physicians were aware of them (1989:86).
2.4.10.4 **Snakebite**

The Greeks did not share the same fear and revulsion of snakes as the Egyptians and ancient Jews. Instead they regarded them quite positively – one look at Figure 7 where Hygieia is feeding her snake is convincing. It is however, safe to assume that the snakes must have bitten their owners at some time, in which case they might have utilised the following treatments:

Melilot (sweet clover; *Melilotus officinalis*) root imported from Syria was an antidote for venomous bites, possibly used also for that of a snake (Theophrastus 7:15,3; Rosner 1979:8). Dioscorides documents the use of snake venom mixed with that of the asp (6:53; Kottek 1994:135; cf Josephus *Antiquities of the Jews*. 15,225). Pliny the Elder is convinced that the smell of garlic was sufficient to deter both snakes and scorpions (*Natural History* 20:50 in Healy 1991:225).

2.4.10.5 **Tuberculosis**

Tuberculosis, also known as a wasting disease, the common symptoms of which were fever and a persistent cough with blood tinged sputum (Grmek 1989:178). It spread rapidly in overcrowded, unsanitary cities as it is an airborne disease (1989:178).

Archaeological evidence is sadly lacking but Greek art works depict many hunchbacks late into the Greek era which Grmek believes is reminiscent of spinal tuberculosis (Potts disease; 1989:178). It is his opinion that tuberculosis may have originated in China where the Emperor Kao-tsung's prime minister (*circa* 1300 BCE) had symptoms of chronic blood-spitting, coughing and a prevalent hunched back which all seem to refer to tuberculosis, according to the *Nei-ching* treatise on Chinese medicine (Grmek 1989:181).
Phthisis in Greek means ‘wasting’ and Grmek relates that the first apparent case appeared to afflict a Persian called Pharnuches in 481 BCE. He was reported as having to be left behind with phthisis but his haemorrhaging was probably an internal injury as a result of a violent fall from his horse (1989:183).

In the late 400’s BCE there were three types of consumption but none appear to accord completely with the modern symptoms of tuberculosis; they seem to have extra symptoms says Grmek, but he concludes that they are all suggestive of pulmonary tuberculosis (1989:185).

2.4.10.6 Leprosy

Nutton (2004:29) relates how Democritus referred to a disease which caused the skin to become thick and he noticed how it resulted in permanent changes in the nasal bones. This description is reminiscent of Hansen’s disease. Mention is made of an ointment made by the surgeon Archagathus (Caelius Aurelianus, *Chronic Diseases* 4, 1, 7, footnote 101:325) for elephantiasis. Grmek believes that modern leprosy (Hansen's disease) first became evident in Greece around 300 BCE, while by then it was very well known in Alexandria, where it spread throughout the crowded, dirty city hovels where the hygiene was non existent (1989:175). Grmek admits that many scholars believe that modern leprosy (Hansen’s disease) was introduced to Egypt when Alexander the Great’s troops were homeward bound between 327-326 BCE (1989:175). In his opinion, Alexander’s troops were probably responsible for the spread of the disease to Europe but he is of the view that conclusive proof is lacking for this view or that they actually contracted it in India (1989:175). He maintains that leprosy probably already existed in Persia and Mesopotamia (Grmek 1989:160-1) and that the Roman legions carried the disease to Italy. Pliny the Elder states that it began in

---

43 5th century BCE (Nutton 2004:29).
44 He lived at the end of the 3rd century BCE (Nutton 2004:29).
45 Elephantiasis was a possible Greek name for modern leprosy or Hansen’s disease (Nutton 2004:30).
the time of Pompey the Great (*Natural History* 26:7-8), but died out rapidly, unlike Egypt where it became rampant (*Natural History* 26:7-8 in Healy 1991:245; Grmek 1989:156).

### 2.4.11 Conclusion

Greek medicine is noted for its many medical men and notable women who laid the foundations for scientific medicine. Perhaps they moved away from superstition and magic because they were not satisfied to accept that illness was attributed to the supernatural. The training of their doctors displayed a responsibility towards their city and potential patients, but ultimately it was the city folk that selected the best students to graduate as fully fledged doctors. This type of selection process was unique as it did not appear to take place in Rome or Alexandria. In my view it may have been the natural curiosity and love of learning that motivated the Greek healers to expand on the knowledge that they assimilated from the ancient Egyptians.

### 2.5 ROMAN MEDICINE AND DISEASES

#### 2.5.1 Introduction

According to Healy, Roman medicine was a Greek import, which exerted a strong influence on the former from about the end of the 4th century BCE (1991:xxvii; cf Retief & Cilliers 2005(a):64; Nutton 2004:14), but Nutton reminds his readers that the Greek doctors came to Rome with the support and permission of the Roman Senate (Nutton 2004:13). Scarborough believes that the Romans may have regarded their own ‘folk medicine’ as inferior to those of the Greeks because the Roman doctors were not schooled in philosophy (1968:55) unlike their Greek counterparts. Roman medicine is described as ‘instinctive’ or magical-rational medicine by Scarborough (1968:17). Roman doctors probably resembled modern
paramedics as most remedies were dispensed by the head of the household (*paterfamilias*) to the members when the need arose (Scarborough 1968:60).

Healy maintains that both Pliny the Elder and Cato (the author of a Latin medical encyclopaedia) were diametrically opposed to doctors in general (1991:xxvii). In fact Marcus Celsus\(^{46}\) regarded Vettius Valens, the royal physician to Emperor Claudius, as grasping (he earned a huge salary, more than double that of other doctors and he amassed a considerably large estate) and adulterous because of his extra-marital liaison with Messalina, the wife of Claudius (*Natural History* 29:7, 8, 20 in Healy 1991:262, 265).

Scarborough states that the first Hellenistic doctors arrived as slaves in Rome in about 146 BCE and the patricians purchased them for their individual use (Scarborough 1968:110). The first Greek doctor, Archagathus, arrived in Rome in about 219 BCE and was set up with premises by the Roman authorities, but his reputation did not last long due to his too brutal use of the cautery knife (Retief & Cilliers 2005(a):64; cf Pliny *Natural History* 29:12-13 in Healy 1991:263-4).

Pliny the Elder illustrated his scornful view of doctors by saying that the inscription ‘A gang of doctors killed me’ appeared on some tombs referring to the unfortunate, often heated disputes at patients' sickbeds when none of the physicians present could agree on the diagnosis. This illustrates Pliny’s belief that the doctors played with peoples’ lives (*Natural History* 29:11 in Healy 1991:263). Pliny who may have a supporter of the view *mens sana in corpore sano* (‘a healthy mind in a healthy body’) a phrase coined by the Roman poet Juvenal (55-127 CE) preferred the indigenous Roman folk medicine to that of Greece (*Natural History* 29:11 in Healy 1991:263). He said that it had benefited men such as Cato so much, that he lived to eighty five years by using herbal remedies (cabbage was his favourite also known by Dioscorides as wild kale;

Brassica oleracea), known for its anti-inflammatory properties (2:147) and refused to remunerate doctors to prolong his life, which he proclaimed that he could do himself (Scarborough 1968:19).

Galen mentions his friend, a centenarian, Zoldreen, whose longevity was attributed to a vegetable diet, some poultry, fish, bread and honey and by visiting the baths only once a week (6, 332-3 trans. RM Green; Nutton 2004:24). Nutton believes that public bathing may have spread infectious diseases (2004:29). In time though, Greek doctors were encouraged and welcomed by Julius Caesar who gave them and other foreign physicians Roman citizenship (something highly valued and not easily attained in ancient times) if they settled in Rome (Retief & Cilliers 2005(a):65). This may have been the impetus for the Greek doctor, Galen (c. 130-200 CE) a follower of Hippocrates, to settle in Rome in 164 CE and practise medicine there (Guthrie 1967:95).

The fact that medicine was intertwined with religion during Roman times will be discussed. The military might of Rome played a significant part in the training of doctors for initially the only doctors were senior military men with some experience in medical matters (paramedics). Diseases and plant remedies will be considered as well as the role that midwives and the health spas played in Roman healthcare.

2.5.2 Roman medicine and the gods

Scarborough claims that the Romans regarded their gods much like the Egyptians did and believed that illness and other mishaps that occurred were penalties inflicted for their improper attention to their deities, who governed every aspect of their lives (1969:15). He argues that the gods had to be pacified because they were beyond understanding (Scarborough 1969:15). The Romans, maintains Scarborough, realised that most illnesses eventually went away, so they treated the diseases with folk medicine and performed the necessary acts of
contrition to their gods such as Mars and Jupiter (1969:18). Cato the Elder used to pray to Mars Silvanus to protect his cattle and give offerings to Jupiter Dapoli (Scarborough 1968:18). Craffert mentions that Pliny the Elder believed that amulets had great power in ancient times and were worn to protect the wearer from various ills and he tells of the Emperor Augustus who always kept an amulet of seal skin to protect him against lightning (1998:90-1).

2.5.3 Medical texts

Fletcher believes that Marcus Terentius Varro⁴⁷ was Rome’s greatest scholar who wrote ‘Antiquities of Human and Divine Things’, an encyclopaedia of history in Latin, one of which dealt with medical matters (1967:364).

Scarborough describes Cato the Elder⁴⁸ as being of yeoman stock and a great agriculturalist, who wrote the first medical encyclopaedia in Latin, called ‘De agricul
tura’ (‘On Agriculture’; 1968:55). The encyclopaedia dealt with both agricultural and medical matters.

Gaius Plinius Secundus (Pliny the Elder) wrote many books, but Mair & Fletcher claim that his most famous work is his Historiae Naturalis (Natural History), which comprises thirty-seven volumes and is dedicated to the Emperor Titus, son of Vespasian (1967:54). Volumes xx-xxvii deal with plant medicines and the volumes xxvii-xxxii with medicines sourced from human and animal bodies (Mair & Fletcher 1967:55).

The Roman patrician, Aulus Cornelius Celsus wrote a medical book – De medicina⁴⁹ that was based on Greek medicine in 30 CE (Veith 1976:146). He

---

⁴⁷ He lived in the period 116-27 BCE (Fletcher 1967:364).
⁴⁸ Also known as Marcus Porcius Cato called The Censor circa 234-149 BCE (Scarborough 1968:55).
⁴⁹ This was translated into English by WG Spencer in 1938, comprising three volumes and was printed in 1478 when interest in the classics revived during the Renaissance (Veith 1967:146).
believed that the treatment of heart and mental illnesses should include healthy diet and regimen, using drugs and surgery if necessary (Veith 1976:146). Much of present day knowledge on Greek medicine is thanks to Celsus, whose work ‘Prooemium’ deals with Alexandrian practices of surgery and anatomy (Veith 1967:146).

### 2.5.4 Healing sanctuaries and spas

Jackson claims that the healing mineral springs which ease muscular disorders and rheumatism had their origins in antiquity (1988:162). Frequent by the wealthy Romans and described in detail by Pliny the Younger, Hispellum comprised water features with boating facilities and shrines. There people would relax by bathing in the springs and spending nights at the inn (Letters 8, 8 trans. B Radice; Jackson 1988:162). There were others at Vichy, Baden, Baden-Baden and Aixen and each one was presided over by its own deity (Jackson 1988:162). Jackson describes how the famous Roman springs at Bath, built twenty or thirty years after the Roman conquest of Britain was completely walled to resemble a sauna by the 2\textsuperscript{nd} century CE. Grateful visitors who had been healed threw offerings of metal vessels, trinkets and coins into the spring (Jackson 1988:162).

### 2.5.5 Materia medica

Mainly plant and animal products were used to treat illnesses and Jackson says that many of them had no actual effect on the patient but probably only a psychosomatic or placebo effect, because the ancients were not fully conversant with the workings of the human body (1988:74). While this has a ring of truth, the Roman medical writers such as Cato the Elder made use of wool in the following ways (Scarborough 1969:19):

---

50 His full name was Gaius Plinius Caecilius (c. 62-c.113 CE; Sherwin-White 1967:55).
2.5.5.1  Wool and rue (Ruta graveolens)

Unwashed wool dipped in a mixture of fat and rue (probably in decoction form) was used for bruises and swellings. Rue contains rutin which is used to treat vascular and capillary diseases (Van Wyk, Van Oudtshoorn & Gericke 2009:250).

2.5.5.2  Wool and rose oil (Rosa canina)

The wool was soaked in rose oil, formed into a plug and inserted into bleeding nostrils to staunch the flow. The oil has astringent properties that staunch a bleeding wound (Kramer 2006:165; cf Davis 1968:73).

2.5.5.3  Wool and oil

Washed ram's wool was soaked in cold oil (probably olive oil) and used to treat inflammation of the uterus. Cold compresses assist in relieving inflammation (Anderson 19[68]:82).

Jackson mentions that many bronze pill boxes have been found dating from Roman times, containing remnants of medication. These have been analysed to reveal the use of metals like copper, lead, zinc and iron which were used as astringents to staunch bleeding, to clean the skin and in ointment form to soothe the eyes (1988:75). It is not easy to pinpoint how the knowledge of healing herbs began in Rome but it developed from the local folk medicine and as Jackson maintains, they certainly knew their native flora (1988:75).

2.5.6  Hospitals

Craffert states that hospitals did not exist in Greece or Rome, but a doctor could treat an ill patient at an extra room in his own abode (1998:142). Retief & Cilliers maintain that the indigent were treated in the doctor’s rooms but the wealthy
warranted house calls (2005(c):220). Usually the doctor visited the patient who was taken care of by his/her house servants. Craffert is certain that the very late establishment of hospitals was due to the fact that the head of the household (*paterfamilias*) was expected to provide for all family members and his slaves himself (Craffert 1998:142).

Jackson however, gives details of archaeological excavations at Fendoch in Scotland which yielded the remains of a timber military hospital (*valetudinaria*) dating to the end of the 1st century CE containing ten small wards that most likely only serving a small garrison (1988:136) Jackson maintains that a much larger one existed at Nuess. This could accommodate the needs of a legion of sixty centuries and probably had a medicinal herb garden that provided for the doctor’s prescriptions (1988:136; cf Nutton 2004:179). According to Nutton (2004:181) a military camp was not always conveniently sited close to the battle scene and he postulates that many soldiers died long before they reached the military hospital (Cassius Dio *History* 68, 14, 2). Retief & Cilliers are convinced that the first military hospital was established at Carnuntum (near Vienna) during the 1st century BCE by the Romans (2005(c):220).

Although Craffert (1998:142) maintains that hospitals did not exist in Greco-Roman times, there was an exception to this – slave hospitals (where no Roman would ever be seen or treated there alongside his slaves). These were situated on large farms founded for the exclusive treatment of slaves and gladiators. These hospitals arose out of necessity because the high price of slaves resulted in fewer being available. As a result slaves became a valuable commodity, worthy of care (Craffert 1998:142; Retief & Cilliers 2005(c):221). Nutton argues that Galen worked for a time taking care of the injured gladiators tending their wounds and treating their illnesses (2004:223). Retief & Cilliers are of the opinion that these hospitals were run from government and private funding but little information on them is available (2005(c):221).
Brooke avers that many monasteries developed into Christian hospitals and St Basil of Caesarea (in Cappadocia) founded one at Basilica, Caesarea and many more were established (1993:18-19). The first one in Rome, according to Jerome was established by Fabiola, a wealthy Roman widow, in 390 CE (Epistula lxxvi, Ad Oceanum de morte Fabiolae) just nine years before her death (Brooke 1993:18-19).

2.5.7 Physicians

2.5.7.1 Training of physicians and the Roman army

The Roman army had surgeons whose main task it was to ‘patch up’ the sick so that they could continue fighting in the field but there was almost no provision for the ill and wounded (Scarborough 1968:255). Scarborough continues by saying that the high ranking military officers would take their own physicians with them on foreign campaigns while the ordinary soldier was treated by experienced military ‘first aiders’ (1968:255; cf Plutarch, Caesar 34.3 and Pompey 2. 5-6). He believes that Julius Caesar was a very humane general for his writings manifest genuine concern for the wounded soldiers (Caesar, Gallic War VI 38.1-4), but unfortunately he never recorded how many were treated and the medications or methods used (Scarborough 1968:257).

Archaeological evidence that has brought to light an inscription found near Hadrian’s Wall, which documents the gratitude the average soldier felt for Ancius Ingenuus, an ordinary medicus51 of the first Tungarian Chort. He died aged 25 and Titus Hymnus, the doctor of the Claudia legion XXI, who was remembered for his compassion (Scarborough 1968:258). A wall painting in Pompeii illustrates a doctor removing an arrowhead from a wounded soldier in Figure 11 in The List of Photographs (Jackson 1988:127).

---

51 The Latin word medicus could mean either doctor or healer (Kidd 1984:201).
Scarborough states that the injured soldiers who could no longer continue fighting would be left in a private house or an allied fort to recover (1968:255; cf Craffert 1998:142). Jackson (1988:112) suggests that surgery was a last resort because its success could not be guaranteed. One of the reasons for this was that modern anaesthetics did not exist although there were sedating herbs that gave some measure of pain relief (Jackson 1988:112).

Roman military camps were for the most part positioned near rivers on well drained ground; despite this precaution, Jackson believes that dysentery plagued the troops because plantain (plantago major) was used as a remedy of choice (1988:136; cf Dioscorides 2:153). This plant possesses anti-inflammatory and anti-viral properties (Ebadi 2007:493; cf Singh 2006:209 who documents that it is a useful expectorant).

Rosner (1978:17) is convinced that a physician would visit his patients accompanied by his students referred to as ‘his disciples’ during the time of the Emperors (27 BCE-181 CE). Retief & Cilliers (2005(a):67) add that the Emperor Vespasian (69-79 BCE) paid salaries to lecturing doctors. This was an improvement as their only income previously stemmed from their students.

Scarborough (1968:255) is convinced that Roman military medicine owes much to its military ‘medics’ and Rosner adds that by 370 CE there were community physicians (1978:15). They enjoyed special privileges, including excellent salaries, tax breaks and the benefit of wealthy private patients (Retief & Cilliers 2005(a):65). Julius Caesar also granted citizenship to all the foreign doctors in Rome during the 1st century CE (2005:66; cf Suetonius Divius Julius 42; Retief & Cilliers 2005(b):184). Vespasian\(^{52}\) provided government grants for training doctors and in 20 CE Emperor Severus\(^{53}\) donated public money for building

---

\(^{52}\) 69-79 CE (Retief & Cilliers 2005(a):67).

\(^{53}\) His full names were Lucius Septimus Severus (146-211 CE; Morris 1967(d):279).
lecture halls and assisting indigent medical students in Rome (Retief & Cilliers 2005(a):67).

2.5.7.2 A physician’s duties

Doctors were able to perform a variety of operations which included the cautery of varicose veins and bone surgery as well as removal of gangrene (Jackson 1988:116). According to Pliny the Elder, they probably used vinegar to minimise infection (Natural History 23:56 in Healy 1991:232). Jackson believes that by Celsus’ time surgery was a safer option although major abdominal surgery was dangerous with the high risk of infection and shock to the patient (1988:126). According to Jackson, Hippocrates was an experienced bone ‘manipulator’. He would re-align fractured bones, splint and bandage them to aid healing. Celsus incorporated much of Hippocrates’ writings into his own medical works centuries later (1988:116).

Brooke is convinced that women healers were fully functional both in Greece and Rome during the 4th and 3rd centuries BCE such as Apasia who specialised in gynaecology during the 2nd century BCE (1993:15). Figure 12 depicts a woman doctor’s (medica) tombstone from the 1st century (Jackson 1988:87).

2.5.7.3 Physicians’ fees and liabilities

The doctor would refuse to see the patient if he/she could not afford to pay the doctor’s fee in advance and that there was no complaint about their lack of compassion (Rosner 1978:32).

However Pliny (Natural History 29:8 in Healy 1991:262) complained bitterly about the avarice of the Greek physicians practising in Rome demanding payment in advance before the patient had received treatment or even knew whether the cure prescribed would be effective. It is still the position today.
According to the *Lex Aquilia*, the Roman legal code governing the law of delict, death caused by a negligent doctor was severely punished (Retief & Cilliers 2005(a):65). Free treatment was provided to the indigent of Rome by the Emperor Valentinian I in the 4th century CE (Retief & Cilliers 2005(a):67).

### 2.5.7.4 The surgeon and anaesthetics

Celsus, a Roman patrician (probably not the doctor who penned many medical books called *De Medicina*), was of the opinion that the ideal surgeon should be young with a good steady hand, preferably ambidextrous with good eyesight and compassionate, although he ought not to be put off by any patient’s cries of distress (*De Medicina VII Prooemium, 4*; trans. WG Spencer; Jackson 1988:112). Figure 13 in the List of Photographs is an excellent illustration of the type of instruments used by the Roman surgeon. These were probably of a similar type found in Pompeii at the House of the Surgeon (Jackson 1988:114).

Both Jackson (1988:112) and Dioscorides (4:65) mention that decoctions of opium poppy (*Papaver somniferum*) extract, a narcotic, were applied to the temples for insomnia or used as a suppository presumably when the patient could not take any orally. Dioscorides maintains that it was administered to crying children in syrup form, made from honey but he cautioned that too much can kill. The seed extract of henbane (*Hyoscyamus albus*) which is poisonous, was administered for pain but the leaves could also be mixed with polenta and applied locally, or a leaf decoction could also used for pain relief (Dioscorides 4:69). Dioscorides states that the henbane plant decoction caused sleep and delirium and that the juice of the henbane plant mixed with wheat flour was pressed into tablets (4:69).\(^\text{54}\)

---

\(^\text{54}\) In addition to henbane, there was also white mandrake root (*Mandragora officinarum*) and the recipe was: Approximately one and a half kg of bark root was boiled in seventy two litres of sweet wine and cooled. 750 ml of this decoction was administered to a patient before surgery (Dioscorides 4:76). The dose differed according to the weight (Pliny the Elder refers to ‘the strength’) of the patient, who would have remained unconscious for three to four hours afterwards.
Pliny the Elder indicates that the mandrake plant was used as an anaesthetic (Natural History 25:150 in Healy 1991:242) and states that the smell of the mandrake plants leaves causes drowsiness while those who are not aware of its narcotic properties and consume too much decoction could die. Surgery must have been carried out on many patients as there were drugs used for pain relief.

2.5.8 Midwives

French (in Retief & Cilliers 2005(b):177) believes that the local midwife often received her training from a family member and was frequently called upon to examine a woman to determine whether she was pregnant. If there was uncertainty, five midwives were summoned and the decision of the majority was accepted, says Jackson (1988:95). Retief & Cilliers (2005(b):174) are convinced that the midwife-slaves continued to ply their trade after being freed and often lived to a ripe old age such as Claudia Trophinia aged seventy five years shown as Figure 14 in the List of Photographs. Soranus’ requirements for an efficient midwife was that she had to be literate with her wits about her, healthy without bodily defects, have short fingernails, a professional and compassionate manner, be of sober habits, self disciplined and quiet enough to keep confidences a secret – generally a good all-rounder that also had knowledge of diet and was not mercenary or superstitious (Gynaecology I, 3-4 trans. O. Temkin; cf Nutton 2004:180).

Birth usually took place in the home of the mother-to-be, the midwife took charge of the birthing process and informed the physician of progress (Jackson 1988:97). The woman usually sat on the birthing chair (which came in several sizes) assisted by the midwife and a helper but if the labour became very hard, the midwife laid her patient flat on her back – often the whole process would vary between the two positions (Galen On the Natural Faculties, III, iii trans. AJ
Brock). Jackson maintains that Soranus\textsuperscript{55} was against the cruel custom of dunking a newborn baby in cold water to make it strong (1988:99).

2.5.9 Blood-letting and purging

Blood-letting was believed to be a cure for most ills according to Celsus and was usually taken from the patient’s arms but this treatment had to be restricted in case it weakened the person (Jackson 1988:72). Purgatives such as aloe vera and poisonous hellebore (\textit{Helleborus albus}) were used to slim down patients that had gained weight from over-eating (‘gormandising’) or it enabled them to continue to do so. Celsus said that purging was not advisable as it could also cause weakness (Jackson 1988:70).

Bleeding cups (\textit{cucurbitulae})\textsuperscript{56} were usually made of bronze (during the 1\textsuperscript{st} and 2\textsuperscript{nd} century) or ivory (horn) and sometimes silver and by the 3\textsuperscript{rd} century CE Jackson avers that glass was the favourite. It was recommended by Antyllos because it adhered to the body which was achieved by sealing of one end with wax to create a vacuum (1988:72). Jackson believes that leeches were also used instead of cups with the same result which treatment was popular during the Greek era (1988:73).

2.5.10 Specific diseases

2.5.10.1 Gout

Jackson (1988:170-172) records a certain Servius Clodius who used to massage his gout with a poisonous plant which relieved his pain but also caused his whole leg to become numb but does not mention the name of the plant. Pliny the Younger, more compassionate than his uncle, Pliny the Elder, lauds the bravery

\textsuperscript{55} He lived during 98-138 BCE.
\textsuperscript{56} Kidd (1984:85).
of one of his friends Titius Aristo, who decided not to take his own life but to endure the excruciating pain of gout for the sake of his wife and daughter, (*Letters* I, 22; trans. B. Radice; 1988:170-172). Jackson uses these two examples to elucidate the fact that so few diseases in ancient times could be cured, but only relieved (1988:170). The leaves of the river mangrove (*Aegiceras majus*) were pounded and mixed with vinegar for gout pain (*Dioscorides* 1:113) or the leaves of the Bladderwrack (*Ficus vesiculosus*; a type of seaweed) was placed wet, probably fresh from the ocean onto the gouty inflammation (*Dioscorides* 4:100).

The Roman author, Lucian remarked dryly about a doctor who said that ‘gout is an example of a bitter caricature of the helpless doctor with many promises’ illustrating how frustrating it must have been living with this disorder (Scarborough 1968:261). Jackson believes that gout was so prevalent in the Roman world because the syrups used to preserve the port wine were stored in lead containers. The syrup when mixed with the fruit acid in the grapes proved to be most toxic to the kidneys that would render them unable to control the quantity of uric acid in the blood (1988:178; cf Nutton 2004:33).

Both Pliny the Elder (23-79 CE), his nephew Pliny the Younger and Galen were aware of gout and they believed that the cause of the disease was over-indulgence in rich food but conceded that it was also an inherited disorder (Jackson 1988:178). Lucian had very little sympathy for those with gout saying that they lacked self-discipline. Jackson (1988:178) narrates that Pliny the Younger was very concerned about his friend, Cornelius Rufus, a gout sufferer who, despite a most temperate lifestyle, grew so weary of his agony and the ineffective medical treatment of the time, that he starved himself to death (*Letters* I, 12 trans. B. Radice).
2.5.10.2  Parasites

Jackson explains that without refrigerators, foods like meat and fish were liable to spoil (1988:37) but the Romans preserved those foods with salt by placing them in a brine concentrate. Fried fish was pickled in vinegar, smoked and even dried. Despite these precautions, Jackson is convinced that it must have been almost impossible at times, not to have consumed rotten food (1988:37). The conditions were not very hygienic; a house in Pompeii has shown that lavatories were often situated in the kitchen (Jackson 1988:53) and sewage was buried in holes near wells. The Romans did not realise that whipworm and roundworm are commonly found in sewage and that the water supply was likely to be infected (Jackson 1988:536). Bowel parasites have been found in the sewers of a Roman fort at Kunzing, Bavaria (Jackson 1988:131, footnote 24). Jackson does not define them exactly. The presence of human parasites could have accounted for the stomach ache remedies recommended by Pliny the Elder, although Jackson does not mention them by name. The presence of flies mentioned by Celsus (De Med. II, 8, 30-33) indicates that many must have fallen prey to dysentery and diarrhoea (Jackson 1988:53).

2.5.10.3  Snakebite

The Romans regarded snakes as symbols of healing. Serpents did not evoke the same revulsion and fear in these people as it did in the early Jews, instead they were kept as pets certainly by Asklepios’ daughter (Jackson 1988:142). Snakes were paramount to the cures that took place in the abaton. Jackson is convinced that the reason for them being regarded as spirits of the underworld was linked to their tendency to slide in and out of cavities in rocks (1988:142).

Remedies for snakebite would include pulverised mandrake plant root (Mandragora officinarum; Harrison 1966:12); Dioscorides (6:53) would probably
use the snake venom mixed with the poisons of other snakes, while Pliny the Elder recommends vinegar (Natural History 23:56 in Healy 1991:232).

2.5.10.4  

**Bubonic plague (Pasteurella pestis)**

Jackson believes that the ‘plague of Justinian’ was first experienced in the Mediterranean ports (including Rome) and was spread by the black rat around 251-266 CE. It killed up to 5 000 Romans a day and seemed to be the beginning of a spate of epidemics which in 542-543 CE caused the death of 10 000 people per day in Constantinople (1988:175). Jackson maintains that it inspired fear and dread because it reduced the population so dramatically and may have been a factor in the economic downturn of some of the smaller towns (1988:175).

2.5.10.5  

**Epilepsy**

Nutton (2004:31,41) documents that epilepsy was regarded by the majority to be a demon-related mental disorder but Galen and Hippocrates, who made up the minority, seek a more scientific answer not only for epilepsy but also for other illnesses through reason and argument. Hippocrates (in Nutton 2004:31) criticises those who thought that epilepsy was a supernatural disease which required healing by the gods. Hippocrates held that all diseases arose as a result of incorrect eating and resorting regularly to cathartics (History 2, 77; 2004:41). In my opinion it is possible that an epileptic would wear a protective amulet designed to exorcise demons or would seek healing at their local temple of Asklepios.

2.5.10.6  

**Tuberculosis**

Jackson states that the Romans and Greek doctors believed that pulmonary tuberculosis was spread via the ‘bad seeds' contained in the exhaled air from a sufferer’s lungs and that these ‘seeds' contaminated food and water (1988:172).
Tuberculosis bacilli are in fact transmitted from one person to another by coughing (Jackson 1988:172,180). He adds that the most susceptible were those who were under-nourished and weak (Jackson 1988:180). Galen\textsuperscript{57} however did not hold with this theory because the 'seeds' were invisible and as there was no proof he diagnosed bloody sputum from the lungs as a lung abscess (Jackson 1988:174). Celsus (in Jackson 1988:180) says that it was the very worst of the wasting diseases (De Medicina III, 22, 3 trans. WG Spencer). If this was the case Pliny the Elder would have prescribed the sea voyage from Italy to Alexandria because the Egyptian climate was drier and Pliny the Younger's freedman Zosimus took the same trip (Letters 5, 19 trans. B. Radice in Jackson 1988:181). Thersandrus of Halieis was cured of tuberculosis at the healing temple of Asklepios at Epidaurus and Jackson believes the cure lay in the healthy climate and diet provided at these sanctuaries (1988:18). Dioscorides (5:44) would have prescribed pinecone wine (\textit{Pinus mugo}) made from freshly bruised pinecones soaked in must (unfermented grape juice). This mixture was boiled and taken for pulmonary tuberculosis or a decoction made from the leaves and seeds of the common white horehound (\textit{Marrubium vulgare}) was taken (Dioscorides 3:119).

2.5.10.7 \hspace{1em} Leprosy

As mentioned above, Jackson believes that leprosy was present in China during the first millennium and spread to the ancient Near East by the troops of Alexander the Great in 327-326 BCE. Despite this archaeological evidence was found in the Dakhlek Oasis in Egypt with remains dating to the 2\textsuperscript{nd} century BCE. Jackson explains this discrepancy by saying that leprosy was relatively unknown during the early 4\textsuperscript{th} century BCE but by the 1\textsuperscript{st} century CE it was more common (1988:182). The Greeks called leprosy ‘elephantiasis’ and Pliny the Elder said that it was not well-known in Italy before Pompey the Great but more so in Egypt (Jackson 1988:182; Celsus \textit{De Medicina} III, 25, 1-2; trans. WG Spencer). The type of leprosy that Celsus describes appears to be similar to the lepromatous

\textsuperscript{57} He lived during the period 129-c 200 CE (Jackson 1988:174).
type, the more severe form of leprosy (Hansen’s disease; Jackson 1988:183). It is quite possible that leprosy spread to Britain by 400 CE and evidence to support this view was found at a cemetery at Poundsbury Camp. The discovery there of skeletal remains of an adult where the leg and feet bones manifested the abnormalities typical of leprosy (Jackson 1988:183). Jackson mentions the cross-immunity between tuberculosis and leprosy but there appeared to be a very small percentage of people that contracted leprosy during the Greco-Roman period (1988:184). Dioscorides (1:37) states that the oil of the wild olive \((Olea sylvestris)\) or sulphur mixed with vinegar was applied to leprosy lesions (5:124).

2.5.11 Conclusion

The study of Mesopotamian medicine is still hampered by the fragmented texts and the diagnoses are couched in a manner that makes them very difficult to understand. More research is necessary in this regard. Although magic was interwoven with the medical practices of Egypt, it was a sophisticated system and many of the alternative remedies used by the populace are still used today. Greek medicine moved away from superstition and laid the foundations for a scientific system. It was the only country where the people selected their doctors from the available students by public opinion. Roman medicine was a Greek assimilation, but the Romans were excellent administrators, engineers and builders. Their aqueducts contributed to a healthy infrastructure. They also had some of the most talented writers such as Pliny the Elder whose works are still utilised today.

Disease in ancient times affected rich and poor alike but the plight of the poor was far worse because it is improbable that they had the financial means to pay for medical treatment especially if a breadwinner had been lost to illness. This unfortunate situation still rings true today. Jackson maintains that it must have been very frustrating for those who were suffering from incurable diseases to continue working to support their families: a constant feeling of malaise or a low
grade fever would have affected their concentration and productivity and resulted in poor judgment, incomplete tasks and inefficiency (1988:186). The modern indigent and unemployed still suffer the same fate today, especially those who live in the rural areas far from hospitals and clinics.

The ancient doctors, according to Jackson (1988:186) were unable to cure mental illness, serious injuries, leprosy, tuberculosis and gout to name but a few but medical men like Galen, a Hippocratic doctor (regarded as a medical giant whose ideas were devoid of magic, amulets or superstition), Soranus, Dioscorides and Celsus were compassionate towards those they treated. What was important in ancient times was a healthy diet, lifestyle and supported by herbal medication when really necessary which still rings true.

This chapter provides a background to the investigation of similar diseases in the Bible and relies on the Talmud to further elucidate the Biblical text if possible. Although only leprosy is mentioned by name in the Bible, it is clear that diseases such as gout, epilepsy, tuberculosis and parasitic infestations were common among all the peoples of the ancient Near East. By way of an example, it will be noted that archaeological excavations in Egypt have brought to the light the fact that many of the local populace suffered from spinal tuberculosis (Pott’s disease), and ancient cesspits in Jerusalem outside the city of David have unearthed fossilised parasites proving that these infestations were quite common in Israel during Biblical times. Riddle (1993:xiii) maintains that trade existed between the different countries of the ancient Near East and it would be surprising if Jewish medicine did not operate within the context of its neighbouring countries and the people of Biblical times must surely have known more about illnesses than the Bible documents.

Where the Bible and Talmud are silent on the medication used to treat a disease, I have referred to the herbal remedies of Dioscorides and Pliny the Elder
because the plants used in Israel during Biblical times also grew throughout the ancient Near East.
CHAPTER THREE
PHYSICIANS, MIDWIVES, BLOOD-LETTERS, AND CIRCUMCISERS IN THE BIBLE AND TALMUD

3.1 INTRODUCTION

The focus of this chapter is the discussion of the physicians and midwives in the Bible and Talmud. Although blood-letting is not documented in the Bible, the rabbis of the Talmud discussed it. Circumcision is an important procedure for any Jew. Both the Bible and especially the Talmud refer to it many times as I will mention.

Harrison (1962(b):331-2) documents that the priests and prophets in the Old Testament had medical duties connected to their religious ones e.g. Elijah (1 Ki 17:17-24) brought the son of the widow in Zarephath back to life; the prophet Elisha was involved in Naaman’s healing (2 Ki 5:3), detoxifying the waters of Jericho with salt (2 Ki 2:20-21) and healing the son of the Shunammite woman (2 Ki 4:32-35). God through Isaiah was responsible for the healing of King Hezekiah (2 Ki 20:1-7). The priests would purify those whose tzara’at (which is translated by the words ‘a dreaded skin disease’ in Today’s English version of the Bible) had been healed (Lv 13), women after childbirth and those who had come into contact with a corpse (Lv 21:1-3). Impurity from contact with a corpse is reminiscent of the Greek taboo mentioned by Nutton (2004:129) where even touching a cadaver was forbidden, for the body was nevertheless regarded as a person, worthy of respect. Orthodox Judaism still forbids men, who claim descent from the ancient priestly caste, to come into contact with a cadaver or be in the same building as a dead person (Rabbi Matitiani, personal interview Cape Town 2009).

This study is being conducted because the Bible provides little or no information on physicians, except criticism of King Asa when he consulted a doctor for his
foot disease (2 Chr 16:12 TEV). Physicians are well documented in the Talmud and the ancient Near East. Unlike the Talmud, the Bible does not mention bloodletters, who were operational in Greece before 460 BCE when Hippocrates was born (1992:161) and popular in Rome, where leeches instead of cups were used to bleed patients (Jackson 1988:72). Circumcision did not appear to have taken place in Mesopotamia and was not practised at all in the Roman or Greek world, but was common in Egypt from 4000 BCE (Montagu 1967:799-800; cf Hyatt 1962:630). It took place in ancient Israel. Midwives well documented in the Bible (Ex 1:15) and in the Talmud, are given special dispensation to travel on the Shabbath and to act as a witness in court (Talmudic tractates Shabbath 128b, Eiruvin 45a).

The laws of cleanliness and hygiene laid down in the book of Leviticus imply that folk medicine was practiced as a preventative measure (Wiseman 1986:15). A ‘Book of Medicines’ is traditionally ascribed to Noah, and he acquired it from the angel Raphael (Newmyer 1993:110). Noah, according to Newmyer (1993:110) passed it on to his sons, who shared it with the wise of many nations. It also came into Abraham’s hands (Jubilees 10:10-14) and found its way to India and Mesopotamia (Newmyer 1993:110). Wiseman believes that Moses would have had much to add, having received a princely education in Egypt (1986:15). Josephus believes that King Solomon had extensive knowledge of healing, botany and zoology but there is no mention of medicine (Kottek 1994:17). Newmyer postulates that Asklepios obtained this same healing book in Macedonia; Hippocrates learnt from it and its information passed to Dioscorides, Galen and Asaph, a Jewish physician (Newmyer 1993:110).

According to Pliny the Elder, the physician/herbalist Crateuas produced a herbal (manual used to identify plants for medical purposes), which is probably included in the Materia Medica of the Greek physician, Dioscorides, used authoritatively until the 16th century CE (Bell 1967:409). Every plant was believed to possess
healing properties which could be invoked by incantations and its growth was initiated by a heavenly constellation (Midrash – Genesis Rabbah 10:6).\(^1\)

It was the view of Rabbi Judah the Prince\(^2\) that King Hezekiah of Judah (who ruled circa 716-641 BCE) was reputed to have hidden ‘The Book of Remedies’ because it provided an ‘easy’ alternative to praying to God for healing (Talmud – Berachot 10b, footnote 9). The Talmudic rabbis approved of his action because they believed that disease was inflicted on people for sinning and the only way back to health was to pray and repent, although they must have been aware of the healing properties of the herbs, shrubs and trees in the Holy Land. The medicines took many and varied forms: liquids, tablets, gargles, incense, ointments, suppositories, enemas, oils, eye, ear- and nose-drops (Rosner 1978:433). Many of these medicinal herbs and plants are still in use today.

The early Jews were probably influenced not only by the prevailing medicinal plants used by their neighbours, but also by their medical belief systems and medical practices. Egypt, in particular had a rather sophisticated knowledge of medicine.

3.2 PHYSICIANS

3.2.1 Physicians in Biblical times

Physicians in Biblical times were not highly regarded (Job 13:4). The author of the book of Job viewed the healers (rofim), Eliphaz and his friends who came to commiserate with Job in his distress, as ‘physicians of no value’ (13:4 KJV). It is not certain whether Eliphaz was a doctor because they are referred to as Job’s ‘friends’ in an earlier chapter (Job 2:11; Adeyemo 2006:579). My view is that the

---

\(^1\) Herbal medicine was known and practiced in India before the Christian era and the Chinese have a record of 1 000 ancient herbs still in use today.

\(^2\) Also known as Rabbi Judah Ha-nasi (Prince), a Palestinian Tanna (135-219 CE; Kolatch 1981:152).
reference to them as ‘physicians’ was merely sarcasm on the part of Job because they came to lecture him not really to sympathise with him. Job was angry with them because they approved of God’s ‘punishment’ (Brown et al 1990: 475; Carson et al 1994:468-9; Adeyemo 2006:579).

The prevailing view in Biblical times was that God inflicted punishment on those who sinned against Him, but cured them when they repented. This idea was expressed by the friends of Job, Eliphaz, Bildad and Zophar (Job 2:11) that his illness was caused by his sins against God (Job 22:5). These men were disciples of the so-called retribution theology. They believed that God would heal Job if he repented (Job 22:21-30; Dunn & Rogerson 2003:345). Job however was opposed to that idea and spoke against this point of view (Dunn & Rogerson 2003:362; cf Adeyemo 2006:586; Brown et al 1990:478). Job’s view that God is capricious is illustrated by the author of the book of Ecclesiastes (Boshoff et al 2000:213). As a result people should enjoy their lives (Ec 9:7-10) for the same fate awaits everyone (Ec 9:3).

The Hebrew word for doctor – rofe means ‘a person who mended, sewn or cured’ in English. This would indicate that wounds, cuts and injuries were stitched and Harrison (1962(b):332) is of the opinion that the doctors of Asa’s time were probably herbal practitioners. They utilised the scented gums and resins that were antiseptic and in general during that period such as balm from Gilead (Jr 8:22) well known for its healing qualities (Jr 46:11), frankincense, a product of Arabia (Is 60:6), cinnamon, used as a perfume (Pr 7:17) and medications like oil (Is 1:6). Bone fractures were probably not treated in earlier Old Testament times (Lv 21:19) but in the later times the healers would have at least tried to reduce the fracture (Ezk 30:21; Harrison 1962(b):331).

Wiseman presumes it probable that when local doctors failed to cure, ordinary folks would resort to prophets and priests (in Palmer 1986:15). Many Jews in Biblical times visited pagan temples to pray for healing despite their monotheism,
but they also consulted medical doctors, who themselves practised Greek medicine as long as it did not conflict with their religion (Nutton 2004:261). Naaman was cured by the prophet Elisha (2 Ki 5:3). Some of the physicians referred to in the Bible were foreigners:

- **Egyptian physicians embalmed Jacob** (Gn 50:2) and Joseph (Gn 50:26) because they died in Egypt and wanted to be buried in Canaan (Gn 50:5, 25; Dunn & Rogerson 2003:71) and in order to preserve their bodies for the long journey (Adeyemo 2006:83; Brown et al 1990:43).

- **King Asa** was criticized for relying on physicians rather than on God (2 Chr 16:12) when he suffered from his foot disease believed to be gout (Rosner 2000:242). Brown et al believe that the ‘doctors’ referred to in 2 Chronicles are probably medicine men or witch doctors but do not elucidate their view (1990:377).

- **The prophet Jeremiah** could not believe that there was no doctor residing in Gilead (Jr 8:22). Brown et al believe that this verse refers to Jeremiah’s lament for the people that he loved, for whom he had only bad news and predictions of doom (1990:277; cf Adeyemo 2006:860).

- **As the Bible is mute on whether King Hezekiah consulted doctors during his illness**, Josephus records that the king’s illness caused his ‘physicians’ to despair of a cure (Kottek 1994:15).

- **Despite the Bible’s silence on the matter, King Saul’s advisors**, some of whom could well have been medical men, recommended the use of music therapy to calm the king’s violent mood swings (1 Sm 16:16-18).

Besides circumcision (Gn 17:23), Biblical surgery is mentioned in the book of Exodus where a slave refused to be set free from his master in the seventh year,
often because the man had married a female slave belonging to the same man and the wife had children. The rule was that the wife and children were always the owner’s property (Ex 21:6)! It would take a heartless husband and father to leave his family and the slave would agree to serve the master for the rest of his life. In this way a ‘contractual’ obligation was formed between the two, ‘sealed’ by the master making a hole through the unfortunate man’s ear with a crude, often dirty, awl, while holding the slave’s ear against a doorpost. Harrison admits that this procedure was more a social rather than a medical one (1962(b):332).

Physicians were eventually recognized and revered by 190 BCE. In the Apocryphal writings it was accepted that God healed through the physician and created medicine from the earth (Sirah 38:1-4). Doctors and medication were regarded as beneficial and those with common sense would consult a practitioner although many prescribed amulets and used magical means to heal their patients (Harrison 1962(b):332). The Greek author of the Apocryphal book of Sirach (or ‘Ecclesiasticus’) Ben Sirah was a teacher in Jerusalem and his work was published circa 180 BCE (Burkill 1977:155). A Greek version of the Hebrew manuscript appeared in 132 BCE when Ben Sirach’s grandson had it published in Egypt (Burkill 1977:155-6).

3.2.2 Magic and medicine in the Bible and Talmud

The monotheistic Jews of antiquity diagnosed disease in terms of religious belief – they believed that illness was inflicted by God upon those who had sinned and broken one or more of His commandments (Burkill 1977:154; Ex 32:35). This is summed up in the book of Deuteronomy by the following words in Chapter 32:39 (TEV):

“I, and I alone am God, no other god is real
I kill and I give life, I wound and I heal.”

3 A small, pointed tool for piercing holes in leather and wood
Broadly speaking, disease or misfortune could therefore be ascribed to transgressions against the norms and values of the culture concerned (Worsley 1982:327). In order for God to restore their health it was vital that those afflicted repent and pray for forgiveness. In biblical times it was believed on the one hand that God was the Supreme Healer (Ps 103:3; Dt 32:39) while Dunn & Rogerson on the other hand, believe that God in the above Biblical quotation (Dt 32:39), is acting out of character by harming the ones He called to His service (2003:61). Adeyemo sees this verse merely as confirmation that God is the sole ruler of the universe (2006:252) and Plaut sees it as God is eternal (2006:1406).

Friedman believes this passage demonstrates the existence of polytheism during the time of the Babylonian exile (2003:671). It is Hertz’s view that it is Moses’ warning that the other gods are not worthy of the people’s trust (1960:901). Carson et al view it as God’s ability to resurrect those He has killed (1994:229). In my view the passage above indicates sinister repercussions for failure to observe the first commandment.

In contrast to the rest of the ancient Near East, consulting soothsayers, exorcists, or engaging in divination practices, was contrary to Jewish law (halakhah) and regarded as highly offensive to God (Lv 19:31, 20:6). Despite these laws, however some people did engage in many of these forbidden practices (Dt 18:9-12). Despite the prohibition in the Bible against magic and necromancy (Dt 18:10-11), the ancient Jews engaged in their practice by using amulets and incantations to ward off or treat illnesses. Levene says that Jews were no different to other peoples of the ancient Near East in that they believed that they should use magic when they prayed to God for His help and they invoked the name of non-Jewish gods as well as their own God in case they offend any deities by ignoring them in their pleas (Levene 2007:65). Schrire (2007:121) however states that there is no certainty that amulets were used during Biblical times as they are only mentioned in the book of Isaiah, Chapter 3 (18-23) as a prohibition. It is my view that they must have been worn otherwise they would not have been frowned upon.
Nutton believes that many Jews in biblical times visited pagan temples to pray for healing despite their monotheism, but they also consulted medical doctors, who themselves practised Greek medicine as long as it did not conflict with their religion (2004:261).

The Bible states that before the kings, the early Israelites sacrificed to demons and spirits (Dt 32:17) and Rosner says that the Talmud is rich in its references to these spirits who played an important role in Jewish folk medicine as they were believed to cause most illnesses (2000:96; Ps 91:5-6). According to the Talmud, there are far more demons than humans (Talmud – Berachot 6a). They have wings and can fly; they can foretell the future and like humans consume food and drink, reproduce and then die (Talmud – Chagigah 16a). If a person recited the Shema prayer (Dt 6:4-9) before retiring at night, he/she would be protected against demons (Talmud – Berachot 5a, footnote 7). For those who wanted to see demons, they would have to take the roasted placenta and kitten of a queen cat, which had been pulverised to a fine powder and place some of it in their eye (Talmud – Berachot 6a). It is surprising then that Muntner (2007(b):722) is of the opinion that the Jews as a whole were not as superstitious and accepting of magical medicine as the other peoples of the ancient Near East – but the common belief was that good health and illness was bestowed upon them by a Higher Power.

Rosner states that incantations were prayers or Biblical verses chanted over an illness (2000:172-3). A fish bone stuck in the throat could be dislodged by an incantation made by the patient with a fish on his/her head according to Rabbi Hiyya ben Abin (Talmud – Shabbath 67a). A nose bleed was taken care of by reciting the words: ‘I, Papi Shila bar Sunki’ backwards or else ‘Ta’am deli be’me kesaf, ta-am deli be’me pegam’. These Hebrew words mean ‘The taste of the bucket in water of silver, the taste of the bucket in water of blemish’ but it is not stated exactly who made this statement. Rabbi Akiva was of the opinion that those who make use of incantations (‘whisper over a wound’) and say, ‘I will put
none of the diseases upon you which I have put on the Egyptians, for I am the Lord who heals you’ (Ex 15:26) will not have a heavenly reward after their death. Clearly there was a difference of opinion amongst the rabbis depending on whether they were superstitious or more rational.

3.2.3 Physicians in the Talmud

The medical knowledge of the Talmudists was based upon tradition. It contains inter alia the only known dissection of the cadaver of a prostitute, who had been condemned to burn to death, by the disciples of Rabbi Ishmael⁴ (Talmud – Bechoroth 45a). The rabbis observed the diseases of, and performed experiments upon sacrificed animals that had been ritually slaughtered (Talmud - Chullin 57b). It was necessary for the rabbis to inspect and examine their internal organs in order to certify them free from defects and fit for human consumption (kosher⁵; Talmud – Chullin 46a-b) In the course of these examinations, different malformations, injuries and illness were discovered, which increased their insight into human injuries and illnesses (Rosner 2000:23).

In many instances sons of physicians followed in their father’s footsteps. The fact that there is much mention of medical matters in the Talmud and the fact that physicians took part in the discussions of many important religious questions by the rabbis, indicate that they were very well versed in the science of medicine (Talmud tractates Nazir 52a, Niddah 22b).

It is probable that much of the medicine mentioned in the Talmud is ‘folk medicine’ or home remedies that were handed down orally through time usually by the women healers when the physician’s medicine did not cure. We do know

---

⁴ One of three Tannaim: Rabbi Ishmael ben Elisha (1st century CE), Rabbi Ishmael ben Johanan ben Baroka or Rabbi Ishmael ben Jose ben Halaffa, both 2nd century CE (Kolatch 1981:128). Rabbi Ishmael was a physician (Rosner 2000:244).

⁵ ‘In the slaughter yard of the Temple, a fly was never seen’ (Avot 5:5) implies that the area was kept clean.
that many plant remedies were used with success and that the people of the time used them for many purposes. Muntner however states that the Talmud is not a medical text book (2007(b):722).

Unlike the Bible, the Talmud contains many references to doctors. The Talmud rabbis mention that the physicians would treat the following:

- A person suffering from a heart problem, but the sin that caused his illness was not mentioned (Talmud - Baba Kama 80a),

- A youth’s pining for his lover was endangering his life illustrating a conflict between the physicians and the rabbis. The object of his passion was a certain woman and the doctors recommended that he should be allowed access to her to save his life but the rabbis, who were concerned about the dignity of the lady, refused saying that she should not give herself to him but he should rather martyr himself. His lust caused his illness (Talmud - Sanhedrin 75a).

- Rabbi Zadok⁶ (who almost died from fasting), his sin was religious fanaticism because he endangered his life to prove his piety (Talmud – Gittin 56b). Specialists attended Rabbi Abbahu⁷ and profaned Shabbat to treat him because he was ill but the illness and sin are not mentioned (Talmud – Abodah Zarah 28a). These latter two instances are further examples of retribution theology believed by Job’s friends (See 3.1.2.1 above).

- A woman aborting a baby (Talmud – Niddah 22b). According to the sages, it was assumed that sexual intercourse during pregnancy resulted in a spontaneous abortion in the shape of a ‘flat fish’ (Talmud – Yeabamoth

---

⁶ A Palestinian Tanna active during the 1st century CE (Kolatch 1981:212).
⁷ A Palestinian Amora of the 3rd century CE (Kolatch 1981:133).
Co-habitation was permitted during the last trimester of pregnancy, but prohibited during the first (Talmud – *Niddah* 31a). Another cause of miscarriage was the sin of ceaseless hatred (Talmud – *Shabbath* 32b).

If patients were not satisfied with a diagnosis from one physician, they would seek a second opinion (Rosner 1978:17-8). The patients often complained that the doctor took so long to reach them after being called and a dry remark made by Rabbi Abaye in a tractate of Talmud states: ‘If the physician is a long way off, the eye will be blind before he arrives’ (*Baba Kama* 85a). This very complaint can often be heard echoing through the ages! Despite this the physicians of the time must have put in long hours and worked very hard.

The physicians were also used as court experts in cases of bodily injury where compensation was sought (Rosner 1978:16). Their expertise was required to ascertain whether the accused was fit enough to be sentenced to corporal punishment and to determine the amount of damages payable to the victim (Rosner 1978:16).

### 3.3 EDUCATION AND MEDICAL TRAINING IN THE BIBLE AND TALMUD

Neither the Bible nor the Talmud mentions the education and training of medical doctors. Rosner quotes Puschmann who refers to Talmudic times when he says ‘the essential professional training occurred through the personal instruction of the student by a teacher who was experienced and knowledgeable in medical therapeutics’ (*Geschichte des Medizine Unterrichts* 1889:26), a sort of internship. Rosner is of the opinion that in all probability the universities of the day organised medical courses as part of their training in science and medicine (1978:17). From this it can be assumed that there were ‘lay practitioners’ as well as the qualified physicians, but this is not certain. The words *rofe* (healer) and

---

8 Born in 280 CE, a Babylonian *Amora* (Kolatch 1981:50).
asya (healer) referred to both. This would appear to be similar to the physicians and spirit-medium-healers of ancient Egypt. Rosner (1978:21) indicates that only practitioners with sufficient experience and the necessary knowledge would practice. If a patient died as a result of the doctor’s negligence he was charged with murder.

The rabbis were not adverse to learning from or treating the Romans either – Rabbi Johanan (active during the 2\textsuperscript{nd} century CE) revealed a recipe given to him for scurvy (tzafdina) by a Roman woman although she had sworn him to secrecy (Talmud – Yoma 84a). According to the Midrash the Roman Emperor Antonius Pius (138-161 CE) requested Rabbi Judah the Prince\textsuperscript{9} to send an intern to treat one of his slaves who was very ill (Midrash - Leviticus Rabbah 10:4).

There did not appear to be any specialists in Biblical or Talmudic times, unlike Egypt where every physician specialised in one field of medicine. Mention is made of a priest Ben Achiya, although not a physician knew through experience which wine to give his colleagues for their intestinal discomfort (Rosner 1978:14; Mishnah – Shekalim 5:1). The Talmud enhances the Biblical view of a physician in that training was given. A Roman doctor would visit his patients with his students in tow, indicating that they acquired practical experience in their field. Medical schools began in Egypt from 2730 BCE and in Greece from the 5\textsuperscript{th} century BCE.

3.4 DUTIES OF A PHYSICIAN IN THE BIBLE AND TALMUD

The Bible does not mention what the duties of a physician were but they were functional in Biblical times according to Josephus (Antiquities of the Jews 6, 8:2 - music therapy was recommended for King Saul; Antiquities of the Jews 10, 2:1 - King Hezekiah’s depression was mentioned) whereas, the Talmud is very clear

\textsuperscript{9} Patriarch of Judea and redactor of the Mishnah so called because he was a man of independent means (Kolatch 1981:152).
on the matter. It indicates that every Talmudic physician was also a surgeon. When he operated he would strap an obese patient to the table and cut out his fat after administering a sleeping potion (Talmud – Baba Metzia 83b). He was also a dentist and could clean out a decayed tooth (Talmud – Kiddush 24b). There were many and varied duties mentioned in the Mishnah and the Talmud – some follow below:

- Treated snake bite cases by sucking out the venom but no detail is given as to how that was done (Snowman 1974:48). Rosner interprets an incident of Rabbis Ammi (or Ami) and Assi (or Asi)\(^\text{10}\) as licking the leg of a patient to mean that they sucked the snake poison out of the bite wound (1978:11; Talmud – Abodah Zarah 28a, footnote 12). Pliny the Elder says that the Ophiogenites treated snake bite with their saliva (Natural History 7:2)

- Drilled open the skull and closed the wound with cleaned pumpkin peel presumably to expedite healing and prevent infection entering the wound (Rosner 1978:12).

- Lanced abscesses (Snowman 1974:48), performed amputations on the diseased limbs of lepers and those with gangrene (Rosner 1978:12).

- According to the Midrash a physician healed wounds (Midrash – Genesis Rabbah 10:6) by applying plasters and treated injured bones and prescribed suitable diets and healing herbs for his patients.

- Sometimes physicians had to heal unfortunates who had been tortured by Herod, according to Josephus (The Wars of the Jews 1, 12:7).

---

\(^{10}\) Both these Palestinian Amoraim were active 290-320 CE (Kolatch 1981:72, 75).
1. A doctor was also a pharmacist who dispensed his own medication stored in a *narthex* or 'metal basket' (Rosner 1978:17; *Mishnah – Kelim* 12:3, 16:8) containing medical instruments and a medical bag containing a knife or dagger, scissors or shears, a razor, a tablet case and a leather apron or cover coat (dating back to the first or 2nd century of the Common Era). It was possibly similar to those carried by those doctors who still make house calls today.

3.4.1 Archaeological evidence

In the absence of archaeological evidence for surgical instruments being found in Israel, I found evidence of such instruments from Pompeii, the largest find, discovered early in the 19th century at the ‘House of the Surgeon’ in the Via Consolare’ (Jackson 1988:66; but he does not say by whom), that was destroyed by the eruption of Mount Vesuvius in 79 CE (Craffert 1998:143). Surgeons in Mesopotamia, Egypt and Greece also used similar instruments as Figures 1, 3, 10 and 12 in the List of Photographs will demonstrate).

There were a few instruments made of iron but most were manufactured from copper, bronze and brass (Jackson 1988:114) found on the floor of the surgery (Jackson 1988:66). Jackson believes that the Romans were skilled at forging iron implements and could produce steel tools. In certain areas the iron ore mined was of such good quality that it produced a natural steel (1988:114) and Galen recommended that Noricum, in the Alps produced the best grade (Galen II 682K; Jackson 1988:193, footnote 5). Jackson believes that the bronze scalpel with a removable iron blade was replaced when necessary by the local blacksmith (1988:114). A stone engraving from the Asklepieion in Athens (Jackson 1988:115) depicts a small case of instruments, indicating that doctors kept their instruments in wooden cases with hinged lids. They also held other instruments such as needles, forceps, probes and spatulas and a bronze speculum used to
examine the vagina and facilitated treatment of the uterus (Jackson 1988:93,115; Figure 10 in the List of Photographs).

3.5 MILITARY PHYSICIANS IN THE BIBLE AND TALMUD

The Bible and Talmud are silent on the subject of military physicians. Injured military personnel were more than likely carried off the battlefield and sent home by their high command. Those who could not be moved had to rely on the Roman or other physicians. Rabbi ben Zakkai\textsuperscript{11} obtained Vespasian’s physician to treat Rabbi Zadok\textsuperscript{12} at the point of death by voluntary starvation (Talmud – \textit{Gittin} 56b). His treatment is outlined in the Talmud: the first day he drank water in which bran had been soaked; the next day water which contained coarse meal and on the third day water in which there had been flour, so that his stomach expanded gradually.

When Cestius Gallus was legate of Syria (\textit{circa} 67 CE) and before he was captured by the Romans (\textit{The Life of Flavius Josephus} 8:30), Josephus related how the horse he was riding fell into a marshy area in the vicinity of the bank of the Jordan River and he was thrown to the ground. He stated that he only bruised his wrist. He was taken to Capernaum by his men, he sent for a physician because he was so feverish (he probably did more than injure his wrist). The physician ordered that he be sent away from the battlefield (\textit{The Life of Flavius Josephus}: 72: 403). It is highly unlikely that there were Jewish doctors in the vicinity of the battleground so presumably the doctor was a Roman.

(In some cases the Talmud illuminates the text, but in this case it is the perspective from the ancient Near Eastern studies that explains how one of the Talmudic rabbis was given emergency treatment by Emperor Vespasian’s

---

\textsuperscript{11} A Palestinian Tanna of priestly descent, active between 40-80 CE (Berman 1989:33).
\textsuperscript{12} A Palestinian Tanna active between 40-80 CE (Berman 1989:31).
physician illustrating that a spirit of co-operation existed between the Romans and the Jews in times of need).

3.6 PHYSICIAN’S FEES IN THE BIBLE AND TALMUD

There is no mention of physician’s fees in the Bible but Talmudic physicians usually demanded payment in advance before treating the patient, despite the fact that the patient had not yet been cured. This is still the same today in many medical practices. A physician who did not charge for his service was felt to be worthless (Talmud – *Baba Kama* 85a). Slaves were not given cheaper rates but it was possible to negotiate a more favourable price. It was regarded as immoral to overcharge patients, but the wealthy ones could and did pay what was demanded (Rosner 1978:32). Things were not so different in the other countries of the ancient Near East. Those in Mesopotamia were employed by the state and in Egypt the doctors who worked for the wealthy earned more than those employed by the state to treat ordinary people. In Greece and Rome some doctors were criticised for their greed in demanding exorbitant fees but there were probably many such physicians who helped the poor by charging them less.

3.7 PHYSICIAN’S RESPONSIBILITY AND LIABILITY IN THE BIBLE AND TALMUD

In the early days of the Old Testament, physicians were held in poor regard. King Asa was criticised for consulting them (2 Chr 16:12) and Job regarded them disdainfully (Job 13:4). God was held to be the only physician (Dt 32:39). It was only in the later period (circa 190 BCE) that their reputation improved. In the Apocryphal writings it was accepted that God healed through the physician and created medicine from the earth (Sirah 38:1-4). This view is further elucidated by the Talmud as the Talmudic sages also believed that God healed through the physician, although there was still an element of free will that was always a challenge in Judaism.
There were certain rules that applied to physicians during the Talmudic period:

- The physician had to have a licence to practice if not, he was guilty of an offence.

- The doctor was liable for intentional injury to a patient (Rosner 1978:30). If it was a case of negligence, the physician could seek asylum in a city of refuge until the death of the High Priest after which he could return (Rosner 1978:29; Snowman 1974:16). In Egypt (Halioua & Ziskind 2005:26) the physicians were highly ethical because they viewed their medical texts as sacred, while in early Greece the physician was not held liable for negligence (Rosner 1978:31), but only suffered a tarnished reputation. The later Hippocratic doctor was generally ethical and upheld human life (Jouanna 1992:125). Roman law dealt very severely with a negligent doctor (Retief & Cilliers 2005(a):65).

- A doctor guilty of negligence was to be judged by God according to the Mishnah but was dismissed if he was grossly negligent. Negligence was regarded as inflicting more injury to the patient during treatment than was necessary (Talmud – Baba Kama 85a).

3.8 PROMINENT TALMUDIC PHYSICIANS

Since there are no references to specific physicians in the Old Testament, the Talmud may shed some light on the matter.

3.8.1 Asaph Ha-Rofe

Although not mentioned in the Talmud, Rosner maintains that Asaph Ha-Rofe, also known as Asaph the Jew lived between the 3\textsuperscript{rd} and 7\textsuperscript{th} century CE (1977:119) but Muntner maintains that he lived during the 6\textsuperscript{th} century CE
somewhere in the Middle East, in the area between Babylon and Galilee (2007(a):543). His disciples wrote a medical book in Hebrew (Sefer Asaf) which has still not been published consisting of sixteen manuscripts and details Jewish medical ethics and remedies of the time (2007(a):543; cf Rosner 1977:120). Muntner notes that his writings include Hebrew translations and commentaries on the Pharmaceutics of Hippocrates. It can be concluded that Asaph’s teachings and prescriptions are not based on Biblical texts but Muntner states that they were influenced mainly by Greek and Roman physicians such as Hippocrates, Dioscorides and Galen and their works. Rabbi Judah Ibn Quraysh, a 10th century linguist mentions Asaph’s medical book where the remedies appear in Aramaic writing (2007(a):543).

Many of his views on diagnosis, hygiene and pharmaceuticals are similar to those expressed in the Talmud, including sin as the cause of disease. Asaph believed that many diseases originated as punishment for sins; healing was possible through prayer, repentance and charitable acts (Muntner 2007(a):544). He was a devout man with a strong belief that God was the supreme healer (Muntner 2007(a):544). Relying on physicians for medical assistance was not regarded as God’s failure to heal, for Talmudic tractate Baba Kama states that if a person suffers pain, he/she should consult a physician (Baba Kama 46b). Honesty and a high standard of medical ethics were essential in a physician who included free medical care for the indigent and medication within the reach of all (Muntner 2007(a):543)\(^{13}\). He was the first ancient medical author to concede the possibility that some diseases are genetically transmitted.

3.8.2 Mar Samuel (Samuel bet Abba ha-Kohen circa 180-257 CE).

Mar Samuel was born in Nehardea in Babylon, a brilliant physician and rabbinical scholar (Rosner 1977:157). He received his religious education from his wealthy

---

\(^{13}\) There is an Israeli state hospital in Sarafand named after Asahp ha-Rofe.
father and probably studied medicine in Netzivim (Nisbis). Much later he and his father relocated to Tzipori (Sepphoris) where he studied medicine and theology with Rabbi Hanina bar Hama. It seems that he was never ordained because he was not generally referred to as 'rabbi', but according to Rosner called 'astronomer' (yarhinah; Rosner 1977:159) because of his knowledge on the subject (1977:157). Snowman avers that he is better remembered as an astrologer (1974:14).

Mar Samuel’s medical knowledge was extensive in almost all fields but it was not based on Biblical texts (Rosner 2000:200). He is best remembered for his eye remedy with which he treated Rabbi Judah the Prince placing ‘a phial of chemicals under his pillow, and he was healed’ (Talmud – Baba Metzia 85b). Rosner maintains that the vapour was strong enough to penetrate the eye through the pillow (1977:161).

In order to examine the vagina and determine the cause of vaginal bleeding he recommended the use of an ‘inward-sloping lead tube’ possibly the first speculum (Talmud – Niddah 66a) with an absorbent swab attached to the top to ascertain the source of the bleeding. If the blood that appeared after sexual intercourse was from the uterus it would stain the top of the swab and vaginal blood would cover the sides. Such blood was regarded as unclean. Jewish purity laws are very strict and a man who has sexual relations with such a woman is regarded as ritually unclean until he has purified himself (Newmyer 1980:364). If a woman bled on three subsequent occasions after intercourse, the marriage could be annulled. Later it was realised that such bleeding could be a symptom of uterine or cervical cancer.

A post mortem Caesarean section is discussed in Talmudic tractate Arachin 7a, where it was regarded as permissible to operate and save the child even if it

14 There is uncertainty as to whether he was a Palestinian or Babylonian Tanna but he was active in 180-250 CE and spent time in both countries (Kolatch 1981:107).
desecrated the Sabbath. Several ‘monsters’\textsuperscript{15} are described in the Talmud (\textit{Bechoroth} 43b) and Rosner believes that these probably refer to the defect of \textit{spina bifida}\textsuperscript{16} (1977:165).

3.9 BLOOD-LETTERS IN THE BIBLE AND TALMUD

Blood-letting is defined as ‘surgical removal of some of the patient’s blood’ (Coulson, Carr, Hutchinson & Murphy 1980:82) and ‘the removal of blood in treating diseases’ (Leibowitz 2007:774). Although not mentioned in the Biblical text, it was commonplace in the Talmud. It is important to discuss it because it will render a better understanding of the cultural background to the Biblical text through the Talmud. It is possible that it took place but is not mentioned because:

- It was such an old and accepted practice,
- It is most unlikely that it would even be mentioned because the Bible is not a medical textbook.

It was common practice in the Talmud and was carried out with a lancet or small knife to cut the skin or a pointed instrument much like a nail (\textit{Mishnah} – \textit{Kelim} 12:4). Cupping horns\textsuperscript{17} were also used (Talmud – \textit{Niddah} 20a).

The main reason for blood-letting was based on the belief that it was good hygienic practice to have some of one’s blood regularly removed, but that it should be done in moderation and in accordance with the age of the patient. (This is implied in tractate \textit{Gittin} 70a). It was important to have some food such as meat and red wine after being bled (Talmud – \textit{Shabbath} 129 a-b). It is

\textsuperscript{15} One of them is described as ‘a creature which possesses a double back or a double spine.’ Rav maintained that if was miscarried, it was not regarded as a child and if it was an animal offspring, it was not kosher and could not be eaten (Talmud \textit{Bechoroth} 43b).
\textsuperscript{16} Defined by Davis et al as ‘a cleft or cloven spine’ (1968:578). The \textit{Mishnah} further describes it as a curved spine which appeared as a double spine (\textit{Bechoroth} 43b)
\textsuperscript{17} The horns were originally those of heifers. The tips were removed and the horn placed on the patient’s skin. The cupper then sucked through the open tip. Cupping vessels were later manufactured from glass, silver or bronze (Rosner 2000:88).
noteworthy that the Talmudic rabbis’ views of blood-letting contrasted sharply with the views of the ancient world in general where blood-letting was unrestricted and performed to treat many illnesses (Leibowitz 2007:774). Rashi, a medieval commentator explained a section of Talmudic tractate Shabbath 129b by saying that blood-letting ought to take place every thirty days for those under forty years and the time period between bleeds should be lengthened for patients less than sixty years and even longer for the very old (sixty years and over).

Rosner believes that blood-letting was routine practice when a fever had been present for at least two days (1978:249; Talmud – Gittin 67b). The physician Mar Samuel, like most of the ancients, also advocated it as a cure for most illnesses but emphasised that taken to excess was life-threatening. In modern times blood-letting or phlebotomy is recommended for polycythemia vera (an abnormal increase in red blood cell production) the symptoms include headaches, plethora (excess of blood), blood red tongues and bloodshot eyes. The rabbis prescribed therapeutic blood-letting for people with these symptoms (Rosner 1977:167).

Blood-letting was controlled by astrology in that certain days and hours were regarded as the most favourable time – according to the Talmud in tractate Shabbath 129b. If blood was drawn on an even numbered hour, it could spell disaster. Mar Samuel said that the best days for blood-letting were Sundays, Wednesdays and Fridays but not Monday or Thursday because the court would convene on those days and Tuesday was deemed to be under the influence of the planet Mars. Rabbi Judah the Prince however stated categorically that Jews were not subject to astrological influences (Talmud – Nedarim 32a).

The blood-letter, who sometimes performed the services of a mohel (circumciser) was regarded as a lowly artisan - similar to a shoemaker, tailor or shepherd. Unlike a physician whose status was that of a scholar, the blood-letter was rated akin to a butcher (Talmud – Baba Metzia 97a). Because of his low social status, he was not permitted to the ranks of community leader or priest sometimes even
regarded as a thief! Occasionally he is shown in the Talmud in a more positive light:

- Abba the Cupper\textsuperscript{18} would not accept payment from those who could not afford to pay but would give his patients money for food so that they could regain their strength after the blood-letting (Muntner 2007(b):722; Talmud – *Ta’anith* 21b). Rosner (2000:57) states that the blood from blood-letting flowed onto the ground and was either consumed by birds, (Talmud – *Baba Bathra* 12a, but this does not appear in the tractate) or onto absorbent rags (Talmud – *Baba Bathra* 20a) or collected in a special pottery vessel kept for that purpose (*Midrash Leviticus Rabbah* 10:5; Talmud – *Baba Bathra* 20b). The blood itself would presumably have been buried like that of a sacrificed bird (Talmud – *Pesachim* 47b). This point of view is based on the fact that those with leprosy, whose limbs were amputated and the remains of abortions were buried in mounds near cemeteries (Talmud - *Kethuboth* 20b).

- He worked from an expansive consulting area of several rooms where men and women had their separate cupping cubicles. Special garments were provided for the women during the procedure to preserve their modesty throughout the process with only the area to be bled exposed, usually the shoulder (Rosner 1978:35).

- If necessary he would allow them to stay the night and provided woollen mattresses for them to sleep on (Talmud – *Ta’anith* 21b).

- A box would be placed outside the consulting room where patients could deposit their fees. The scholars and the poor could save face by paying what they could afford, if anything at all (Rosner 1978:35).

\textsuperscript{18} Also known as Abba Umana, active in the 4\textsuperscript{th} century CE (Muntner 2007:543).
A blood-letter would not have charged unreasonable fees for their services (Talmud – *Sanhedrin* 109b) and a husband was obligated to pay his wife’s ongoing venesection expenses as part of her regular medical costs (Talmud – *Kethuboth* 52b).

Blood-letting must have been painful, so much so that Rabbi Nahman19spoke to Raba20 on the latter’s deathbed. Raba described his dying as being similar to the prick of the cupping instrument (Talmud – *Moed Katan* 28a).

The Bible is silent on blood-letting but the Talmud provides an insight on this practice, a treatment that was very common in Talmudic times. There is reason to presume that it was also used as a healing treatment during Biblical times.

Blood-letting does not appear to have taken place in ancient Egypt although it was common in Greece by the time Hippocrates was born circa 469 BCE and it was only performed on healthy patients (Jouanna 1992:161). The Romans were very favourably disposed to blood-letting, which was believed to be a panacea for most diseases (Jackson 1988:70). They also used bleeding cups made of horn, metal or glass but leeches were often used instead of cups during the Greek era (Jackson 1988:72-3). As blood-letting was a common practice of the peoples of the ancient Near East, it is quite possible that it was carried out in Biblical times.

### 3.9.1 Archaeological evidence

In the absence of archaeological evidence for blood-letters in the Bible and Talmud, I found evidence of bronze cupping vessels that came to light in an excavated grave in Bingen, Germany dating back to the 1st or 2nd century CE. The set of three vessels stood on a stand and was used often as blood-letting.

---

19 His full name was Nahman ben Jacob, a Babylonian Amora (*circa* 235-324 CE; Kolatch 1981:166).
20 His full name was Rabbi Abba ben Joseph ben Hama, a Babylonian Amora (*circa* 280-352 CE; Kolatch 1981:177).
was so common in Greek and Roman medicine (Jackson 1988:71). Jackson does not document who discovered the House of the Surgeon.

3.10 CIRCUMCISERS IN THE BIBLE AND TALMUD

Snowman is convinced that circumcision was originally a ritual, dating back to prehistoric times and became entrenched amongst the Jews (2007:731). Propp believes that circumcision was the norm in the countries of the Levant (2004:25) except for Mesopotamia. It began when Abraham was commanded by God to circumcise himself aged ninety nine years (Gn 17:24). The normal age for circumcision was on the eighth\textsuperscript{21} day of a baby boy’s life (Gn 17:11-12).

There were punitive measures attached to those who ignored the practice – they would be ‘cut off’ from their kin, which the Talmudic rabbis understood to mean exclusion or excommunication (Snowman 2007:731). Adeyemo is in agreement with this view and elucidates the existence of the belief that an uncircumcised man could die without heirs or be buried outside his ancestral tomb (2006:36). Dunn & Rogerson’s view is that ‘cut off from his people’ meant dying prematurely (2003:52; cf Carson 1994:73). Friedman is not certain of the meaning of the phrase but postulates that it merits punishment by God, by a man either dying childless or not joining his ancestors in the afterlife (2003:61).

Circumcision was important because only circumcised men could participate in the Passover meal (Ex 12:44, 48; Snowman 2007:731). Only those who were circumcised could enter Canaan, the Promised Land (Jos 5:2; Snowman 2007:731).

The prophet Ezekiel often spoke of the fate of those who were uncircumcised (Ezk 28:8-10; 32:19, 21, 25-26). Propp (1987:362) maintains that circumcision

\footnote{The reason for this says Propp (1987:366) is because the human blood clotting mechanism is fully functional at six months of age, which function is still inefficient until the fourth day after birth.}
was performed because of the high infant mortality rate and the rabbis believed that the baby’s fate in the next world would be more favourable if he was circumcised before death\(^{22}\) (Talmud – Sanhedrin 110b; Midrash – Exodus Rabbah 19:4).

Ishmael was circumcised at age thirteen (Gn 17:25) and Isaac at eight days. Hyatt is convinced that in the earliest times of Israel’s history, circumcision was performed on boys aged thirteen but the timing of this rite was changed to the eighth day of life around the time that the book of Genesis was written (1962:629; cf Propp 1987:362-3) who is of the opinion that it was thought to be less painful and traumatic than if it were performed at puberty (usually thirteen years). The boys at this age would have been most reluctant to undergo the rite and their parents probably would probably not permit it to take place (Propp 2004:28).

Propp postulates that circumcision initially seems to have been a prerequisite for marriage – a rite of passage from adolescence to adulthood (2004:25-28). Propp gives five examples to strengthen his point of view; although the last one does not add to his argument:

- Ishmael was circumcised aged thirteen (Gn 17:25), and he is only mentioned again, after his death, as having descendants who inhabited the land between Havilah and Shur (Gn 25:17-18). Propp believes that his circumcision was a prelude to marriage.

- Zipporah tells Moses that he is her ‘husband of blood’ when she circumcises her son and touches Moses’ genitals with the foreskin to indicate that God had forgiven Moses for possibly not being circumcised on the eighth day as the rite would have been performed later in Egypt at thirteen years old before he got married (Propp 2004:27; Ex 4:25).

\(^{22}\) This is reminiscent of Christian baptism.
• After the ‘rape’ of Dinah, Shechem, the Hivite, wanted to marry her but was uncircumcised. Dinah’s brothers insisted on Shechem and his people undergoing the rite but this was just a ruse to murder them all (Gn 34:1-26).

• Before David was permitted to marry King Saul’s daughter, Michal, he had to present him with one hundred Philistine foreskins, but David was zealous and gave the king two hundred so he could marry his daughter (1 Sm 18:25-27).

Snowman (2007:731) states that circumcision was already well established in Egypt by 4000 BCE according to inscriptions found on early Egyptian temples. In Egypt the priests were the first to be circumcised followed by the soldiers, nobles and lastly royalty. There are many theories for circumcision:

• Blood was offered to the gods to promote the longevity of an individual. Hyatt believes that the foreskin was sacrificed to preserve the body (1962:630),

• To maintain the immortality of a king (the Egyptians believed that a pharaoh would become immortal after his demise),

• To promote fertility (it was thought that the foreskin affected fertility by constricting the gland),

• For hygienic reasons (Montagu 1967:800; cf Hyatt 1962:630).

Moses’ wife Zipporah used a flint stone knife to circumcise her son, Gershom but the circumcision of the second son, Eliezer is not mentioned (Ex 2:22; Ex 4:25; Ex 18:4). This instrument was very primitive compared to the surgical instruments used in Egypt, Mesopotamia and Greece during the same period (Burkill
1977:153). Plaut’s view is that it was probably a pre-Bronze Age instrument (2006:116).

Circumcision was adopted by the early Israelites as a physical sign of their covenant with God (Hertz 1987:58; Gn 17:10-11). God commanded that all males of eight days old be circumcised (b’rit milah; Gn 17:12); this injunction was reaffirmed through Moses (Ex 5:25-26). Gevirtz (in Plaut 2006:116) is convinced that in this way a commonplace ancient Egyptian rite acquired religious significance for the ancient Jews. A reason for this was advocated by Eilberg-Schwartz (in Plaut 2006:117) who believes that a woman’s blood was regarded as contaminating (Lv 18:19; Lv 15:19) whereas the blood of a man created a covenant. As Biblical society was patriarchal (Plaut 2006:110) this is not surprising.

A covenant is a type of contract or bargain (Coulson 1980:195). Plaut (2006:108) maintains that the God of Israel, unlike the capricious pagan deities, was reliable and unchanging. Judge Davis expressed his concise view on a covenant in a sermon. He likened the covenant between God and Israel to the relationship between parents and their children. The covenant is based on God’s unconditional love of the people of Israel forgiving them their wrong-doings after they repent. A covenant, he said, unlike a contract does not create reciprocal duties and obligations, but is a sacred undertaking by one of the parties to the agreement.  

The duty of circumcision (brit milah) of a baby boy on the eighth day  

rests on the father (Gn 21:4) and the Talmud echoes this in tractate Shabbath 137b where it is implied by the fact that it is the father who recites the blessings for the ritual; but is usually performed by a circumciser (mohel; Plaut 2006:116). It has always

---

23 I was present when Judge Dennis Davis delivered a Sabbath sermon on 31 July 2009 at the Limmud conference, Goudini Spa, Slanghoek (Paarl area).
24 The baby could only be circumcised if he was healthy (Talmud – Yebamoth 14a). Mar Samuel held that the circumcision could be postponed for seven days until the child had recovered (Talmud – Yebamoth 71a).
been an important and sacred commandment (*mitzvah*), so much so the sages said that it is equal to all the other *mitzvoth* combined. In fact a Jew is regarded as ‘imperfect’ or ‘incomplete’ if he is not circumcised. Rabbi Ashi regarded circumcision as a physical repair (Talmud – *Shabbath* 106a).

The circumciser was usually a man whose technical skills were held in low regard like the blood-letter but like Zipporah, there were women who circumcised their babies themselves (Rosner 1978:36) During the times of Antiochus the Maccabee, two mothers who contravened the law and circumcised their boys, suffered martyrdom with their children (II Maccabees 6:10), but their father was never punished according to Josephus, who gives no further explanation (*Antiquities of the Jews* 12, 5:4).

Although Rabbi Jose\(^\text{25}\) said that although circumcision was regarded as work, the circumciser was permitted to perform this duty on the Shabbath (Talmud – *Nedarim* 31b; cf *Shabbath* 128b) because circumcision takes precedence over the Shabbath (Talmud – *Shabbath* 132a). The *mohel* was not permitted to perform a circumcision after sunset but could only operate during daylight hours according to Talmud tractate *Megilah* 20a. If the mohel for instance, performed the operation on the evening of the eighth day, he would be doing it in fact, on the ninth day.\(^\text{26}\)

The rabbis pondered the question of a gentile doctor performing a circumcision where no Jewish one was available. Even the most liberal sages viewed non-Jews as heathens; even their doctors were viewed with trepidation lest they wilfully injured the child, but in the absence of a *mohel* Rabbi Meir\(^\text{27}\) said (Talmudic – *Menachoth* 42a) that they were regarded as trustworthy enough to circumcise the Jewish babies (Rosner 1978:36). In that case the father had to

\(^{25}\) Not identifiable as there are twenty six others of the same name (Kolatch 1981:139-145).
\(^{26}\) A day began at sunset.
\(^{27}\) A *Tanna* of the 2\(^{nd}\) century CE (Kolatch 1981:164). (See Appendix A)
recite the blessings after the operation. Rabbi Judah\(^{28}\) however preferred to use the services of a Samaritan\(^{29}\) and Rabbi Jonathan\(^{30}\) disagreed and maintained that the circumciser, himself must be circumcised and that the doctor therefore should be Jewish (Talmud – Menachoth 42a).

The father usually hired a mohel as his agent, to perform the operation or a physician (Josephus, Antiquities of the Jews 20, 2:4) if the circumcision was to be performed on an adult. A circumcision was regarded as a religious duty and a mohel would never demand a fee for this service. If a mohel, a blood-letter or a physician was found guilty of negligence while performing a circumcision, he was liable and would be relieved of his duties (Talmud – Baba Bathra 21b). In Talmudic times a knife possibly with a sharp metal (iron) blade or a razor was used to perform the operation according to Rabbi Eliezar\(^{31}\) (Talmud – Shabbath 130a; Auboyer 1992:827).

In Talmudic tractate Sanhedrin 32b, it is mentioned by the sages that if the noise of grinding could be heard at Burni, this would indicate that a circumcision was imminent for ingredients were being ground for use on a circumcision wound. Unfortunately the Talmud does not indicate what the medication consisted of. Talmudic tractate Shabbath 77b notes that skin wounds were treated with honey\(^{32}\) even the saddle sores of a camel (Talmud – Shabbath 154b). The Hellenistic botanist, Dioscorides also applied honey to circumcision wounds after bathing them for thirty days (2:101). The Talmud (Shabbath 133b) also documents a healing compress of seven parts of fat and one part of wax for application to a circumcision wound.

---

\(^{28}\) Not identifiable as there were twenty one rabbis with the same name (Kolatch 1981:152-159).

\(^{29}\) A Samaritan was regarded as being closer to being Jewish than a gentile.

\(^{30}\) Not identifiable as there were seven rabbis of the same name (Kolatch 1981:137-138).

\(^{31}\) Not identifiable as there are eight rabbis with the same name (Kolatch 1981:91-94).

\(^{32}\) Honey has been used since ancient times on wounds and burns (Ebadi 2007:404) because of its antibacterial properties (Ebadi 2007:399-404).
The Talmud elucidates the Biblical knowledge of circumcision by mention of the instrument used, the fact that a skilled circumciser (*mohel*) performed the delicate operation and that a negligent *mohel* would be punished. It also highlighted that medication was used on the circumcision wound. It is possible that honey was applied to circumcision wounds. During Talmudic times, circumcision did not take place in exactly the same way as it did in Biblical times, but the Talmud gives an indication of the rite.

Snowman (2007:731) states that in Hellenistic times, many assimilated Jews were embarrassed to be seen naked at the gymnasia because the Greeks and Romans ridiculed them and were repulsed by their circumcision. Consequently many such Jews underwent the painful operation, called epispasm⁴³, to reverse their circumcision⁴⁴ (Cf Rubin 1980:121; Hall 1992:52) where some surgeons were able to reconstruct the foreskin (Propp 2004:44). This was regarded as a major transgression of the covenant by the Talmudic rabbis in tractate *Sanhedrin* 44a.

### 3.10.1 Archaeological evidence

The only evidence available for circumcision during Biblical and Talmudic times are those that referred to in the Bible and Talmud itself but I wish to mention some archaeological evidence from Egypt. There is a wall relief discovered at Saqqara, from the tomb of Ankh-ma-Hor dating back to the Sixth Dynasty (2345-2181 BCE) indicating that the rite of circumcision was an old and established one (Reeves 1992:29, 30). It depicts a circumciser performing the operation on a young man, who is standing remarkably still. Perhaps he had been given dose of pain reliever before his surgery. (Figure 4 in the List of Photographs).

---

³³ This was very popular in the 1st century CE (Hall 1992:52).
³⁴ Many Jews wanted to fit in with their Greek and Roman counterparts for recreational and business reasons (Hall 1992:54).
3.11 MIDWIVES IN THE BIBLE AND TALMUD

From ancient times, midwives have always assisted birthing women. The first mention is made of two Hebrew midwives who served their community in Egypt - Shiphrah (meaning 'fair one') and Puah (meaning 'girl'). The Bible relates that they were devout and religious women and refused to kill the baby boys as Pharaoh had commanded them to (Ex 1:15ff), saying that the babies were born before they could assist the women.35 Carson et al mention that God gave these women children as a reward for their bravery (Ex 1:21) and putting His interests first (1994:96; cf Adeyemo 2006:87). Dunn & Rogerson believe that the Biblical verse actually means that they provided families for Israel (2003:74; Ex 1:21). Alter concludes that their reward was either a rise in their social status or that they were able to start their own families (2004:311).

Midwives were called upon to assist Rachel, who was having a difficult birth with Benjamin (Gn 35:16) and Tamar when in labour with her twins fathered by Judah (Gn 38:28). No further detail on the duties and functions of the midwives are given in the Old Testament.

The Talmud brings to light that a midwife (chaya) was regarded as a wise woman and that she was given special dispensation to travel on the Sabbath (Talmud – Shabbath 128b; cf Eiruvin 45a) from one city to another (Talmud – Rosh Hashanah 23b) in order to be available to deliver babies within her area at any time. The midwife was entitled to the services of one of her professional colleagues when she had her own baby (Talmud – Sotah 11b), but if none were available, presumably a maidservant could assist her.

35 Plaut (1981:383) comments that killing the boys would prevent uprisings in the future but would also adversely affect Pharaoh’s labour force!
The Talmud states that midwives were often called upon to give evidence in court in cases where it was vital to ascertain which twin was the older because the eldest boy inherited all his father’s possessions according to halacha (Jewish law). Rabbi Nahman\textsuperscript{36} says that her evidence was superior to that of both parents (Talmud – Kiddushin 74a). Generally the evidence of a woman was not accepted as reliable but this was a noteworthy exception to the rule (Rosner 1978:38).

The Jewish midwife was not encouraged to attend gentile (heathen) women because that would be tantamount to bringing another idol worshiper into the world (Talmud – Avodah Zarah 26a) and by the same token, heathen midwives were viewed with the utmost caution ‘lest she crush the infant in the womb’ through her negligence. Rabbi Meir feared that such a midwife might press too hard on the fontanel of the baby’s head and for that reason did not approve of the birthing woman being alone with the midwife. This was the view of the Babylonian sages but the Palestinian sages had no misgivings provided that the midwife was reliable and trustworthy (Rosner 1978:38). Midwives were paid for their services but an amount is not mentioned (Talmud – Abodah Zara 26a). Ben Azzai (also known as Simon ben Azzai\textsuperscript{37}) a friend and pupil of Rabbi Akiva (also Akiba) ben Joseph\textsuperscript{38} discusses the liability of a midwife in Talmudic tractate Baba Kama 59a and maintains that a midwife, who inflicted an injury on a pregnant woman resulting in a miscarriage, would have a portion of her fee deducted.

The Talmud elucidates the Biblical text (Ex 1:15; Gn 35:17) by providing more information on midwives especially that they were worthy of protection (Talmud – Berachoth 54b) and that their legal evidence was accepted in a court of law (Talmud – Kiddushin 73b).

\textsuperscript{36} Either Nahman ben Isaac (280-356 CE) or Nahman ben Jacob (235-324 CE; Kolatch 1981:166-167).
\textsuperscript{37} A shortened form of Azariah.
\textsuperscript{38} A Palestinian Tanna born 30 CE (Kolatch 1981:68-71).
3.11.1 Archaeological evidence

In the absence of archaeological evidence for midwives in the Bible and Talmud, I found a terracotta relief from Ostia, Italy, of a childbirth scene. It depicts a woman in labour seated on a birthing stool, assisted by her midwife, Scribonia Attice, and helper. The assistant has her arms around the mother-to-be, while the midwife appears to be facilitating the birthing process (Jackson 1988:99). The relief dates back to the 2nd century CE (Figure 14 in the List of Photographs).

3.12 CONCLUSION

The Talmud does not elucidate Biblical knowledge of physicians, but we do learn that the status of a physician improved from the time of King Asa (circa 915 BCE; 2 Chr 16:12) because the Talmudic sages believed that God healed through the physician (Sirah 38:1-4; circa 196 BCE).

Whilst the Bible reveals very little information about physicians, Josephus states that they were functional during that period. However, they were far more prominent during Talmudic times judging from the many references to them.

The rabbis were consulted on a variety of human illnesses both physical and psychological and the Talmud records details of the maladies and treatment provided.

Patients’ complaints about excessive fees charged in Talmudic times can still be heard! Today as in Talmudic times, doctors are called upon to give expert evidence in a criminal or civil case.

The Talmud illustrates that the rabbis were called upon to treat the Roman Emperor’s slaves and exchanged healing recipes with Roman herbalists (Midrash – Leviticus Rabbah 10:4; Talmud – Yoma 84a).
The doctors not only performed operations like trephinations and amputations, but also functioned as dentists, dieticians and pharmacists (Rosner 1978:12; 17).

An important development is the question of personal liability for negligence on the part of the physician. The Talmud sets down the definition and the punishment for such impropriety (Talmud – *Baba Kama* 85a).

General thinking about physicians progressed from their being reviled to being respected. During Talmudic times realisation dawned that a physician played a vital role in society using his God-given skill to heal and as a result became an esteemed servant of the Almighty.

It was rare to find a young person without venesection scars on their bodies (Rosner 1978:249). This practise was so common and routinely recommended that it was considered foolish to live in a town without a blood-letter (Rosner 2000:55). There were those who regarded puncturing the skin contrary to *halakhah* (Rosner 1978:250).

This prohibition stemmed from the prohibition of mourning by cutting the body (Lv 19:28) as practiced by the heathens. This would also include the cuts of venesection (Talmud – *Makkot* 21a).

Blood-letting can perhaps be compared to blood donation, which is after all, a sophisticated and humanitarian form of phlebotomy. The effects are the same – the individual still looses blood.

Venesection is still used today to treat *polycythemia vera* (an abnormal increase in red blood cell production) the symptoms include headaches, plethora (excess of blood), blood red tongues and bloodshot eyes (Rosner 1977:167). Alternatively the individual could also donate blood.
Circumcision is still practised by Jews after so many centuries, performed by a mohel or doctor on the eighth day of a baby boys' life, providing the child is healthy.

The modern medical instruments are more sophisticated than the first flint knife used by biblical people. To a Jew, circumcision is a holy rite, because it is still part of an ancient covenant between him and his God.

Although women were not permitted to give evidence in a court of law, a midwife was the only person able to do so. In a case where so much importance was placed on inheritance by the eldest boy, her testimony was vital and usually accepted unless anyone else objected (Rosner 1978:38).

Midwives today still ply their ancient trade. They perform a most valuable service especially for those who live in rural and outlying areas not served by hospitals.
CHAPTER FOUR
BIBLICAL DISEASES IN THE LIGHT OF TALMUDIC PERSPECTIVES

4.1 INTRODUCTION

I will be discussing Biblical references to what I believe are gout, tuberculosis and leprosy that have afflicted mankind for thousands of years. These diseases were selected because they leave unmistakable signs on human skeletal remains, which can be analysed by paleopathologists to determine the type of disease suffered by the deceased. The Talmud will be scrutinised to see how it can possibly explain biblical illness. I will include Biblical passages that may imply parasite infestation and substantiate my belief by discussion of the archaeological finds in Jerusalem. The Talmud will also be studied for more information that might contribute to our understanding.

Epilepsy, although only one instance is mentioned, will be dealt with. Recent medical research has revealed that skull/brain tumours exert pressure on the patient’s brain, resulting in epileptic fits. There might have been such sufferers in biblical and Talmudic times. By reference to some archaeological evidence, found in Europe and Israel, I hope to show that those diseases existed during both biblical and Talmudic times. Although snake bite does not fit into this category, I chose it because the Bible tells the story of Moses and how he used the *Nehushtan* to heal the Israelites’ bites in a manner reminiscent of homoeopathy. The story of how a fruit poultice saved a king interested me and Josephus’ account mentions that King Hezekiah was so sick that his ‘physicians’ had tried to cure him without success. The Talmud sheds some light on the rabbinic view of this king. Mention is made of a ‘Book of Remedies’ that he unilaterally decided to withhold from all future generations.
In each of the illnesses selected for this study, I shall mention specific remedies as well as the early Greek, Hellenistic and Roman medical writers who recommended them.

Jewish law (halachah) dictates that archaeological remains have to be re-buried as soon as possible after too brief an examination and this hampers the re-study of previously excavated osteological material from Israel (Greeff 2005:84). Greeff states that Jewish law also restricts the type of testing that can be performed on the skeletal remains (2005:84). This is because Jewish law regards a burial site as a ‘house of eternity’ (bet olam) and it is not to be violated by the excavators. As a result exhumation is prohibited by the Talmud as it would dishonour the deceased (Talmud – Baba Bathra 154a-155b).

Likewise autopsies in Israel today are forbidden for the same reason (Rosner 2000:35). But there is an exception to this general rule: If an autopsy can save the life of another suffering from the same illness or if it can prevent harm to others being treated with similar drugs that were used on the deceased, it is permitted (Rosner 2000:35). Samet (2007:460) documents that Rabbi Ezekiel Landau, an 18th century Ashkenazi commentator¹ was an authority on halakhah. He was the first to permit autopsies but the conditions imposed were very stringent.

4.2 KING ASA’S ILLNESS

4.2.1 Introduction

Adeyemo believes that King Asa (circa 915-875 BCE) was either the son or brother of Abijah (917-915 BCE) and grandson of Rehoboam (933-917 BCE) who ruled Judah for forty one years (2006:435; cf Bright 1972:236). Bright says that Abijah probably died prematurely (1972:236). Skolnick, Berenbaum, Gafni &

¹ Born in 1713 and died in 1793 also known as Noda bi-Jehudah.
Gilson believe that Asa and Abijah were brothers (2007:540). Asa was a great religious reformer and managed to eradicate the pagan symbols of idolatry common in the reigns of Abijah and Rehoboam and renew God’s worship in Jerusalem (Skolnick et al 2007:540). In his latter years, Asa developed ‘a foot disease’ which according to the Bible was most troublesome but the description is very vague (1 Ki 15:23; 2 Chr 16:12). This ‘disease’ will be discussed to ascertain what the illness could have been and what herbal remedies of the time were used to treat the condition. Skeletal evidence excavated both in Israel and Greece will show whether the disease was common in ancient times.

Talmudic references to gout will be discussed which might elucidate King Asa’s illness and the remedies that were used in those times. Where the Talmud is silent on these matters, I have indicated remedies used by the Roman, Pliny the Elder and his Greek counterpart, Dioscorides during this era because remedies like other commodities, were traded and used by the peoples of the ancient Near East.

4.2.2 Background information on King Asa

It would appear that Abijah and Asa were brothers because Maachah (daughter of Absalom) was their mother (1Ki 15:2; 2 Chr 15:16; Skolnick et al 2007:540). Adeyemo, however, maintains that she was the grandmother of Asa (2006:435) and served as queen regent (2 Chr 13:23) on his brother’s/father’s death, until the very young Asa became of age (2006:435). MacLean (in Bright 1972:243) explains that Micaiah, daughter of Uriel of Gibeah was Abijah’s mother (2 Chr 13:2), consequently Asa’s mother he has presumed to be Maachah, Absolom’s daughter (2 Chr 15:16). He is convinced that the confusion arose from the similarity of their names. When Asa came to power he removed Maachah from her position together with her followers as part of his later religious reforms because she worshipped the goddess, Asherah (Skolnick et al 2007:540) and made an obscene symbol of her (1 Ki 15:12-13). Dunn & Rogerson’s view is that
Maachah was known as *gebirah* which is the Hebrew word for the ‘Great Lady’ or ‘queen mother’ but it was probably the title of an office at the royal court, held often but not always by the mother of the king (2003:260). This could explain why she is referred to as the mother of both Abijah and Asa (Dunn & Rogerson 2003:260).

Rehoboam, Asa’s father worshipped idols and this was not surprising because he was influenced by Maachah, a worshipper of Asherah (Adeyemo 2006:435). His father Solomon was far too busy with his 700 wives and 300 concubines to give Rehoboam much if any attention at all (Adeyemo 2006:435). As Abijah ruled for such a short time that he would have had little or no influence on the prevailing pagan practices of his day so abhorrent to God (1 Ki 14:22-24). Asa’s reforms may have been a policy to reunite Israel and Judah by gaining the support of those in Israel who were in favour of Temple worship (Skolnick et al 2007:540), but it is Wiseman’s view that these reforms may not have been welcomed by everyone (1993:155).

Although the beginning of his reign was peaceful enabling him to fortify various towns in Judah and to strengthen his army (2 Chr 14:5-6, 8), Baasha of Israel (900-877 BCE) waged constant war on Asa (1 Ki 15:16). Besides this war, Asa defeated the Ethiopians under Zerah, who may have been an African mercenary employed by the pharaoh of Egypt (Bright 1972:231; Adeyemo 2006:512) and the booty he acquired boosted the position of the tribe of Simeon in the Negev (Skolnick et al 2007:540). The presence of Baasha’s troops eventually posed such a threat to Judah (1 Ki 15:17) that Asa sought an alliance with Ben Hadad I of Aram (1 Ki 15:18-19), who invaded Galilee. This resulted in the withdrawal of Baasha’s troops from Ramah then occupied by Asa, thereby securing his northern boundary with Israel and strengthening his position (Skolnick et al 2007:540; Carson, France, Motyer & Wenham 1995:356). This alliance proved very expensive for Judah – it cost a small fortune in the loss of Temple treasures (1 Ki 15:18-19) and God strongly disapproved of foreign alliances (Adeyemo

4.2.3 Biblical references to Asa’s disease

The Bible describes Asa’s foot disease very briefly and only that it plagued him in his senior years. Rosner, a medical doctor, considers it to be gout (2000:140). The two Biblical references that point to his disorder are:

But in his old age he was crippled by a foot disease (1 Ki 15:23 TEV)

and

In the thirty-ninth year that Asa was king, he was crippled by a severe foot disease; but even then he did not turn to the Lord for help, but to doctors. (2 Chr 16:12 TEV).

The king was criticised by the Chronicler for his pro-active policy of seeking medical attention from physicians instead of turning to God for help.

I can understand the king’s stance. The generally held belief was that God sent illness and disease to those who disobeyed Him and healing when they repented (Ps 103:3). Asa may have believed that praying would not have achieved much because God would decide when healing should be sent (Dt 32:39). Perhaps Asa believed he had not transgressed God’s laws; instead he had instituted many religious reforms during his long reign (1 Ki 15:12) and thought that he had already lived a sufficiently long and productive life.

Adeyemo however maintains that Asa’s illness was perceived to be punishment for his alliance with a pagan nation (Ben Hadad I of Aram; 2006:513). Japhet’s view is that the Bible does not prohibit humans from seeking medicine or healing; although the Chronicler believes it futile to seek elsewhere other than God. The former does not regard Asa’s consultation with physicians a transgression
warranting retribution because the Bible documents the kings honourable burial in the royal tombs in David’s city (1993:718; 1 Ki 15:24).

The physician’s licence to heal was eventually only recognised and revered by 190 BCE. In the writings of Ben Sira it was accepted that God heals through the physician and creates medicine from the earth (Sira 38:1-4).

King Asa’s disease suggests that gout and arthritis existed during biblical times and I will investigate the possibilities as well as how the Talmud reflects on those illnesses. If one accepts that Asa suffered from gout, it is defined as an inherited metabolic disorder resulting in prolonged attacks of severely painful inflammation, caused by excess uric acid deposits resembling a chalk-like appearance in the joints (Anderson 19[68]:371; cf Berkow & Talbott 1977:1339). This disease is common in middle-aged men although women are also affected, especially those suffering from obesity and hypertension, whose risk of developing the disease is similar to men and often runs in families (Anderson 19[68]: 371; Dorland 1968: 277; http://en.wikipedia.org/wiki/Gout). Vegetarians are less prone to gout because they have less purine in their blood. There is a very painful type of arthritis associated with gout that can develop on several joints, the knee, ankle but more commonly, the joint of the big toe (http://en.wikipedia.org/wiki/uric_acid). The joint then becomes red and swollen and the patient complains of weakness and fever. Rosner maintains that sciatica (shigrona) is considered to be a type of gout only because it affects the hip joints and is defined as inflammation of the sciatic nerve (1978:310).

Wiseman believes that gout was not a common disease in the ancient Near East and that King Asa probably died from gangrene brought about as a result of a circulatory dysfunction in his legs (1986:33). Harris (in Wiseman) goes on further to say that the ‘feet’ are often a euphemism for genitals and suggests that the

---

2 Uric acid is created when the body breaks down purines (http://www.nim.nih.gov/medlineplus/ency/article/003476.htm).
king could even have died of a venereal disease (Wiseman 1986:34). This seems unlikely in Wiseman’s opinion because such diseases are not specifically identified in Old Testament times (1986:34). Rosner disagrees and refers to the Bible (Lv 15:2) for symptoms of gonorrhoea (1978:354).

In line with Wiseman’s opinion Rosner quotes an article by two Israeli physicians that was published in the *New York State Journal of Medicine* in February 1975 where they postulate that King Asa most likely suffered from gangrene brought about by chronic vascular disease or clinical gout at old age, but that he may not have died from the latter disease two years later (1977:60). Ben-Noun says that leg pain is very common in the elderly (2001:96) with many causes but the most likely one is peripheral vascular disease in Asa’s case, because of his advanced age (2001:96; cf Kinnier Wilson 1982:364). Smoking, diabetes, hypertension and hypercholesterolemia would have aggravated this disease (Ben Noun 2001:96). As far as known, the king was not a smoker but may have passively inhaled smoke from fragrant leaves and resin – a common ritual practised in Egypt and Babylon in the 3rd millennium BCE (Ben-Noun 2001:99).

### 4.2.4 Treatments in biblical times

The Bible does not mention specific treatments for King Asa’s kind of disease. If King Asa had gout the following treatments were possibly available for gout and rheumatic disease in the ancient Near East:

- The edible oil of the fruit of the terebinth tree (*Pistacia terebinthus*) known to the ancient Egyptians, Hippocrates and Galen (Kottek 1994:126). Jacob, W mentions that the resin of the terebinth (*Pistacia lentiscus*), native to the Mediterranean coastal regions was probably used like other resins but to what extent is not known (1993:44). It is possible that both plant types belonged to the same family. The resin of the mastic tree or

\[\text{An excess of cholesterol in the blood (Davis et al 1968:307).}\]
terebinth (*Pistacia lentiscus*) is used today for diarrhoea and to treat halitosis. It is an ingredient in tooth cement but is no longer used to treat gout (Chiej 1988:235). Singh documents its use as an expectorant (2006:209).

- The berries of a species of juniper, Greek juniper (*Juniperus phoenica*) probably native to Europe and Britain, as they still grow wild in those areas (Chiej 1988:164) were used to ease the swelling and discomfort of gout and arthritis – a decoction of berries would be taken internally and pulverised for external joint application (Jacob, W 1993:36; Germer 1993:72). The Bible mentions that the leaves of the Greek juniper\(^4\) provide welcome shade (1 Ki 19:4-5). Juniper berries have anti-inflammatory properties and are used to improve mobility and ease the pain of gout and arthritis (Kramer 2006:120; cf Ebadi 2007:97; Chiej 1988:164).

- The root, stem and leaves of the mandrake plant (*Mandragora officinarum*) were made into a decoction and taken internally to treat gout (Jacob, W 1993:41) which plant he claims was common in ancient Israel (Jacob, W 1993:39). During biblical times, this plant was believed to enhance human fertility (Gn 30:14-16; Can 7:13). The mandrake plant’s many properties are used in pharmaceutical products today but not specifically for gout and arthritis, according to Van der Berg (2007: *Paper given at 27th Biennial Conference of the Classical Association of South Africa*). Daniel (2006:50) claims that it is still used to relieve the pain of rheumatism in modern times.

- The bark and fruit of a species of willow\(^5\) tree (*Salix safsaf*) imported from Assyria but mentioned in the Bible (Lv 23:40, 42; Ps 137:2) was used to

---

\(^4\) Reference to the Masoretic Text of the Holy Scriptures has indicated that the tree in these Biblical verses is a broom tree not a Greek juniper.

\(^5\) Willow bark contains salicin converted into salicylic acid by the body which is a natural form of aspirin.
treat painful gout inflammation presumably in the form of a decoction or poultice (Jacob, W 1993:45). Willow bark possesses anti-inflammatory, antiseptic and analgesic properties (Kramer 2006:197; cf Daniel 2006:227). In the book of Job 40:22, willows are mentioned as growing by streams. Willow was used for firewood and formed part of the ceremony of Sukkoth ‘dwelling in booths’ (Talmud – Sukkah 11b).

Pain in any limb of the body regardless of the cause was regarded as arthritis by the ancient Aretaeus of Cappadocia, a physician who probably lived in the 1st century CE (http://en.wikipedia.org/wiki/Aretaeus_of_Cappadocia). The two are related in that gout is a form of arthritis (Berkow & Talbott 1977:1340-1) and signs of arthritis can be seen on a skeleton from La Chapelle-aux-Saints, France dating back to Neanderthal times indicating that arthritis and related illnesses has plagued human kind for centuries (Brothwell 1967:143).

4.2.5 Archaeological evidence

Excavations at Giv'at ha Mivtar, Jerusalem have revealed 15 ossuaries in three burial caves. The bones comprised 15 human skeletons (Haas 1970:38). One of the male skeletons evidenced signs of arthritis on a right knee bone (Haas 1970:40).

Greeff states that some scholars maintain that there are some diseases that leave their imprints on bone while others believe that death occurs before the illness can generate the tell-tale lesions on the bones (2005:59). Greeff is convinced that there are illnesses that leave Harris’ lines on the bones like arthritis (2005:154).

Modern technology has made it easier for archaeologists to determine illness and cause of death in skeletal remains found today because of CAT-scans and DNA analysis, unlike their 19th century counterparts. Consequently many skeletons
were re-buried without the benefits and knowledge of 21st century technology (Greeff 2005:59)

Owing to the paucity of archaeological remains in Syro-Palestine I found other archaeological evidence of a gout-sufferer in the Mediterranean area. The skeleton of a 35 year old man was found at Lerna, Greece in a Middle Bronze Age tomb which displayed signs of an arthritic toe joint on his right foot - a typical sign of gout. To confirm the diagnosis there was a characteristic yellow-purplish lesion on the left elbow of the same man (Grmek 1989:73).

A mature male skeleton with several gouty joints was discovered buried in a British Roman cemetery near Cirencester in Gloucestershire dating back to the 2nd century CE. The fact that the body was buried in a sarcophagus indicated that the man was probably of a high social rank (Grmek 1989: 73). Cf Jackson (1988:179) describes the skeleton of the right foot of a gout sufferer excavated from a Roman cemetery at Bath Gate, Cirencester but indicates that it dates back to the 4th century CE.; Figure 15 in the List of Photographs).

4.2.6 Talmudic perspectives on gout and arthritis

Talmudic references are sparse – but there are two which clearly pinpoint the king’s disease as gout. In Talmud tractate Sotah 10a, Raba⁶ states that King Asa was punished with gout because he had instituted forced labour during his reign upon the disciples of the Sages who believed that they should have been exempted for ‘even a bridegroom was exempt’ and in Sanhedrin 48b Rabbi Judah⁷ said that his disease was gout⁸.

⁶ Babylonian Amora. His full name was Judah ben Joseph ben Hama (280-352 CE; Kolatch 177-88).
⁷ Not identifiable as there are twenty one Talmudic rabbis with the same name (Kolatch 1981:152-159).
⁸ The Babylonian Talmud uses the Latin word podagra to refer to gout.
The Hebrew word for gout, *tzinit* (Alcalay 1990:2196) has two meanings: The first in agreement with the Jerusalem Talmud (*Shabbath* 6:8) but the Babylonian Talmud translates the same word as ‘corn, callous or bunion’ (*Shabbath* 65a).

Rabbi Nahman’s son, Mar Zutra asked his father what gout felt like. Rabbi Nahman described the disease to be ‘like a needle in raw flesh’. It seems as though Rabbi Nahman had experience of this agonising disease himself or was well acquainted with it, either through his teacher or Divine revelation (Talmud – *Sanhedrin* 48b; *Sotah* 10a).

The Talmud thus sheds light on the Biblical passage that refers simply to the kings feet being crippled by a foot disease (2 Chr 16:12 TEV) and pinpoints it as gout. Asa eventually died of gangrene brought about by senile circulatory dysfunction (Ben Noun 2001:96).

### 4.2.7 Treatments from the Talmud

The Talmud makes very little mention of gout or its treatment besides the two Talmudic tractates mentioned above. It is possible that King Asa may have made use of amulets to treat his gout. Craffert states that amulets were used mostly to treat medical illnesses (1998:89) and each one was made ‘to order’, was unique and endowed with ritual power that could put evil spirits to flight. Rosner believes that they consisted of a small piece of written parchment and Schrire avers that the wealthy wore silver amulets (2007:121) on a chain or on a ring (Rosner 2000:17). Craffert states that it was tied around the neck, arm or leg to protect the wearer from danger, demons and the evil eye (1998:89). The Talmud Tractate *Shabbath* 66b gives more detail of one:

- Three knots in the amulet stopped an illness,
- five knots healed it, and
- seven knots offered better protection.
Amulets were used in Biblical times by Jacob (Gn 35:4), worn by women (Is 3:18) and men (Jdg 8:26) despite their being banned (Is 3:18-20). The Talmudic rabbis permitted their use only for healing purposes (Talmud – Shabbath 61a). The number seven was deemed to be a sacred number and Rabbi Johanan tells of a special one that was worn on the nape of the neck on a piece of white string (Talmud – Shabbath 67a). Rosner believes that amulets had a placebo effect (2000:18). An amulet was deemed effective if it had cured the same sick person three times or if it had cured three different patients three times (Rosner 2000:17; Talmud – Shabbath 60a). According to Rabbi Meir (Talmud – Shabbath 67a) inflammation was treated by the nail from the gallows of an impaled convict (Talmud – Shabbath 67a) – this seems to be a type of amulet. Some rabbis were convinced that amulets cured, but the more rational ones believed it to be mere superstition.

- A bunion was treated by application of a hard rough coin because the metal was believed to secrete substances that would cure the bunion (Talmud – Kethuboth 93b).

- The sages recommended rubbing fish brine 60 times into each hip (Talmud - Gittin 69b) or used a mixture of wine, vinegar or rose oil (Rosa canina; Is 35:1) where the desert is spoken of as blooming. The Talmud mentions that children applied rose oil to heal their wounds (Talmud – Shabbath 111b). This species of rose appears to be native to Britain and Europe (Palmer 1985:52). The actual rubbing motion can possibly be regarded as a therapeutic base on which physiotherapy later developed.

- Recent research has shown that dried rose petals of the Rosa gallica and Rosa x centifolia are used in mouthwashes because of their anti-
inflammatory effects while the essential oil of the *Rosa x centifolia*⁹ and *Rosa x damascena* have sedative, antidepressant and anti-inflammatory properties but no longer to treat gout or rheumatic disease (Van Wyk & Wink 2004:275). Singh concurs that the plant possesses anti-inflammatory properties (2006:223).

4.2.8 Dioscorides’ and Pliny the Elder’s treatments

- Dioscorides (2.126) would have recommended a folk remedy where mountain chickpea (*Astragalus cicer*) poultice was applied to the top of each wart/bunion, bandaged with linen and ordered firmly to leave the patient’s foot.

- The seeds of the hedge mustard (*Sisymbrium officinale*) were taken mixed with honey to treat sciatica (2.188).

- Arthritis and sciatica would have been treated with vinegar honey which was a mixture of vinegar, salt, honey and water (Dioscorides 5.22) or thyme vinegar (*Thymus vulgaris acetum*), a mixture of pounded thyme leaves, salt, meal and rue mixed with water (Dioscorides 5.24). Many kitchen herbs and spices such as celery seed, horseradish, cinnamon, turmeric and ginger are used for arthritis and rheumatism these days (Kramer 2006:63, 116, 69, 187, 96): The use of these herbs and spices has changed since Talmudic times when most of them were used to treat gastric, lung and chest disorders.

- Pliny mentions the use of oil¹⁰ from the castor bean tree (*Ricinus communis*) which is native to the Nile basin or Asia Minor used to treat joint diseases (Jacob, I 1993:85, 83). Today it is used in chemotherapy, as

---

⁹ This is a hybrid rose.

¹⁰ The oil was obtained by bruising, grinding or roasting and then pressing and collecting the residue.
a bowel cleanser before abdominal surgery, in the cosmetic industry and the beans\textsuperscript{11} for jewellery but no longer to treat gout or arthritis (Jacob, I 1993:87; cf Ebadi 2007:161). Singh however states that it has anti-inflammatory properties and is presently used to treat arthritis, rheumatism and constipation (2006:223). Cf Daniel (2006:213), who avers that the leaves, which contain ricinine are very effective in the treatment of rheumatism and arthritis.

4.2.9 Conclusion

Gout and arthritis have been around since time immemorial and it is still a source of interest to us twenty centuries after it appeared in the Bible. The Talmudic remedy that may have formed the basis for physiotherapy has a parallel in Egypt. There are scenes of what appears to be therapists massaging the hands and feet of people, perhaps their patients, in the tombs of Ankh-ma-Hor and Khentika dating from the 6\textsuperscript{th} dynasty (2345-2181) situated near Teti's pyramid at Saqqara suggestive of physiotherapists engaged in their work.

Although medical science has made massive strides, there is still no consensus on the illness of King Asa. The Talmudic sages believed that the king suffered from either gout or a bunion on his foot.

Later research has resulted in a diagnosis of gangrene brought about as a result of a circulatory dysfunction in the legs because gout is not a common disease in the ancient Near East (Harrison in Wiseman 1986:33). The ‘feet’ are often a euphemism for genitals and Harris (in Wiseman 1986:34) suggests that the king could even have died of a venereal disease. This seems unlikely in Wiseman’s opinion because such diseases are not specifically identified in Old Testament

\textsuperscript{11} The seeds are very poisonous and there is no specific antidote. Six seeds can kill a child and ten an adult (Chiej 1988:262).

In 1975 and 2001 scholars re-considered the matter and tend to agree that that King Asa’s illness was most likely peripheral vascular disease (Nunn 2001:96) due to his age. Ben-Noun states that smoking, diabetes, hypertension and hypercholesterolemia would have made this disease worse. It is not known whether the king was a smoker but may have suffered from passive smoke inhalation as a result of the burning of fragrant leaves and resin that was a common ritual practised in Egypt and Babylon in the 3rd millennium BCE. It will probably never be known whether he did smoke leaves, branches and resins (Ben-Noun 2001:99). The sages of the Talmud gave their considered opinion that King Asa’s disease mentioned in 1 Kings 15:23 and 2 Chronicles 16:12 was probably gout.

4.3 THE ILLNESS OF KING HEZEKIAH

4.3.1 Introduction

Judah had become a vassal state of Assyria when its ruler, Ahaz (circa 742-726 BCE) enlisted that country’s help during the Syro-Ephraimite war of 734-3 BCE (2 Ki 16:5-9; Boshoff et al 2000:117; cf Bright 1972:277). Hezekiah became king aged 25 years and reigned in Jerusalem from circa 716/5 – 687/6 BCE (Adeyemo 2006:458; Bimson, Kane, Paterson & Wiseman 1986:118). Hezekiah became well known for his religious reforms (Adeyemo 2006:458; cf Bimson et al 1985:118). Unlike his father, he was a devout king who ‘did what was pleasing to the Lord’ (2 Ki 18:3) possibly brought up differently, having the guidance and assistance of people like Isaiah (2 Ki 19:5) and Micah of Moresheth whose wise counsel he heeded (Jr 26:18-19). Adeyemo believes that his mother Abijah must have played a defining part in his religious education, because his father Ahaz, was not much of a role model, having sacrificed one of his sons to pagan idols (2
Ki 16:3; 2006:456). He believed that worship of the Assyrian gods was not in the interest of his people’s welfare which depended instead on adherence to their own ancient religion (Skolnick et al 2007:87-8).

Three Biblical books (2 Chronicles, 2 Kings and the book of Isaiah) refer to Hezekiah’s illness, which was life-threatening. It is difficult to give an exact diagnosis based merely on the symptoms listed in the Bible because they are too vague. Biblical commentators will be studied to attempt to pinpoint the exact nature of the disease. Herbs and treatments used in biblical times will be mentioned.

Talmudic views on Hezekiah will be investigated possibly to enrich Biblical knowledge of him and his world as well as medications and remedies employed during the Talmudic era to ascertain if any are still in use. An attempt will be made to determine what illness the king was suffering from.

4.3.2 Background information

Hezekiah like Asa, instituted religious reforms by removing the high places of worship as well as the Asherah poles, sacred stones and the bronze/copper serpent that Moses had made because it had become an object of worship (2 Ki 18:4). He referred to it as nehash nehoshet (‘that thing of brass’, Adeyemo 2006:458; Dunn & Rogerson 2003:308; Carson et al 1995:378). Hezekiah re-established temple worship, donated animals for sacrifices and encouraged the people to provide produce and tithes for the priests and Levites (2 Chr 31:2-6). He repaired the existing city wall and constructed towers on it (Japhet 1993:983) and built a new inner wall to strengthen the city (Is 22:9-11).

During Hezekiah’s reign, resistance to Assyria increased (Boshoff et al 2000:118). Sennacherib (704-681 BCE) son of Sargon II (721-705 BCE) was not as competent a ruler as his father was; consequently Hezekiah seized this
opportunity to refuse to pay Judah’s tribute to Assyria. Realising that Sennacherib would retaliate; he dug the famous Siloam tunnel to divert the spring water of Gihon, situated just outside the city walls, into the city itself in preparation for an attack (Bright 1972:283). The Assyrians eventually advanced on Jerusalem forcing the city into a siege, which was broken when the king took Isaiah’s advice and moved for peace (Bright 1972:284). The tribute demanded was huge, and included most of the gold and silver in his kingdom which must have caused criticism at home and several of his daughters to serve as Sennacherib's concubines (Bright 1972:284).

Historical information after this is uncertain but Bright believes it possible that a second Assyrian invasion occurred after Tirhakah (690-644 BCE) took control of Egypt circa 690/89 BCE, and Hezekiah again rebelled (2 Ki 18:17; 19:8) resulting in yet another siege of Jerusalem (Bright 1972:286). Sennacherib then sent his commanding general to Hezekiah, demanding surrender (2 Ki 18:31ff) but the king refused (2 Ki 19:8-9). Tirhakah’s African forces were on their way to Jerusalem and Adeyemo believes that they were feared in antiquity (2006:459). An epidemic was rife in his camp – the Chronicler states that God sent angels to kill the Assyrian soldiers and officers (2 Chr 32:21). This plus news from home, forced Sennacherib to return home humiliated (Bright 1972:286; 2 Chr 32:21). Carson et al (1995:380) maintain that God saved Jerusalem because of His promise that David and his dynasty would last forever not because of Hezekiah’s piety or prayers or Sennacherib’s blasphemy (2 Ki 19:34).

4.3.3 Biblical references to his illness

The Bible relates how King Hezekiah in the fourteenth year of his reign, became very seriously ill (2 Ki 20:1ff; Is 38:1 ff; 2 Chr 32:24 ff; cf Carson et al 1995:380) possibly before Jerusalem was threatened by Sennacherib (2 Ki 20:1). Hezekiah had been suffering from an illness that had lasted for some time without improvement. Hurding maintains that some credence was given to physicians
although they were seldom mentioned (1986:194). In Hezekiah’s case, there are no references to physicians in the biblical passages that highlight his sickness.

Kottek quotes Josephus (whose account was more detailed than the Biblical version) as saying that King Hezekiah was so sick that his ‘physicians’ had given up all hope of a successful cure and his friends feared the worst (1994:15). This is borne out by Isaiah’s terminal prognosis, the symptoms of fever: pains in his joints and bones, sore and tired eyes, a sort of delirium or moaning (Is 38:14). He also mentions the fact that envoys from Babylonia visited Hezekiah with a letter and gift from their King Merodach Baladan (Is 39:1). Carson et al continue by saying that news of Hezekiah’s illness had reached Babylonia, although 1 000 km distant; this was testimony to the long duration of his disease because the messengers probably took anything from one to two years to reach the king (1995:381). Adeyemo postulates that those opposed to Hezekiah’s reforms may have regarded his death as a punishment from the pagan god Ba’al, which Ahaz had worshipped because Asa had destroyed their idols (2006:460).

Levin’s theory is that the King’s problem may have been a boil, a series of boils or abscesses that lingered and festered. His other postulation was that tuberculosis caused Hezekiah’s abscess (1993:2). Berkow & Talbott explain that tuberculosis of the membrane lining the bronchial tubes can cause painful mouth and throat ulcers if the infection is not checked (1977:115). This would possibly explain the king’s symptoms of pain, fever and delirium (Is 38:14) and the long duration of the illness (Berkow & Talbott 1977:115).

Yet another possibility put forward by Levin (1993:2) for Hezekiah’s serious illness is that of yaws (Treponema pertenue) very similar to syphilis but without its serious complications (cf Berkow & Talbott 1977:130). Anderson defines yaws as a non-venereal, tropical skin disease that targets children, usually transmitted.

---

12 Bosch believes that yaws has existed for 8 000 years judging by evidence found in Florida USA (Greeff 2005:133).
via insects, discharges of skin ulcers and contaminated clothing (19[68]:297). He describes the symptoms of yaws as fever, headache, joint pain and feelings of weakness (19[68]:297) similar to those experienced by Hezekiah. Complications can result in permanent disfiguration of the bones of the feet (Anderson 19[68]:298), Greeff adds that yaws can also result in malformation of the facial bones and those of the upper soft palate (2005:134). It initially develops on the legs or buttocks followed some weeks later by discharging tumours which subside even without proper treatment (Greeff 2005:134). Latent yaws may result in the reappearance of the early symptoms after a period of five to ten years according to Greeff (2005:134). Edward (in Greeff 2005:134) explains that the emergence of late yaws can manifest in one or many ulcer or nodular skin lesions that heal with scars and bone malformations.

Isaiah informed Hezekiah that he should prepare himself for death (2 Ki 20:1). According to Wiseman this news was a typical ancient medical prognosis in the case of severe illness (1993:286). This news obviously depressed the king because he had no children and realised he would die without an heir. In answer to his prayers the king was granted another fifteen years to ‘put his house in order’ (2 Ki 20:6, 3) and during that time produced an heir, Manasseh (2 Ki 20:21). The king’s healing potion was revealed by God to His prophet Isaiah

Isaiah told the king to put a paste made of figs on his boil, and he would get well (Is 38:21).

Wiseman (1993:287) mentions that a raisin poultice cured a horse (evidence found in medical texts of Ras Shamra 55:28) and that it was rare for a prophet to heal but there is mention of Elijah’s healing of the widow’s son (I Ki 17:17-24). Elisha healed Naaman, the Syrian general of his leprosy (2 Ki 5:1-19) as well as the Shunammite woman’s son (2 Ki 4:18-37). Hezekiah’s remedy of a fig poultice was ‘folk medicine’ that had possibly been used before as it was an ancient remedy for the buboes of bubonic plague (Dunn & Rogerson 2003:523; cf Pliny
Natural History 23:63-4). In this instance however, it was preceded by Hezekiah’s desperate plea to God for healing and the king recovered (2 Ki 20:3-5; 2 Chr 32:24-26; Carson et al 1995:381). The ‘Book of Remedies’ had been hidden by Hezekiah because he did not want his people to know that the fig-plaster remedy was referred to in the book. Perhaps he preferred to give due honour to God for his healing.

The Bible indicates that the messengers from the Assyrian camp delivered a letter to King Hezekiah, who received it personally (Is 37:14). It may have been infected with plague (Barker 2001:34). To substantiate her view, she quotes Josephus who writes in The Wars of the Jews (5, 9:388) that the Assyrians went to Jerusalem after their retreat from Pelusium and quotes Herodotus’ account of the army’s equipment being infested by mice (Barker 2001:33; cf Ademeyo 2006:835). It is Josephus’ view (Antiquities of the Jews 10:18-19) that Sennacherib had to withdraw because the army’s leather equipment had been damaged by rodent infestation at Pelusium in north-eastern Egypt (Wiseman 1993:281; cf Barker 2001:33). Barker maintains that all it would have taken for Hezekiah to be afflicted with bubonic plague was for one infected flea to leap from the body of the messenger onto the king (2001:34) and bite him.

Barker is convinced that Hezekiah manifested symptoms of bubonic plague and quotes Dols (in Barker 2001:31) saying that the king would have experienced headaches, dizziness and intolerance to light. Hezekiah did in fact turn his face to the wall (Is 38:2) and Barker believes it was to avoid the light. Pliny the Elder (Natural History 23:63-64) and Dioscorides (1:185) state that wild figs were used to soften tumours, a symptom of the plague and encourage them to rupture (Barker 2001:32). Once the bubo had ruptured, it healed resulting in a small percentage of victims who were treated in this way, recovered. (Barker 2001:32). Figure 16 in the List of Photographs is an example of such a bubo. Doctors in 17th century plague-infested London used fig poultices to treat their patients and Barker (2001:32) refers her readers to Thomas Lodge’s A Treatise of the Plague.
(London, 1603) and a medicinal manual from the College of Physicians, *Directions for the Plague* (London, 1636) as proof of her claim. The Bible states however that God instructed the prophet to treat the king’s ‘boil’ with a fig poultice which saved his life (Is 38:21).

If the illness was bubonic plague, it seems strange that Hezekiah was the only one infected as plague spreads very quickly via the infected fleas and the preceding pneumonia (Anderson 19[68]:303). Levin is also convinced that Hezekiah’s disease was not bubonic plague because there is a ‘confusing transposition’ in the book of Isaiah. In order for events to unfold in their correct chronological order, chapters 36 and 37 should be read after 38 and 39 (http://encyclopedia.com). Consequently, in his view, the illness cannot be bubonic plague because Hezekiah developed his disease before the Assyrian invasion of Judea and Jerusalem’s siege by the Babylonians, whom it is believed, brought the plague to Judea and Israel (Levin 1993:1).

Hurding has a different idea saying that the king suffered from septicaemia (blood poisoning; 1986:195). Anderson explains that poisons find their way into the blood which spreads throughout the body causing fever and headaches or localized inflammation that is swollen, hot and painful (19[68]:303).

In biblical times, at a certain stage, disease was regarded as punishment for sin (but the books of Job and Ecclesiastes polemised against that idea) and God was regarded as the only supreme and true healer although Wiseman’s view is that this belief does not preclude consulting doctors or using their medicine (1993:286). According to the Chronicler and the author of the book of Isaiah, Hezekiah’s sins were:

- He did not show much gratitude for his miraculous healing (2 Chr 32:25). Yet the king composed a thanksgiving hymn for his new lease on life (Is 38:9-20).
• The fact that he asked God for a sign that he would live longer is regarded by Carson et al as loss of his former faith shown during the siege of Jerusalem (2 Chr 20:21; 1995:381). The sign that Hezekiah prayed for manifested in the sun's shadow on a stairway built in Ahaz's time. The shadow moving ten steps backwards instead of its normal forward motion was requested by Hezekiah as a divine sign. Adeyemo draws a parallel to the 'sun standing still' in the time of Joshua (2 Ki 20:9-11; Jos 10:12-14; 2006:461). Dunn & Rogerson postulate that the sign could have referred to some form of sundial (2003:277; cf Brown et al 1990:183). Barker's explanation seems far more plausible. She explains that there was a partial eclipse of the sun in Jerusalem on 6 August 700 BCE in the late afternoon which may explain why the sun did not appear follow its usual path (Barker 2001:40, footnote 4) and refers to Solar and Lunar Eclipses in the Ancient Near East by Kudlek & Mickler, 1971:64.

• He boasted about his riches to the Babylonian officials sent by Merodach Baladan of Babylonia (Is 39:2; 2 Ki 20:13). Adeyemo believes that Hezekiah should not have taken them into his confidence because they were able to gauge his strengths and weakness which posed a future security threat (2006:461; Dunn & Rogerson 2003:277). Carson et al's view is that Hezekiah welcomed the Babylonian visitors as a potential ally to rid himself of the Assyrian yoke (1995:381). Wiseman is of the opinion that Hezekiah was not showing off his riches but that his behaviour was in accordance with the hospitality shown to potential allies (1993:288).

• Hezekiah was not troubled by Isaiah's prophecy that Babylonia would invade Jerusalem in the future but was more concerned with peace in his own lifetime than concern for the future (Adeyemo 2006:461; 2 Ki 20:16-19).
If the king’s illness had been merely a crop of boils, I am puzzled however by the depressing terminal prognosis of the illness by Isaiah as it is common knowledge that boils do eventually come to a head and then heal up within several days. Rosner feels that the king was misinformed about the seriousness of his illness by Isaiah (Is 38:1). In my view Isaiah’s prophecy of the king’s death was exaggerated to encourage Hezekiah’s repentance for his sins. I agree with Rosner that King Hezekiah’s illness was not an outbreak of boils because the inflammation usually forms a head, discharges and is healed within several weeks (Rosner 1978:342).

If the king had been plagued with an abscess inside the throat, it would have been impossible for the medication to remain on it for longer than a few seconds before being swallowed or causing choking. It is possible that the fig medication was used as a gargle although the Bible is silent on this. Levin (1993:3) believes that the king had an abscess but does not mention whether it was inside the throat or on the outside. I do not believe that the king’s disease was a tubercular throat ulcer because a fig poultice was applied to it (2 Ki 20:7; Is 38:21). The king did not ingest the medicine.

If Hezekiah was infected by the plague he appeared to be the only one, which is rather unusual, I am however persuaded by Barker’s argument that the fig poultice probably healed the bubo, saving the king’s life. This is another indication that God provides humanity with healing plants.

When Hezekiah died, he was buried in the upper area of the royal tombs which demonstrated his high esteem (Brown et al 1990:382; Dunn & Rogerson 2003:310). Wiseman postulates that Hezekiah was buried on the hills with King David’s other descendants because the older burial caves north of the city were probably full (1993:288).
4.3.4 Treatments in biblical times

The following treatments were available in biblical times:

- The prophet Isaiah was instructed to place a fig poultice on Hezekiah's boil (Is 38:12).

- If Hezekiah's illness had been a crop of boils treating them with applications of fig poultice (ficus carica; probably heated) to draw it out was also well known to Pliny the Elder. This remedy also appears in veterinary texts from Ugarit dating back to the 13th century BCE (Wiseman 1986:33). The fig is also mentioned in the Bible (Mi 4:4). Chiej claims that it is useful in treating boils (1988:132). Kramer (2006:91) maintains that the plant is indigenous to the Mediterranean area and its anti-inflammatory properties are attributable to the flavonoids and coumarins found in the fig fruit and its leaves.

- If the king's problem had been an infected throat ulcer an extract of the bark of the sycamore fig (Ficus sycamorus) well known to the ancient Egyptians, probably in the form of a decoction, was used to treat it (Jacob, W 1993:38).

- Roman chamomile (Anthemis nobilis) was another remedy that alleviated purulent infections (Jacob, W 1993:40) and could have been used as a throat gargle (in this case) or drank as a decoction. Kramer (2006:65) claims that the plant contains bisabol which renders it an effective anti-inflammatory, while Daniel states that it is a useful remedy for hysteria and nervous tension common in menopausal women (2006:81). Kramer claims that German chamomile (Chamomilla recutita) is preferable to that of Roman chamomile although the properties of both are similar (2006:65).
• Cumin (*Cuminum cyminum*) seeds indigenous to Egypt, were chewed for gumboils and for sore and abscessed throats (Germer 1993:78) and the seeds are mentioned in the Bible as being harvested by lightweight rods not by a heavy wooden club (Is 28:25, 27). This plant has weak analgesic properties and is used nowadays to treat the common cold (Van Wyk & Wink 2004:407).

• Garlic (*Allium sativum*) and onion (*Allium cepa*) probably originated in the Middle East (Van Wyk & Wink 2004:38-9) and were used both internally and externally to treat abscesses (Germer 1993:78). These plants were grown in Egypt (Germer 1993:78) and both are mentioned in the Bible when the early Jews were wandering in the desert (Nm 11:5). Garlic (*Allium sativum*) and onion (*Allium cepa*) each possess antibiotic properties. Onion has analgesic effects and used to heal wounds (Van Wyk & Wink 2004:38), while garlic is a useful carminative, thought to have anti-cancerous action and was used as an antiseptic during World War I by the French (Chiej 1988:17-18; cf Van Wyk & Wink 2004:38-39). Ebadi claims that it was used to prevent gangrene during both world wars with its anti-microbial properties (2007:477; Daniel 2006:91). Garlic is still in use to treat infection and is an immune stimulant. Tests carried out in Japan in 1999 revealed that garlic has anti-bacterial action against the troublesome *E. coli* and salmonella infections (Kramer 2006:94, 285). The Talmudic sages were convinced that the stalk in the centre of the onion was poisonous (Talmud – *Eiruvin* 29b).

• If the king had been suffering from yaws, it is almost certain that his disease would be treated symptomatically – the inflammation, by applications of natural aspirin\(^\text{13}\) found in the bark and leaves of the willow

---

\(^{13}\) Salicylic acid found in the twigs and leaves of most willow species e.g. White willow (*Salix alba*; Ebadi 2007:105; Chiej 1988:271) and in South Africa the wild willow (*Salix micrometer*) or wildevilger as it is known in Afrikaans (Van Wyk, van Oudtshoorn & Gericke 2009:252).
which grew near pools (Job 40:22; *Salix safsaf* native to Israel; Jacob, W 1993:45; cf Kramer 2006:65; Ebadi 2007:105).

### 4.3.5 Talmudic perspectives

It was a generally held belief that disease was an affliction sent by God in punishment for sin; once the sinner had repented, recovered and led a more penitent life his/her health would return. King Hezekiah’s illness was ascribed to his childless state (Talmud – *Berachot* 10a). Rabbi ben Nahman believed that the king suffered from more than one illness but gives no indication as to what it might have been saying that whatever his illness he was healed by God (*Midrash* – *Genesis Rabbah* 65:9; Rosner 2000:182).

The rabbis debated the reason for fifteen years being added to Hezekiah’s life and disagreement arose as to whether he would have lived fifteen years longer because God determined his lifespan at birth (which included the extra fifteen years) or in reality added them to his lifespan after his supplications (*Midrash* – *Deuteronomy Rabbah* 1:13; Talmud – *Yebamoth* 50a). Moses Maimonides, a medieval commentator, felt that a lifespan is not pre-determined but can be extended by prayer and presumably good deeds (Rosner 2000:182).

The Talmud does not elucidate the Biblical text regarding Hezekiah’s illness, except that his illness was punishment for his childless state (Talmud – *Berachoth* 10a) but he was healed by God after repentance and prayer. The rabbis emphases is more on Hezekiah’s six actions of renown – they approved of the first three and disapproved of the last three:

- He hid the ‘Book of Remedies’ to force people to pray to God for cures (Talmud – *Berachoth* 10b),
- Smashed the bronze serpent because it was venerated in the Temple (2 Ki 18:4),
• Dragged his father Ahaz, to his grave on a bed of ropes instead of giving him a royal burial because he was a wicked monarch (Talmud – Berachoth 10b),

• He blocked up the water of the Gihon spring and channeled it to flow inside the city of Jerusalem so preventing the Assyrians from obtaining water when they reached the city (2 Chr 32:5). Carson et al said that this made the king unpopular and there were some who said he should have trusted God (1995:416). Carson et al continues by noting that this action gave the pragmatic Hezekiah the time to improve Jerusalem’s defences (1995:416),

• He removed the gold from the Temple doors and sent it to the king of Assyria, Sennacherib as tribute (2 Ki 18:15) so that he would be left in peace,

• The sages asserted that King Hezekiah added an extra month of Nisan instead of a second month of Adar (Talmud – Berachoth 10b). The Jewish year is a lunar based one that is eleven days shorter than the solar year (upon which the civil year is based). Seven times in a nineteen year cycle it has to be brought back into line with the solar calendar by adding an additional month, in order to make sure that Passover always falls in the spring month of Aviv (Ex 23:14). According to rabbinic convention the extra month that is added is Adar II. Thus Hezekiah was criticised for adding the wrong month which was viewed as a challenge to the religious authorities.

4.3.6 Treatments in Talmudic times

If we accept that Hezekiah’s illness was some kind of boil and in the absence of treatments mentioned by the Talmudic rabbis, I have turned to Dioscorides who would have recommended poultices of the following:
Both Dioscorides (1:183 and Pliny *Natural History* 23:63) also prescribed figs as softening compresses for boils and inflammatory tumours (Rosner 1978:342). Although Palmer refers to a fig (*ficus carica*) poultice as a ‘primitive’ cure for an abscess (1986:195), there is evidence that figs contain anti-inflammatory properties (flavonoids and coumarins) that also alleviate sinus, coughs and catarrh problems.

Pitch pine gum (*Pinus pinea*) also called stone pine, boiled with wool to remove the gum, mixed with barley meal (1:95) and applied directly onto boils. Roasted olives (*Olea europaea*; 1:139) applied as a poultice to an ulcer prevents gangrene. Figs (*Ficus carica*; 1:183) were also applied directly onto boils and used as a gargle for throat infections.

Plasters of wheat (*Triticum furegidum*; Dioscorides 2:107), powdered aloe (*Aloe vera*) sprinkled on the boil site (Dioscorides 3:25), wild basil leaves (*Melissa clinopodium*; Dioscorides 4:176) and salt peter (potassium nitrate; Dioscorides 5:131; used nowadays to preserve meat) would be mixed with turpentine tree wine (*Pistacia terebinthus*) probably native to Egypt (Jacob, W 1993:44; Dioscorides 5:39) and applied to open the boil.

A blade of wheat straw was used to blow medication into the mouth or throat in the case of an oral abscess (Talmud – *Gittin* 69a).

Asphalt (bitumen of Judea) was extracted from the Dead Sea and used as a dressing for ulcers (Dioscorides 1:73).

If Hezekiah had tuberculosis of the throat, he may have been treated with one or more of Dioscorides’ remedies:

Wine made from the myrtle (*Myrtus communis*; 5:36), a Biblical plant (Neh 8:15), common to the Mediterranean area was made from the very ripe
berries by boiling the juice until it reduced, or the berries were placed in sunlight to dry, then mixed with water and wine, pounded and strained into jars. The result was a very astringent mixture, used to treat internal ulcers. This plant is used today for its antibiotic properties (Chiej 1988:202).

- A decoction of hyssop (*Hyssopus officinalis*), also mentioned in the Bible (1 Ki 4:33) and figs (*Ficus carica*) were used as a gargle for an abscessed throat (3:30) or a mixture of vinegar, sea salt and honey (5:22) that had been boiled until it had reduced in volume and cooled. Honey alone was useful in healing many skin complaints including skin ulcers (2:101). Kramer claims that hyssop has antiseptic, antifungal and antiviral properties (2006:118). Research done in 1990 indicates that extract from the leaves have shown positive activity against the HIV virus (Kramer 2006:118; cf Singh 2006:168).

If the king had possibly suffered from bubonic plague he may have benefited from the following treatments recommended by Dioscorides:

- Lesbos wine described by Dioscorides (5:12) to ease the initial symptoms of bubonic plague, which according to Anderson manifest as a high fever, severe bodily pain, vomiting, and thirst (19[68]:303).

- The king’s bubo may have been treated with common white horehound (*Marrubium vulgare*), indigenous to the Mediterranean. The leaves of the plant would be applied with honey and used to treat suppurating ulcers (3:119). In modern times this plant is used to treat coughs and colds, having very effective expectorants and inflammation relieving properties (Kramer 2006:192). Daniel adds that the plant is a useful antiseptic (2006:67).
4.3.7 Conclusion

The Bible relates how King Hezekiah developed a serious illness after ruling Judah for fourteen years. His treatment was divinely revealed to Isaiah, who treated a boil on his body with a fig poultice, documented in the Bible (Is 38:12) but not in the Talmud.

Barker believes that Hezekiah may have suffered from bubonic plague that had infected the Assyrians during the battle of Jerusalem and he was the only victim. Although this is unusual, Barker is persuasive in her conviction that the fig poultice probably healed Hezekiah’s bubo and saved his life.

The fig poultice was also believed by Carson et al to be an ancient remedy that was applied to the buboes of bubonic plague. Wild fig paste was used to treat tumours during the 1st century CE and well documented by both Pliny the Elder and Dioscorides although not mentioned in the Talmud.

Other theories were put forward to explain Hezekiah’s affliction and include that of septicaemia, tuberculosis of the throat, a throat abscess or even yaws, a milder form of syphilis.

The Talmudic sages refer briefly to Hezekiah’s illness and explain that Hezekiah’s malady was inflicted upon him for not trying to produce an heir (Berachoth 10a) thus elucidating the Biblical text. The Midrash – Genesis Rabbah 65:9 indicates that the king may have suffered from several illnesses but does not indicate their exact nature.

4.4 PARASITIC WORM INFESTATION AND THE ILLNESS OF KING JEHORAM
4.4.1 Introduction

Although parasites are not mentioned in the Bible, there is a type of ‘worm-parasite’ called a Guinea or Medina worm (*Dracunculus medinensis*), one of the oldest known human parasites, which can still be found in the Arabian peninsula and Red Sea coast (Tenney 1963:220; cf Faust 1967:1022). Anderson states that they can also be found in India, tropical Africa and parts of the West Indies (1968:295) and it is possible that they are the ‘fiery serpents’ referred to in the book of Numbers (21:6). The infestation of these parasites is called *dracunculosis*. The worm can clearly be seen under the surface of the skin of the forearm or leg and it resembles a snake in appearance, growing over a meter in length (Tenney 1963:220; Figure 17 in the List of Photographs).

The infestation is spread by drinking water containing the worms that burrow under the skin causing blisters (Anderson 1968:295). These migrate from the digestive organs to blood vessels and tissue in the lower legs or forearms where they mature producing skin ulcers (Berkow & Talbot: 1977:173). The ulcers discharge new larvae into water during bathing, which are in turn eaten by minute *Cyclops* (water fleas): anyone drinking this water becomes infected (Anderson 1968:295). The worms are usually extracted by gradual traction on the head over a period of ten days; surgical removal is not recommended (Berkow & Talbot 1977:173).

Rosner however rejects the idea that the ‘fiery serpents’ were Medina worms. His explanation was that their bites caused a fever and the bodies of those bitten burned like fire (1977:181), although he does concede that these parasites would resemble thin snakes lying just below the surface of the skin (Rosner 1978:197). Archaeological evidence of many human parasites has been found in Jerusalem which seems to prove that the ancient Jews suffered from their infestation (Greeff 2005:23).
4.4.2 Background to the illness of King Jehoram

Jehoram (circa 851 – 843 BCE) was not held in high regard by the Chronicler because he was married to Ahab’s daughter (Adeyemo 2006:517), and Brown et al maintain that his wife was either the daughter or even the granddaughter of Omri, father of Ahab (1990:177) and his marriage to her made him a bad king because her father worshipped the Canaanite god, Baal (Brown et al 1990:177).

Jehoram had several brothers whom he murdered after his father’s death possibly because of a serious property rights conflict and his brief reign of eight years was a great threat to the royal line of David (Adeyemo 2006:517). Bright wonders whether Athaliah encouraged him in this action (1972:248). His great sin was that he preferred to worship at the cultic high places rather than in the temple at Jerusalem (Adeyemo 2006:518), he practiced idolatry and encouraged temple prostitution (Dunn & Rogerson 2003:451).

There is however reference to King Jehoram of Judah who was told by the prophet Elijah that he would contract a painful intestinal disease that would worsen with each passing day (2 Chr 21:15). This illness eventually caused the death of the king two years later (2 Chr 21:19). In my opinion this disease was the result of infestation by a human parasite which I shall explain.

Dunn & Rogerson explain that everything that could go wrong for Jehoram did; he was defeated by the Edomites and did not even attempt to enlist God’s help before beginning the battle (2003:304). The Edomites continued to plague Judah throughout his reign (Dunn & Rogerson 2003:304). The Bible tells of how Elijah sent Jehoram a strongly worded letter condemning his constant apostasy, prophesying his illness and eventual doom (2 Chr 21:12-13). Dunn & Rogerson maintain that Elijah’s letter was regarded as a written oracle with a good deal of authority behind it and most ancient people believed such a prediction would become reality (2003:304; cf Carson et al 1995:410). Jehoram ruled for a short
time, but in that time, Judah lost its former glory that it had enjoyed under his father, Jehoshaphet (Carson et al 1995:410). When Jehoram died, no one was sorry (Dunn & Rogerson 2003:304) and the Chronicler did not regard the king worthy of a honourable burial like his forefathers but stated that Jehoram was buried in the city of David, but not in the royal tombs (2 Chr 21:18-20).

4.4.3 Biblical references to Jehoram’s illness

Worms are mentioned three times in the Bible: In the book of Exodus 16:20 referring to wormy manna; the book of Jonah 4:7 mentions what appears to be a caterpillar and in the book of Job 24:20 the author travails about maggot worms in the grave. Yet there is no mention of the parasites that have plagued humankind for thousands of years (Cahill, Reinhard, Tarler & Warnock 1991:65). The fact that the Bible does not mention intestinal parasites is not an indication that they did not exist or that their infestation was highly problematic.

The Bible mentions the illness of King Jehoram only once:

‘... the Lord brought on the king a painful disease of the intestines. For almost two years it grew steadily worse until finally the king died in agony…’ (2 Chr 21:18-19, TEV).

The biblical commentators Brown et al, Carson et al, Dunn & Rogerson and Adeyemo do not go into any detail about Jehoram’s disease, nor do they give any indication of what they believe it might have been. Rosner, however is of the opinion that the king suffered from severe dysentery until, as the Chronicler puts it, ‘his bowels fell out’ (2 Chr 21:18 Masoretic Text) or he developed rectal cancer (2000:176), but it could also have been some type of long term parasitic infestation. Kinnier Wilson states that it will never be known exactly what his disease was for it might just have been dysentery (1982:364).
It is possible that the symptoms of pain in his abdomen and ‘loss of the bowels’ could refer to the severe abdominal distress of persistent tapeworm\textsuperscript{14} (\textit{Taenia saginata}) infestation through consumption of improperly cooked beef (Berkow \& Talbot 1977:152). There are more than thirty different species of tapeworm and their infestation can be very painful, cause diarrhoea and the worms pass their segments through the host’s rectum periodically (Anderson 19[68]:285). This, in my view, may have given rise to the idea that the king’s bowels were falling from his body. Unless eradicated, tapeworms can live in their human host for many years but it is unlikely that this would have caused the king’s death (Anderson 19[68]:285; Berkow \& Talbot 1977:152-3).

Another possibility is that of whipworm\textsuperscript{15} (\textit{Trichuris trichiura}) infestation through the consumption of unwashed garden products fertilised with human waste (Cahill et al 1991:69). These parasites would cause symptoms of blood streaked diarrhoea, abdominal pain, weight loss and rectal prolapse (protrusion of the rectal mucous membrane through the anus) usually in children. It is not so common in adults (Anderson 19[68]:284-5; cf Berkow \& Talbot 1977:152-3).

\textsuperscript{14} The most common parasite in ancient times was the tape worm (\textit{genus Taenia}) so called because of their long flat segmented bodies (Davis et al 1968:607). There are many different types of tapeworm that prey on humans varying in size from several centimetres to ten meters or more (Anderson 19[68]:285). Most are contracted by consuming infected beef, pork or fish that has not been completely cooked (Anderson 19[68]:285). The life cycle of the fish tapeworm will be briefly discussed as most parasites have a similar lifecycle (Anderson 19[68]. Inside man the female fish tapeworm lays thousands of eggs where they are excreted by the bowel in human waste (Anderson 19[68]:285). Once the waste reaches a water source (sewers) eggs are consumed by minute water fleas where further development occurs and finally are eaten by fish where they can be found in the muscle tissue (Anderson 19[68]:285). Tapeworms may remain in the human bowel for years only causing anaemia, or sharp hunger pangs which fade fast after eating (Anderson 19[68]:285). The only visible symptom would be the discharge of worm segments through the rectum (Anderson 19[68]:285).

\textsuperscript{15} Whipworms (\textit{trichuris trichiura}) like tapeworms live inside the bowel and appendix. They pass via human excreta into soil where they enter the body either by the consumption of contaminated food or hands dirty by working in the soil (Anderson 19[68]:284). Although the washing of hands before a meal is a ritual before eating food (Matitiani, private communication), it has hygienic merit as well. Wire- or Threadworms (\textit{Strangyloides}) penetrate the human body through the bare skin of the foot and the larva make their way to the digestive tract lining; it is found in the warmer climates (Anderson 19[68]:283).
Jehoram may have been the exception. But again, it is unlikely to have caused his death.

The king may also have suffered from infestation from intestinal flukes,\(^{16}\) very common in hot climates \(\text{(Anderson 19[68]:286)}\). These parasites need a snail to complete a complicated life cycle then attach themselves to water plants like watercress, and are ingested \(\text{(Anderson 19[68]:286)}\). In the body, they fasten themselves to the bowel lining and cause severe abdominal pain and bleeding often accompanied by diarrhoea, nausea and vomiting \(\text{(Anderson 19[68]:286)}\) which appear to be similar to the Biblical description referring to Jehoram’s disease. Intestinal fluke \((\text{Fasciolopsis buski})\) infestation can be very serious often resulting in death because of the waste products excreted by the parasite that is absorbed by the human host \(\text{(Anderson 19[68]:286)}\). Blood flukes \((\text{Schistosoma haematobium})\) have been found in the livers of ancient Egyptian mummies \(\text{(Cahill et al 1991:67)}\) which originate in sheep liver \(\text{(Berkow & Talbot 1977:154-5)}\). The fact that no archaeological evidence of intestinal flukes has yet been found does not mean that there were no sufferers of the malady in ancient times. Jehoram’s symptoms of severe abdominal pain accompanied probably by diarrhoea seem to accord with the symptoms of intestinal fluke infestation \((\text{Fasciolopsis buski})\). This toxin can be fatal to humans \(\text{(Anderson 19[68]:286)}\) and this in my view could have caused the king’s death.

\(^{16}\) There are different types of trematodes or flukes but the most common are the liver and intestinal flukes found in the Orient and other warm, moist climates of the world \(\text{(Anderson 19[68]:286-7)}\). As their names imply they are found in the liver and intestines of man through ingesting contaminated food or water \(\text{(Anderson 19[68]:286)}\). In the case of intestinal flukes, their toxins can be fatal to humans \(\text{(Anderson 19[68]:286)}\). Liver flukes are prevalent in dogs and cats in the Far East but can pass to humans who eat raw, pickled or smoked fish and make their way to the liver’s bile ducts but they require certain intermediary snails to complete their life cycle and so pass onto man \(\text{(Anderson 19[68]:287)}\). Anderson states that some liver flukes can survive for up to twenty five years inside man and appear to be resilient to treatment \(\text{(19[68]:286)}\).
4.4.4 Remedies for parasites in biblical times

There are no remedies for parasites mentioned in the Bible but there are many plant remedies that were used by the Egyptians and Assyrians that may have influenced those of the early Jews – Walter Jacob believes it is quite feasible to look to Israel's neighbours for their pharmacological know-how (1993:39).

The following remedies were used in ancient Near East for intestinal worms:

- Carob (*Ceratonia siliqua*) found in Arabia and the Eastern Mediterranean countries, was used in ancient Egypt as a vermifuge\(^\text{17}\) (Jacob, W 1993:33). Studies carried out in Belgium in 1989 found that the plant bark possesses mucilage properties and is used to treat infantile gastric disorders, although it also has mild laxative effects (Kramer 2006:59). Singh (2006:107) states that the plant now grows in Europe.

- The rind of the pomegranate (*Punica granatum*) indigenous to Persia and Afghanistan, brought into Egypt by Tuthmosis II (Jacob, W 1993:37) was used to treat worms because of its high tannic acid content (Harrison 1966:28; cf Jacob, W 1993:37; Germer 1993:77). It was stated in the Bible that the spies sent to explore Canaan returned with pomegranates (Nm 13:23). Van Wyk & Wink confirm that the rind has medicinal properties to treat diarrhoea and tape worm infestation in humans (2004:263). They were found in Egyptian tombs and the leaves were used as garlands to grace the mummies (Germer 1993:77). In ancient times a decoction of the bark, root and stem was usually taken (Germer 1993:77). This remedy was in general use until the second half of the 20\(^{th}\) century CE but found to contain toxic alkaloids\(^\text{18}\) (Van Wyk & Wink 2004:263). Palmer attests to their use to rid the body of tapeworm saying that a ‘handful of root bark boiled for an hour in water; and half a tumbler taken

\(^{17}\) A substance that expels worms from the intestines (Coulson 1980:937).
\(^{18}\) Coulson et al describe them as ‘nitrogenous organic substances of vegetable origin, having basic or alkaline properties, many as morphine, strychnine or cocaine being used as drugs’ (1980:19).
after a 24 hour fast’ (1985:145). The rabbis of the Talmud believed that the pomegranate symbolised fruitfulness (Talmud – Berachoth 57a).

- Jacob, I claims that a paste of leaf decoction of the castor bean plant (*Ricinus communis*) was applied to treat Guinea-worm sores (1993:87). Nowadays this is a powerful purgative and is used nowadays mainly for industrial purposes (Van Wyk & Wink 2004:274).

- Frankincense (*Boswelia serrata*) native to India (Kramer 2006:49) was used in Egypt during Pharaohnic times as incense, but it has many medical uses such as a purgative and to expel worms (Jacob, W 1993:35). The Bible documents the origin of the plant as Arabia (Is 60:6). Today its resin the main components of which are boswellic acids, are utilised for their anti-inflammatory, antiseptic, decongestant and sedative properties (van Wyk & Wink 2004:69; Kramer 2006:49). Research done in Germany in 2002 has suggested that it could destroy certain types of cancer (Kramer 2006:49).

- The citron (*Citrus medica*) or *etrog* in Hebrew, similar in size to a large lemon was used in ancient Israel for many purposes but the root and bark of the tree were used to remove tapeworms (Jacob, W 1993:41). Today this fruit is used mainly for religious purposes during Sukkoth, the Feast of Booths to celebrate the harvest when Jews are commanded ‘to dwell in booths’ (Lv 23:40; Trepp 1980:122). Citron oil is used these days in aromatherapy for its anti-inflammatory, antiseptic and decongestant properties. The peel has wide use in the confectionary industry (Van Wyk & Wink 2004:107).

- Kramer mentions the use of garlic (*Allium sativum*) to treat parasitic worms since biblical times (2006:94) and Van Wyk & Wink agree, but state that it is used in modern times as an antiviral, antispasmodic and antiseptic (2004:39). Palmer however states that besides their culinary uses, garlic cloves are still eaten to expel worms (1985:130).
4.4.5 Archaeological evidence for parasites

The study of human coprolites\textsuperscript{19} present in ancient cesspits\textsuperscript{20} has shown that parasites have preyed on humans for thousands of years, evidence of which has been found in North America dating back 10 000 years (Cahill et al 1991:66). The study of parasite eggs extracted from archaeological deposits, cesspits and ancient privies is called archeoparasitology (Cahill et al 1991:66). Archaeological excavations in Jerusalem outside the city of David\textsuperscript{21} have unearthed some interesting evidence of parasites despite the Bible’s silence on the topic:

- In 1991 two calcified cysts from the abdominal cavity of a skeleton were found in a tomb outside the City of David in Jerusalem which medical testing showed to be a type of human tapeworm (\textit{Echinococcus granulosus}) transmitted by dogs to humans (Zias 1991:148). These remains date to the Herodian period\textsuperscript{22} (Zias 1991:149), but earlier remains of cesspits from the City of David dating to 8\textsuperscript{th} century BCE, which also manifest tapeworm infestations have been found (Zias 1991:149).

- The Papyrus Ebers contains references to intestinal parasites and studies conducted on Egyptian mummies have revealed that the ancients suffered from many parasites: blood flukes or \textit{schistoma}, those found mainly in the liver of infected sheep (\textit{Fasciola hepatica}); tapeworm or \textit{trichinella}, found in muscle tissue of pork, wire- or threadworm (\textit{Strangyloides}) and beef tape worm (\textit{Taenia saginata}) indicating insufficient washing water available for hands or shortage of fuel for cooking (Cahill et al 1991:67, 69).

\textsuperscript{19} Fossilised excreta of humans and animals (Greeff 2005:19).
\textsuperscript{20} Ancient latrines (Greeff 2005:20).
\textsuperscript{21} A site situated south of the Temple Mount where Jerusalem was founded (Cahill et al 1991:64).
\textsuperscript{22} Circa 22 BCE – circa 70 CE. It is unknown whether Agrippa II retained his rule of East Lower Galilee and South Peraea until his death after 70 CE (Bimson et al 1994:119).
• In Israel coprolites taken from a cave near the Dead Sea in the vicinity of Nahal Mishmar proved that whipworm (*Trichuris trichiura*) indicative of poor sanitary conditions, (during the Babylonian siege of Jerusalem during the 6th century BCE) was also common in ancient Israel (Cahill et al 1991:67).

4.4.6 Talmudic perspectives on Jehoram, intestinal worms and their causes

The Talmud has very little to say about King Jehoram probably because the rabbis were disappointed in him. His career had an honourable beginning but a dishonourable end, said Rav Papa23 (Talmud – *Krithoth* 5b, footnote 18).

Unlike the Bible, the Talmud has many references to worms and the Talmudic sages believed that they were caused by several factors:

• Intestinal worms would develop by eating the herb fenugreek (*Trigonella foeno-graecum*) and then drinking water immediately afterwards (Talmud – *Shabbath* 109b). Recent research has revealed that the seeds of this plant are used to treat many maladies: taken internally for loss of appetite and anorexia, and the seed powder is applied as a poultice for skin problems such as boils and eczema (Van Wyk & Wink 2004:325). Traditionally it has been used to treat high cholesterol, diabetes and impotence and in Ethiopia, the seeds are used as a milk substitute for infants (Van Wyk & Wink 2004:325).

• Another cause of intestinal worms resulted from eating raw meat and barley flour (*Hordeum vulgare*) over forty days old (Talmud – *Shabbath* 109b). According to Rosner, the visible larva of the flour worms

23 His full name was Papa bar Hanan, a 4th century Babylonian *Amora* (300-375 CE; Kolatch 174-5).
(tenebrous monitor) probably gave rise to the idea that if eaten, they would infest the intestines (1978:186). In my view the rabbis were probably unaware that the hydrochloric acid secreted by the stomach would destroy the worms.

- Not eating a morning snack of bread (Talmud – Baba Metzia 107b).

The Talmud does not elucidate the Biblical text in 2 Chronicles. As there are numerous Talmudic remedies for worms, many people must have been plagued with these parasites in Talmudic times (although this cannot be confirmed as the cause of King Jehoram's illness).

4.4.7 Remedies used for parasites in Talmudic times

There are several remedies for parasites utilised in Talmudic times:

- Pennyroyal (Mentha pulegium) was eaten with seven white dates to eradicate worms in the bowel caused by eating raw meat (Talmud – Shabbath 109b). Pennyroyal oil contains pulegone, an abortifacient in large doses but the oil is also used to remove parasites from the skin (Van Wyk & Wink 2004:207; cf Ebadi 2007:100, who documents its insect repellent properties). Dioscorides also used pennyroyal (3:36), black dates (Phoenix dactylifera; 1:148) and the herb marjoram (Origanum majorana) to expel intestinal worms (3:32; cf Talmud – Shabbath 109b).

- White mustard cress (Sinapis alba) was ingested or a piece of fatty barbecued meat was sucked followed by a sip of vinegar (acetic acid). Some sages were not in favour of the vinegar because they thought it would damage the liver (Talmud – Shabbath 109b). Van Wyk & Wink (2004:70) state that the white mustard plant contains antibacterial
properties, improves the circulation and is useful to treat the pains of rheumatism.

- Bay laurel leaves (*Laurus nobilis*) that have been soaked in wine were recommended for worms (Talmud – *Gittin* 69b). Van Wyk & Wink (2004:188) maintain that the bay tree originated in the Mediterranean region and an infusion in modern times soothes digestive disorders. A modern treatment for intestinal worms according to Van Wyk & Wink (2004:175) is the St. John’s wort plant (*Hypericum perforatum*) which also possesses properties that have been found to suppress the HIV -1 virus and this has created much interest.

- Pliny mentions that European wormwood (*Artemisia aboratum*), although very bitter to the taste, mixed with spikenard (*Nardostachys jatamansi*) and vinegar ‘expels worms from the stomach’ (*Natural History* 27:48). White wormwood (*Artemisia herba alba*) another wormwood variety is still used as a tea by the Bedouin of the Sinai and Negev to expel intestinal worms (Zohary 1982:184) and is mentioned in the Bible (Dt 29:18). Kramer mentions that true to its name, wormwood is an ancient remedy having specific properties to remove parasites such as worms from the bowel (2006:200; cf Palmer 1985:158). Wormwood is indigenous to parts of Europe, Asia and Africa (Kramer 2006:200).

- The Talmudic rabbis were convinced that garlic (*Allium sativum*) eradicates parasites from the bowels (Talmud – *Baba Kama* 82a).

### 4.4.8 Conclusion

Although the Bible is silent on the presence of parasites in ancient times, archaeology has presented a completely different picture revealing that many different types of worm existed, which included tapeworm, whipworm, threadworm and liver flukes found at sites both in Jerusalem and neighbouring
Egypt. Most of the ancient parasitic infestation stemmed from insufficient cooking or unsanitary conditions (Anderson 19[68]:283, 285). I mentioned above that I doubt whether tapeworm infestation could have caused the king’s death but intestinal fluke toxin has been found be fatal to humans and it is my view that the intestinal flukes as mentioned above were the most likely cause of King Jehoram’s death.

‘Fiery serpents’ are parasites common to the Red Sea and Arabian peninsula whose ‘bite’ burns and itches so intensely. They have existed in that area since antiquity (Tenney: 1963:220).

Although the Bible does not mention parasites, the sages of the Talmud realised that parasites plagued the population and discussed the various remedies for their infestation. They were correct in their assumption that parasites were found in raw meat (Shabbath 109b), but incorrect in their belief that barley worms were intestinal parasites (Rosner 1978:186) as they were by all accounts not aware of the effect of the power of human stomach acid.

Of the many herbal treatments practiced by the ancients, three are still used today: namely pomegranate (Punica granatum) root, white wormwood (Artemisia herba alba) and garlic (Allium sativum). From this it can be seen that old trusted herbal remedies used over two thousand years ago are still used today because they proved to be effective.

4.5 SNAKE BITE

4.5.1 Introduction

In ancient Near Eastern literature (See 2.3.10.3; 2.4.10.4; 2.5.10.3 above), a snake is regarded as a symbol of life although the serpent in the Garden of Eden narrative is regarded as evil and malicious and this theme is perpetuated in the
Talmud. In primitive religions serpents are regarded as symbols of sex and death or death and rebirth. The Garden of Eden narrative according to Pope & Sperling (2007:572) was to convey Adam and Eve’s initial childhood innocence and dependence on their parent-creator, God. After eating from the fruit of the Tree of Knowledge of Good and Evil, (as the name implies), they grew up and had to take responsibility for their actions, leading lives completely independently from their parent-God (2007:572; cf Adeyemo 2006:16-17).

Generally speaking, snakes have enjoyed a bad reputation through the ages. They are thought of as cold, slimy reptiles that lie in wait ready to ambush anything that crosses their path: they evoke feelings of fear and awe simultaneously and are depicted in ancient art work that dates back to Paleolithic times (Peters 1992:713). The python is still worshipped in central Africa and the cobra in India. Snake deaths (between 30 000 – 40 000 per annum) are the highest in Tropical Africa and Asia because of inadequate medical treatment (Peters 1992:713). It can be overlooked that snakes control rodent populations that would otherwise spiral out of control; that their venom is used to treat snake bite24 (making it very important to identify the type of snake before administering an antidote) and their skins are used to make leather bags and belts (Peters 1992:713). I have used the words ‘snake’ and ‘serpent’ interchangeably in this section.

According to Xhosa belief, a certain snake called a *majola* appears when a baby is born. It is believed that the *majola* (black with yellow markings) is an ancestral spirit and its appearance is a welcome to a new family member. Unlike the *majola* any other snake is to be avoided. To dream of a *majola* is a bad omen which is taken to mean bad news or general discord (Elizabeth Nomasekela25 Maxama, private communication 2008).

---

24 Made by immunising animals against a particular snake bite and using their antibodies in a serum.

25 The name means ‘to stop from falling’. I had a personal interview with E M Maxama on 19 August 2008 in Sea Point, Cape Town.
4.5.2 Biblical viewpoints on snakes in general

Bodenheimer’s view is that all snakes were thought to be poisonous in biblical times (1962:289). According to Feliks there were many snakes in ancient Israel but only a few poisonous ones (2007(a):695). Three types of poisonous snakes can be found having inhabited the area since ancient times (Feliks 2007(a):695). Whether or not these specific snakes mentioned below occurred in biblical times is not known but it seems possible.

The Palestine viper (Viper palaestinae) that is light brown with dark brown stripes is the only poisonous one that can be found in or near human habitation and it is unusual in that it lays eggs unlike others of its species that are viviparous (Feliks 2007(a):695). A specific viper (Hebrew - Efeh) of the genus Echis referred to in Isaiah 30:6 (from the Hebrew efeh meaning “to cry”) found in the desert is light brown with white lateral stripes so called because of the sound it makes when it shakes its scales and is particularly venomous (Feliks 2007(a):695). An adder (in Hebrew - Shefifon (Pseudocerastes fieldi) mentioned as such in the Hebrew text of Genesis 49:17 is another poisonous snake with horn-like glandular protrusions resembling worms that are visible when the snake burrows under the sand luring prey such as birds. Ancient definition of the snakes is not certain and Bodenheimer doubts whether the species were differentiated at all seeing that this was not the case in ancient Greece (1962:289). Feliks explains the words in Psalm 58:7 which reads: 'Break their teeth, O God, in their mouth', which may refer to the snake charmers that extracted the teeth of the poisonous cobra (Peten walterinnesia aegyptia) found in the Judean desert to render their bite harmless (2007(a):696).

According to Genesis, God created the Eden snake (Gn 3:1) and cursed it (Gn 3:14-15) because it corrupted Eve (Gn 3:1-4). Dunn & Rogerson note that besides being crafty, the snake was also an unclean reptile (Lv 11:31) therefore a most suitable symbol of evil (2003:40). Carson et al add that the Garden of Eden
story is an illustration of the cause of sin – Adam and Eve regarded their human judgment as smarter than obeying God’s commands (1995:63). According to the Bible the serpent had vocal ability and its envy of man led to its downfall (Rosner 1977:180). Adeyemo’s view is that the serpent played on Eve’s naivety to cause a rift between God and His human creation (2006:16). Plaut mentions that serpents have long been associated with the Mesopotamian, Hurrian and Ugaritic falsehood myths with serpents that disobey the will of God (2006:24). God also created other monsters and serpents – sea monsters (Gn 1:21) which refer to Leviathan the ‘wriggling or twisting’ serpent (Job 26:13; Is 27:1), flying serpents (Is 30:6) and sea serpents (Is 27:1).

Rosner however deems these serpents to be legendary dragons of the earth, sea and sky (1977:180). Adeyemo is of a similar view and adds that the Leviathan symbolises ships just as railway lines (called an “iron snake”) symbolises snakes (2006:827). Carson et al’s view is that the great creatures of the deep were held to be divine in ancient mythology but the author of the book of Genesis merely views them as God’s creation (1995:60). Another sea monster, Rahab, often is used to describe Egypt in a derogatory fashion (Ps 87:4; Brown et al 1990:246; Carson et al 1995:651), while Plaut gives their names: Nahar, Yam, Leviathan and Rahab, who is called ‘Lord of the Sea’ in ancient poetry (2006:20).

Metaphorically snake venom represented evil and slander (Ps 140:2-3) as well as deadly poison (Is 59:5-6). The ancient Jews believed that gossips and slanderers were punished by snake bite (Am 5:19) and God would punish Israel’s enemies by forcing them to crawl in the dust like snakes (M1 7:17). Haran & Sperling state that fiery flying serpents are mentioned in the book of Isaiah 14:29 and Herodotus tells of flying serpents being quite common in the Arabian Desert in his time (2007:64).

Serpent symbolism is common and is sometimes regarded as a phallic or fertility symbol but could also represent human shrewdness or chaos in line with the
ancient Near Eastern view that serpents personify chaos, since man’s disobedience causes God to turn order into chaos (Tigay 2007:626). The fact that snake bite is not mentioned in the Bible does not mean that no one was ever bitten – in fact many people must have experienced snake bite: ‘ ... Her offspring [Eve’s] will crush your head, and you will bite her offspring’s heel ’ (Gn 3:15). Dunn & Rogerson view this verse as an initial messianic prophecy that good will ultimately triumph over evil (2003:40).

4.5.3 Moses and the Nehushtan – The Bronze or Copper Serpent

During their wanderings the Jews must have came across the typical desert fauna: lizards, snakes, spiders and scorpions (Dt 8:15). It is mentioned in the Midrash – Deuteronomy Rabbah 7:9-10 that the Jews were protected by the pillar of cloud that preceded them and the fiery sparks emitted between the two staves of the Holy Ark burnt and killed any snakes or scorpions in their path.

It is unclear what the Bronze or Copper Serpent (Nm 21:6-9) was made of: The Hebrew word nakhokhet can be translated as brass (bronze) or copper because the same word is used for both. The Hebrew word for any type of snake is nakhash. Williams postulates that the Nehushtan was a snake god associated with the worship of the god Baal and this is borne out by the name of King Jehoiachin’s mother, Nehusta (2 Ki 24:8) who was most likely called after a nature deity rather than a type of metal (Williams 1962:534).

The Jews en route to Canaan displayed the all too human trait of complaining bitterly when things did not go well. While it is true that the people wanted to leave Egypt, the journey must have been very hard on the youngsters, their mothers and the old. We, living in the 21st century would not envy them. The sheer discomfort of a nomadic life for so many years without much respite, even

26 An alloy of copper (Dt 8:9) and tin (Nm 31:22).

27 Reigned from 609 – 597 BCE.
if they did remain in one place for several days or weeks for instance when Miriam was recovering from *tzara’at* (Nm 12:15) and when she was buried (Nm 20:1), must have been very tiresome indeed especially when they had to take a detour to avoid Edom. It was then that the people’s patience ran out. They had also grown tired of their God given *manna*\(^{28}\) (actually *man hu* in Hebrew which means ‘what is it’ in English) collected each day and a double portion for the Sabbath (Nm 16:4-5) – in fact they said that they loathed it (Nm 21:5 TEV).\(^{29}\)

God then punished them by sending poisonous snakes among the people and many Israelites were bitten and died (Nm 21:6 TEV).

Rosner’s view is that the fiery serpents were actual snakes whose poison resulted in a burning fever but he does not know what species of snake was responsible (1977:181; cf Brown, Fitzmyer & Murphy 1990:88). Carson et al maintain that the bronze snake may have been a kind of adder found in the Sinai desert (1995:187). Alter confirms Rosner’s opinion and adds that the ‘fiery serpents’ is an example of a story or legend that arose based on smatterings of truth based on the early Jews’ encounters with snakes in the desert (2004:789). Dunn & Rogerson regard the fiery snakes as a mere story to explain the origin of the *Nehushtan*, a bronze serpent and to justify its presence in the Jerusalem temple (2003:146).

The Israelites, realising that they had pushed God too far, beseeched Moses to remove the snakes seeing that they had repented (Nm 21:7). God, in answer to Moses’ prayer, ordered that a bronze snake be placed onto a pole and anyone

\(^{28}\) The English ‘manna’ comes from the Septuagint’s translation of Numbers 11:8 (Plaut 2006:444, footnote 15).

\(^{29}\) According to the monks of St. Catherine’s Monastery, tradition has it that biblical manna is the surplus excretions of insects (either *Trabulina mannifera* or *Najacoccus serpentina*) that live on the tamarisk trees which still flourish in the dry river beds in southern Sinai (Feliks 2007(b):478). Zohary states the manna hardens into white globules, some of which is eaten by ants but most is used as a sweetener by the Sinai Bedouins (1982:142). Feliks doubts very much whether this is actually biblical manna because it is not a substantial protein food capable of sustaining desert wanderers (2007(b):478) because Biblical manna was referred to as a staple food (Ex 16:4).
who had been bitten would be cured by merely looking at it (Nm 21:9). Reiner, a rabbi, questions whether the author of the book of Numbers really believed that gazing at a snake had the power to cure its bite (2006:2). Shanks believes that the idea of snake drawings being used to ward off danger of the real thing may have filtered through from Egypt (2007:60; See 2.3.2). Plaut states that the *Nehushtan* is reminiscent of the healing stories found in Greek culture where Asklepios, the Greek god of healing would appear as a serpent (2006:1030). He reminds his readers that the medical symbol used today is the *caduceus* symbol of the inter-twined serpents around the Greek or Roman herald’s wand (2006:1030; Coulson et al 1980:111). Plaut (2006:1038) ponders the reason for the creation of the *Nehushtan*, for it was contrary to the second commandment prohibiting the making of images. This is precisely what the Bronze snake became much later, in the time of King Hezekiah.

Fishbane (2007:214) feels that gazing at the snake was therapeutic because it would provide an effective counter to its evil power. Friedman postulates that the bronze snake was a mysterious serpent seemingly from another plane of existence and the healings that occurred were merely a case of sympathetic magic that was imputed onto the snake as a cult object (2003:498). My opinion is that Moses was unconsciously using homeopathy, which like any healing is a gift from God (Sirah 38:2), by following the homeopathic principle of treating ‘like with like’, or following ‘the law of similars’ (Mahi 1999:1). By gazing at the snake, the source of the bite, the individual himself would be healed. Moses was merely the facilitator of healing in this way. The principles of homeopathy go back as far as the ancient Greeks, and Chinese and Indian medical texts over 5 000 years old and that it was introduced to the Germans by the physician, Hahnemann (1755-1843; Mahi 2006:1).

There is no further mention of snakes in the Bible except the story of Moses and the snakes (Nm 21:6 ff). Adeyemo believes that the *Nehushtan* became a symbol of God’s healing power by pilgrims (2006:194). Eventually King Hezekiah
destroyed the *Nehushtan* which was worshipped in the temple as a cult object (2 Ki 18:4). The motivation was to enable the people to focus all their attention on worship of God (Adeyemo 2006:458; cf Plaut 2006:1030). Dunn & Rogerson state that the author of the book of Deuteronomy was careful to attribute it to Moses, although its origins were clearly Canaanite, so that its presence in the temple would be justified (2003:146; cf Brown et al 1990:88).

### 4.5.4 Treatments for snake bite in biblical times

Germer (1993:79) believes that drugs used in the medical *papyri* of ancient Egypt can solve the problem of herbs/drugs used in Israel during biblical times. The advantages of these drugs imported from other lands: either from Israel or from local traders’ recommendations would have been known to the Egyptians.

There were many remedies available during biblical times, although none of these are mentioned in the Bible itself.

- Kottek states that wounds (possibly even snake bites) were treated by pressing and bandaging the area. Olive oil was applied (*Olea europaea*; 1993:103) to soften them (Is. 1:6). Olive oil is still used as a skin emollient (Van Wyk & Wink 2004:219). Olive oil was described in several Biblical passages: As precious (2 Ki 20:13); golden in colour (Zch 4:12) and used for anointing (Ex 29:33). The Talmudic rabbis added that the anointing oil was mixed with balm and galbanum (*Talmud – Krithoth* 5a) and good for the memory (*Talmud – Horayoth* 13b).

- Zohary is convinced that during biblical times, wounds were washed with a soap (*borit*) made from the leaves of the hammada plant (*Hammada salicornica*) that still grows in the Negev desert. The ashes of the leaves were mixed with olive oil to form the soap and can still be found for sale in local Oriental markets (1982:151).
• Flax plant leaves (*Linum usitatissimum*) were used to make linen strips used to bandage wounds (Zohary 1982:78). Nowadays the seeds are useful as a laxative, and also possess anti-inflammatory, wound healing and antibiotic properties. There are two types: one is grown for the seeds and the other for the stem fibres. This plant’s origins are the Mediterranean area and Western Europe (Van Wyk & Wink 2004:193).

• Cotton (*Gossypium herbaceum*) also called *tzemer-gufen* (vine wool because its leaves resembled those of the grape vine, according to Zohary 1982:79) and was used for hangings during biblical times (Es 1:5-6) and grown in Israel during the latter part of Old Testament times (Zohary 1982:79). Fragments of cloth over 5000 years old were discovered in the Indus Valley of Pakistan. In my opinion it is possible that the soft woolly part of the plant could well have been utilised to dress wounds.

• According to Zohary the balm of Gilead (balsam; *Commiphora gileadensis*) was a snake bite antidote and wound healer (1982:198), so-called because it grew in Gilead (Jr 8:22). This renowned medicinal balm was being transported by a group of Ishmaelites on their way to Egypt when Joseph was sold to them by his brothers (Gn 37:25). Jacob later sent gifts for the governor, including Gilead balsam, with his sons who were on their way to Egypt to purchase grain (Gn 43:11). This plant possesses antiseptic properties (Van Wyk & Wink 2004:406).

• Harrison indicates that the root of the mandrake plant (*Mandragora officinarum*) was pulverised and used to treat snake bite (1966:12).

• Zohary adds that Syrian hyssop (*Origanum syriacum*) mentioned in the Bible was used with cedar wood for the ceremonial purification of a *tzara’at* sufferer (Lv 14:4-7) and this is confirmed by the rabbis in the
Talmud (*Yoma* 41b). Hyssop was used to prevent and treat snake bite (1982:96) but Harrison (1966:45) believes that this remedy is merely a superstitious belief. Another species of this plant is indigenous to South and South-eastern Europe, called *Hyssopus officinalis* and is used these days to treat respiratory ailments (Van Wyk & Wink 2004:177; cf Kramer 2006:118).

- Kottek makes mention of Dioscorides using snake venom as a poison in antiquity (mixed with asp poison and the secretions of other reptiles) as an antidote for their bites (6:53; 1993:135). Peters states that in modern times all poisonous snakes are treated with antidote obtained from the offending snake (1992:713; cf Josephus (*Antiquities of the Jews* 15:225).

- According to Healy the smell of the garlic plant (*Allium sativum*) was used to drive away snakes and scorpions (Pliny - *Natural History* 20:50; 1991:225). Today it is used for the treatment of high blood cholesterol and has antiviral, antispasmodic and antiseptic properties (Van Wyk & Wink 2004:39).

- Onion (*Allium cepa*) known to the ancient Egyptians, found in mummies was used externally to treat snake bites (Jacobs, W 1993:37). The onion contains antibiotic properties and is used to take the sting out of insect bites/stings Van Wyk & Wink (2004:38).30

- Vinegar (acetic acid) was used in antiquity to treat the bite of an asp and Pliny states that doctors of his time were unaware of this (*Natural History* 23:56, in Healy 1991:233). Its power as an asp antidote was discovered almost by accident. Pliny relates how a man, carrying a container of

---

30 I can attest to this as I have found it excellent to ease the intense itch of the sand flea (*Culicoids*) bites, so prevalent in Atlantic coastal cities and Cape Town is no exception!
vinegar stepped onto a snake in his path but continued on his way stopping only to put down the container and rest. The Roman author adds that he drank a measure of the vinegar and lived to tell the tale and Pliny assumes that the happy outcome of the story was the vinegar. He also mentions that ‘those who suck out poison rinse their mouths with vinegar’ (23:57, in Healy 1991:233). Vinegar has been used for many centuries to dress wounds according to Cruickshank & Knappett (1967:91).

- Pliny believed that the saliva of a fasting person was an excellent snake repellent and that snake bite could be treated with saliva (Natural History 27:29, in Healy 1991:255; Natural History 7:2). Rosner (1978:11) explains that it was one of the duties of a physician in biblical times to suck out the poison out of a snake bite wound (Midrash – Numbers Rabbah 20:14).

4.5.5 Archaeological evidence

Shanks documents a magnificent solid gold cobra that dates between 630-603 BCE discovered at Ekron which is not necessarily Israelite (2007:63). The gold snake measures twenty one centimetres from its head to tail and weighs a mere fifteen grams. It was originally attached to a diadem (Shanks 2007:60). Shanks is adamant that such a snake would have been worn in a diadem (called a Uraeus) by an Egyptian pharaoh to protect him from his enemies (the snake would symbolise the enemies being spat at by it; 2007:63). Shanks does not mention when or by whom the discovery was made.

Shanks (2007:63) believes that the Nehushtan operated in much the same way as the Uraeus and served a protective function similar to the snake amulets that guarded the royal mummies from the serpents of the underworld.

A copper snake with a golden head was discovered at a Timna temple in the south of Israel that dates back to the 13th or even 12th century BCE and
measures thirteen centimetres across. Shanks does not indicate the date of this find but explains that it is reminiscent of the *Nehushtan* (2007:61).

### 4.5.6 Talmudic perspectives on the *Nehushtan*, snakes and snake bite

The Talmud does illuminate the Biblical text in Numbers 21:9 by discussing the issue that it was not the *Nehushtan* that healed the people’s snakebites, but God. Only God, Himself could prevent those bitten from dying, kill the snakes and heal those who had been bitten while gazing up at the snake attached to a high pole and their hearts were attuned to Him (*Mishnah – Rosh Hashanah* 3:8).

The Talmud goes into detail about the destruction of the *Nehushtan* by King Hezekiah who broke it into pieces (2 Ki 18:4) and this is echoed in tractates *Berachoth* 10b, *Pesachim* 56a, *Avodah Zarah* 44a and *Chullin* 6b. Of all the tractates only *Chullin* 6b explains that the Israelites were worshipping and giving offerings to the bronze serpent.

Shanks believe that the Hezekiah destroyed the *Nehushtan* because it represented the end of Egyptian symbolism (the Nehushtan represented the pharaoh) and demonstrated Judah’s loyalty to Sennacherib of Assyria (2007:63).

There are many other perspectives on snakes in the Talmud:

- The Talmudic sages conceded that charming a snake or serpent to render it harmless was permissible on the Sabbath according to Rabbi Joshua ben Levi\(^31\) (*Talmud – Sanhedrin* 101a).

- According to Fishbane the snake did not heal the Jews but it forced them to look up to God and accept His healing power (2007:215). In this way

\(^{31}\) A Palestinian *Amora* of the 3rd century CE (Kolatch 1981:151).
the Talmudic rabbis were able to offer an explanation of how an inanimate object like a metal snake could cure those bitten by snakes in the Bible (Nm 21:6). It was vital for the rabbis to elucidate this fact for they believed that only God could prevent those bitten from dying and kill the snakes.

- In discussing the issue of why snakes were used to kill the Israelites (Nm 21:6), it was the view of Rashi (Solomon ben Isaac 1040-1105 CE), a medieval biblical and Talmudic commentator, that it was a sort of ‘retribution’ for the snake’s lies, deceit and slander in the Garden of Eden story – just as God punished the snake for slander, so the snake, in its turn, was able to exact revenge on the Israelites by poisoning them to death (Rosner 1977:181).

- The rabbis believed that God had instructed Moses to fashion a copper/brass snake because of the similarity of the words ‘bronze/copper’ to the word ‘snake’ being a play on words – the Hebrew nakhash nekhoshet means ‘a snake of brass/copper or bronze’ in English (Midrash Genesis Rabbah 31:8).

- If a woman testified that her husband died of snake bite during the wheat harvest it was assumed that she was not lying (Mishnah – Eduyyot 1:12).

- The rabbis of the Talmud knew that snake bite was lethal although not always painful – often it was only noticed when the area around the bite had swollen (Mishnah – Yevamoth 16:6). Mar Samuel, a physician of Talmudic times, believed that all reptile venom was poisonous but that only that of a serpent was fatal (Talmud - Abodah Zarah 31b).

- The ancients believed that the snake’s sense of taste was impeded and everything tasted the same to it (Gn 3:14; Talmud – Yoma 75a), so it was able to punish the ancient Jews, who complained that they were sick of
manna, although they were able to distinguish many delicious foods in one piece of manna (Midrash Numbers Rabbah 19.22).

- The opinion of Rabbi Meir Loeb ben Jeheil Michael (1809-1879) a biblical exegete also called Malbim, (which was an acronym formed by his name) is that God punished the people for not controlling their evil impulse (internal snakes) and behaving like snakes by slandering God (in Rosner 1977:182).

- The rabbis explained why Moses' staff turned into a snake when he threw it to the ground (Ex 4:3). They explained that Moses had spoken ill of the Israelites just as the snake spoke maliciously of God, its creator (Gn 3:4) and the fact that his staff changed into a serpent may have been an indication that God was angry with Moses (Rosner 1977:183).

- The Pharaoh of Egypt is often compared to a snake in the Bible (Ezk 23:3; Is 27:1) by being dishonest (Midrash – Exodus Rabbah 9:4) imprisoning men, then quietly killing them (Midrash – Exodus Rabbah 9:4).

- The drinking of water, wine or milk that had been left uncovered was believed by sages to be similar to snake bite for they believed that the snake’s venom floated on top of the water like a fungus. As a snake drank, it simultaneously discharged its poison into the container in the process, and could poison anyone who drank from the container (Talmud – Sukkah 50a). Consequently the Talmud forbade the drinking of such water unless it had been strained into another container (Mishnah – Terumoth 8:4) or the drink of water was followed by a cup of wine (Rosner 1978:197). According to the Talmudic sages in tractate Shabbath 109b, a drink made
of liverwort\(^{32}\) (*Hepatica nobilis*) was believed to be a remedy for drinking from an uncovered container.

- It was a different story with beer – the bitter taste of the hops destroyed the venom that could have been emptied into the beer (*Talmud - Abodah Zarah* 31b). It was assumed that snakes were not partial to beer (Rosner 1977:189). The famous physician, Mar Samuel only drank boiled cooled water; it was accepted that snakes did not like such water (Rosner 1978:197). He states that the Talmudic rabbis’ anxieties regarding drinking uncovered water were without any scientific merit but that it is possible that a snake may discharge some of its venom into their drinking water only if it has recently bitten something and a minute amount of venom remained on its fangs (1977:194). This venom mixed with water is not dangerous since it is not absorbed by the digestive tract but could prove a problem if the person concerned had mouth sores or a peptic ulcer (1977:194).

- An animal that had died from snake bite could not be eaten not because it was not kosher but because it could endanger life (*Mishnah - Terumoth* 8:6). Pliny the Elder’s view however, was that such meat was perfectly safe to eat (*Natural History* 29:18). It is possible that Pliny had more experience of the different snake species (Rosner 1978:198). Rosner continues that some Jews even went so far as to avoid certain fruits like figs and grapes or vegetables like squash with holes in them in case a snake had made the hole and left it full of venom (*Talmud - Chullin* 9b), while others refused to wear sandals made from the leather of an animal who had not been slaughtered lest it had died from snake bite and the poison had become infused in the leather (1978:198), but he gives no indication where in the Talmud this is mentioned.

\(^{32}\) In the Talmud the Hebrew word *humtarya* is translated as liverwort (Jastrow 1996:435; *Hepatica nobilis*). This plant is used today as a tonic and a liver remedy (Van Wyk & Wink 2004: 412).
4.5.7 Remedies for snake venom and snake bite

4.5.7.1 Talmudic remedies

Unlike the Bible that is devoid of remedies, the Talmud has two remedies for snake bite; the third one seems only coincidental and does not really contribute to the issue at stake:

- A crushed mosquito (presumably applied directly) could be used to treat snake bite (Talmud – *Shabbath* 77b; cf *Abodah Zara* 28b).

- The embryo of a white ass that was kosher (fit for human consumption) would be torn open so that the victim could sit on it (Talmud – *Shabbath* 109b; cf *Kethuboth* 50a). The tractate gives no indication of the reason for this strange remedy.

- Rabbi Akiva ben Joseph (50-135 CE) was forewarned by astrologers that his daughter would be bitten by a snake and die on her wedding day. He was rather traumatised (the tractate does not mention whether he told her or not) but she stuck her brooch into the wall of her bridal chamber (perhaps to keep it safe) that lodged itself into the eye of a snake that just happened to be on the other side of the wall. The next morning when she removed her brooch, one can imagine her horror when the dead snake emerged through the hole (Talmud – *Shabbath* 156b).

Talmudic remedies for counteracting the consumption of uncovered water (which the sages regarded as tantamount to being poisoned by a snake):

- To boil five roses and five glasses of strong alcohol together and then to drink this potion, possibly for its mild anti-inflammatory and sedative
properties. Rabbi Ahadboi ben Ammi’s\textsuperscript{33} mother used a similar recipe and gave it to the patient who sat on bricks placed close to the stove while doing so. The poison then left the patient’s body (presumably by ‘sweating it out’; Talmud – \textit{Shabbath} 109b).

- Another one was to drink the milk of a white goat, according to Rabbi Avia\textsuperscript{34} (Talmud – \textit{Shabbath} 109b). Milk is a well-known antidote to most ingested poisons because it induces vomiting (Anderson 19[68]:110). Perhaps the rabbis believed that milk would neutralise the snake’s venom.

- Rabbi Huna ben Judah\textsuperscript{35} recommended filling the empty case of a citron with honey, boiling it on fire coals and then eating it to treat a snake’s bite (Talmud – \textit{Shabbath} 109b). The problem with this remedy is that the victim would probably have died while the medication was being prepared!

\subsection*{4.5.7.2 Dioscorides’ remedies}

- Wild rue (\textit{Ruta graveolens}) leaves, eaten raw or boiled was recommended for snake bite by Dioscorides (3:52) but excessive use of this plant\textsuperscript{36} was dangerous because it was known to be poisonous (3:52). Daniel (2006:77) states that this herb is native to the Mediterranean area and is used today as a vermifuge. The plant has properties that protect blood vessel capillaries, treat heart palpitations and also anti-spasmodic and analgesic properties (Van Wyk & Wink 2004:280). Daniel is convinced that its use as an antispasmodic is due to the fact that it contains courmarins (2006:77).

\textsuperscript{33} His full name was Ahadboi ben Ammi, a Babylonian Amora of the 4\textsuperscript{th} and 5\textsuperscript{th} centuries (Kolatch 1981:66).

\textsuperscript{34} A Babylonian \textit{Amora} active in the 4\textsuperscript{th} century CE (Kaplan 1997 EJ CD Rom).

\textsuperscript{35} Huna was a very common name among the Babylonian \textit{Amoraim} and there are over sixty with the same name. It is not possible to identify who this \textit{Amora} was (Kolatch 1981:66).

\textsuperscript{36} Native to Israel and other Mediterranean lands.
• Sesame seeds (*Sesamum indicum*) were boiled in wine and drank to treat the bite of the horned viper (Dioscorides 2:121). These seeds are used nowadays in the food industry as flavouring (Van Wink & Wyk 2004:427).

• A decoction of the seeds of the White lily (*Lilium candidum*) was used for snake bite (Dioscorides 3:116). This plant is used to treat epilepsy and is a useful expectorant (Van Wyk & Wink 2004:415).

4.5.8 Conclusion

Perhaps the ancients’ fear of snakes can be understood because of the poisonous species that are still found in Israel (Feliks 2007(a):696). Snake venom was used as a poison in antiquity as well as an antidote according to Dioscorides (6:53; cf. Kottek 1994:135) and this is still the case today.

Plaut (2006:1038) believes that the story of the *Nehushtan* was thought out later to explain how it acquired such a healing reputation and was positioned in the Jerusalem temple. It is his opinion that it was made while the ancient Jews were on their desert sojourn as a tangible representation of the people’s worst nightmares. Not many people are fond of snakes and Moses introduced a metal snake image to quiet the people’s fears for he proved to them that it could repel the evil power of the living serpents and their bites (Plaut 2006:1038). The story of the Garden of Eden resulted in many ancients believing that snakes possessed evil powers. Plaut maintains that the people were healed from their bites as they were forced to look upwards to God (2006:1038).

The Talmudic sages knew that snakebite was fatal (Talmud - *Abodah Zarah* 31b). While this is not necessarily true, the ancients did not want to take any chances and had an almost paranoid fear of snakes. Perhaps they regarded

---

37 These still grow in Galilee and on Mount Carmel and became a sacred symbol in the Christian era (Zohary 1982:176).
‘fiery serpents’ (a parasite called *Dracunculosis*) as snakes. Their fear of drinking uncovered water was not scientifically based. They did not know that the poison was not absorbed by a human digestive tract but would only be harmful if mouth or stomach ulcers were present (Rosner 1977:194).

4.6 **KING SAUL’S MYSTERIOUS MALADY**

4.6.1 **Introduction and background to Saul’s mental state**

The story of King Saul has all the trappings of a popular novel and tells the story of Saul38 the first king of Israel, who reigned in Jerusalem from *circa* 1029-1005 BCE (Oded 2007(a):78). Saul was the son of the wealthy and influential Kish from the tribe of Benjamin (1Sm 9:1), but not an aristocrat. The meaning of his name in Hebrew is ‘asked or requested’. An enigmatic figure, he was chosen by God in response to the people’s request (1 Sm 8:5) as the first King of Israel although it was contrary to the old theocratic ideal that God alone was King of Israel (1 Sm 8:22). Saul’s kingdom was a confederacy of states rather than a united kingdom with their capital at Gibeah, 6 km north of Jerusalem (Boshoff et al 2000:77). Myers is convinced that Saul’s supporters were the tribes of Benjamin, Ephraim, Manasseh and Judah (1962(a):232; 2 Sm 2:8-9).

There are two versions of Saul’s life combined in the book of Samuel – one pro-Saul and the other anti-Saul. The pro-Saul version probably written first (Boshoff et al 2000:82) was in favour of the monarch, believed that he was a brave and humane king rejected by God and that one of his sons should reign after him. Ishbosheth the sole survivor of the battle of Mount Gilboa did reign, but not for long as he was murdered by two Benjamites – Baanah and Rechab (2 Sm 4:7; Boshoff et al 2000:82). Mention is made of a boy, Mephibosheth, who was five

---

38 The account of Saul was originally part of the Deuteronomistic history which included Deuteronomy, Joshua, Judges, the books of Samuel and Kings. In the 3rd century BCE the Hebrew version of the Old Testament (*Tanakh*) was translated into Greek and the two books of Samuel were formed into one document (Sanford 1985:3).
years old when his father, Saul died. His nurse fled with him but dropped him, crippling him (2 Sm 4:4).

In another account however, he was held to be the grandson of Saul (Jonathan's son) whom David spared (2 Sm 21:7) and later compensated for the loss of his grandfather's property (2 Sm 9:10), the anti-Saul version. Carson et al believe that Saul was appointed king because Israel needed a strong and united government (1995:306) and for security reasons (Carson et al 1995:308).

Saul's military talent was evident when he received God's support and re-assembled the Israelite tribes to crush the Ammonites (1 Sm 11:11) according to the pro-Saul account. Saul fought many battles – against the Moabites, the Edomites and Zobahites but the Philistines were his greatest challenge and posed the most serious but constant threat to Israel. The pro-Saul camp believe that Saul was regarded as a sort of charismatic judge-king by his people, clearly statements also favourable to the monarchy (1 Sm 10:11; Boshoff et al 2000:83; cf Siegman 1967:1096; Bright 1972:185). His reign was characterized by freedom from conscription and taxation. War was fought by volunteers and funds were made available by donations received (Siegman 1967:1096). This version is clearly pro-Saul.

The latter years of Saul’s reign were marred by his not unreasonable preoccupation with David’s growing popularity and his own resultant depression (Carson et al 1995:314). This was documented by the anti-Saul biblical author saying that God’s spirit had left Saul and an evil one had taken its place (1 Sm 16:14). He eventually became mentally deranged and suspected everyone of plotting against him (Siegman 1967:1096). Saul’s last battle against the Philistines at Mount Gilboa was fraught with difficulty: David had fled for his life to the Philistine kingdom and had become a mercenary – the personal bodyguard of the Philistine King Achish (1 Sm 28:2).
On the eve of the battle, King Achish was pressurised by his generals to send David home for security reasons (1 Sm 29:6-7). It is not known whether this news was ever conveyed to Saul: if it was, it would have added to his terror at Mount Gilboa (1 Sm 28:5) for David had a reputation of winning battles (1 Sm 18:7). Because God had not answered his pleas for help and guidance before the battle, Saul then committed an unthinkable act – he consulted a medium at Endor, contravening his own edicts, for he had banished all soothsayers from Israel (1Sm 28:9). The medium got in touch with the spirit of the dead Samuel, who was angry at being disturbed (1Sm 28:15-16). Samuel’s message to Saul was that both he and his sons would die during the battle and Israel would be defeated. Although not mentioned by Boshoff et al (2000:83) as an anti-Saul view, these passages in my opinion depict Saul as weak and powerless. This was the most awful confirmation of Saul’s worst anxieties (1Sm 28:19) which could explain his ‘heroic’ suicide before his inevitable capture at Mount Gilboa. He did not want his body to be dishonoured by the Philistines, his enemies (1Sm 31:4). This latter chapter was most probably written by the pro-Saul supporters.

Rosner, a doctor and medical historian, postulates that Saul may have had frequent epileptic seizures (1978:299) which are also termed ‘convulsive disorders’ (Berkow & Talbott 1977:1404). Rosner justifies his viewpoint by reference to the following biblical passage: Saul had followed the messengers to Naioth. ‘And he also stripped off his clothes and he also prophesied before Samuel, and lay down naked all that day and all that night.…’ (1 Sm 19:24). Carson et al (1995:315) understand the word ‘prophesy’ to mean ‘an abnormal trance-like state’ which would in my opinion concur with the views of Rosner 1978:229).

Epilepsy is defined as ‘a neurological disorder involving recurring temporary loss of consciousness with or without convulsions, muscular spasms or automatic movements’ (Coulson et al 1980:282). During an attack the patient often falls down (Anderson 19[68]:385). There are different types of seizures – grand mal
(French for a major epileptic attack) and petit mal. In my opinion grand mal could apply most accurately to Saul. During an attack, the patient often shouts or cries out, (1 Sm 19:23) becomes unconscious, falls to the floor while the body goes into severe muscular spasms. After an attack the patient usually sleeps for several hours (1 Sm 19:24). Anderson states that the cause of epilepsy is unknown but he is certain that it is the abnormal discharge of electrical currents in the brain (19[68]:385). Berkow & Talbot maintain that it is caused by birth trauma or a metabolic disorder (1977:1404). Simon’s paper on epilepsy mentions brain tumours, whether benign or cancerous, can also cause epileptic-type seizures in all patients (http://www.vmm.edu/patiented/articles/what Causes_of_epilepsy_000044_2.htm).

If Saul had some kind of epilepsy it is possible, in my view that his condition may have been caused by a brain tumour or a tumour on or inside his skull because the description of his behaviour in the first book of Samuel (19:24) is reminiscent of an epileptic fit. It is perplexing that although Saul ruled for about thirty four years he only suffered one episode reminiscent of epilepsy documented in the Bible (1 Sm 19:24). If he had been suffering from a brain tumour, he would have had many more such episodes with the progression of the disease (Berkow & Talbott 1977:1437-8).

Ben-Noun analyses Saul’s illness from a medical point of view and does not mention the pro-Saul or anti-Saul versions of the narrative. Ben-Noun believes that Saul suffered from any one of several mental illnesses but he postulates that the most likely is bipolar disorder Number 1 (2003:278), which is characterized by both manic and depressive episodes (2003:278). The general symptoms are: irritability, decreased need for sleep, being too talkative, lack of concentration and delusions or hallucinations (Ben-Noun 2003:274).
The ‘evil spirit’ from God that troubled Saul (according to the anti-Saul version) and his attempt to kill David by throwing a spear at him indicate that the king was very irritable displaying his aggression (1 Sm 18:10). Ben Noun believes that David ministered music therapy to Saul at night because of the king’s insomnia (2003:274, 1 Sm 16:23) and his paranoia indicate the delusional thoughts of most manic patients (Ben-Noun 2003:274).

The king's apparent depression with characteristic insomnia (above), feelings of worthlessness, (1 Sm 18:28-29), indecisive behaviour (his dependence on Samuel) and paranoia complex (1 Sm 18:9) indicate that his condition eventually developed into a psychosis due to his troubled relationship with David (Ben-Noun 2003:275). Saul felt threatened by David and in my opinion, with good reason, because by that time, David unbeknown to Saul, was already the new king-in-waiting (1 Sm 16:13). Perhaps Saul was far more perceptive than anyone had ever realised!

Mental health in biblical times can be summed up by the injunction that it was the responsibility of every individual to take great care of their health (Dt 4:15) and to live by the principles of Torah (Lv 18:5; Bulka 1988:30): Of these cheerfulness 39 (Pr 17:22) and obedience 40 (Pv 4:20-22) were probably the most important. The sin of envy was so paramount that it formed the tenth command (Ex 20:14). Bulka explains that a healthy person was more of an asset to society than an unhealthy one (1988:30). This implied that everyone was born perfect but a person who neglected themselves became ill.

Depression can develop as a result of a poor self image (Bulka 1988:34). The Bible states that not only must we love others, but also love them as much as ourselves (Lv 19:18). To be happy we must share not only our possessions with

---

39 The same can be said of characters such as Sarah (Gn 18:12) and Leah (Gn 30:13) but David was miserable when confronted by family conflicts (2 Sm 16:12).
40 This character trait applied to a person such as Job (Job 1:1) but not always to David who committed adultery with Bathsheba (2 Sm 11:1-27).
others, but ourselves as well. A happy life partner is a very important asset (Pr 12:4). Although this verse refers to a wife, in my opinion it is safe to assume that the same applies to a husband. Saul had a wife Ahinoam (1 Sm 14:50). The commentator, Oded mentions that Saul had only one wife in times when polygamy was the norm (but does not give a reason for his view 2007(a):80) and three sons (1 Sm 31:2). Judging by the conversation between Saul and his son, Jonathan, when Saul noticed that David was missing from court, the relationship between father and son was not a happy one (1 Sm 20:30).

4.6.2 Saul's depression as a result of post-traumatic stress disorder

It is necessary to discuss this disorder because it is possible that Saul may have been suffering from it. He fought many battles and experienced the traumatic event of watching King Agag of the Amalekites being hacked to pieces by Samuel, before his very eyes (1 Sm 15:33).

Post-traumatic Stress Disorder (hereafter referred to as PTSD) is the name given to a psychiatric disorder caused by:

- Partaking in or
- Experiencing traumatic events.

The symptoms, according to Young (1988:203) would include:

- Images and nightmares of the trauma as the original event is ‘re-played’,
- depression and anxiety,
- avoiding all situations which can ‘re-trigger’ the original event,
- insomnia
- waking up at night screaming.
'The Institute for the Treatment of PTSD' (this is not its real name) is part of the United States Veterans Administration Medical System and its findings were that almost all of its patients were Vietnam War veterans (Young 1988:203). The Institute’s psychiatrists discovered that the veterans’ emotional disorders originated because of their involvement in, or enforced observation of, war-related atrocities: such as the torture and violent killing of prisoners-of-war, civilians and their fellow Americans (Young 1988:203).

Young explains that events which cause severe trauma are usually those acts which are *contra bonos mores* (contrary to good or sound morals; 1988:204). During combat troops fight for their lives – it is a kill or be killed situation. It has been found that they fight and kill in a sort of ‘auto pilot mode’ without realising the seriousness of their acts, enabling a sort of numbness of moral responsibility to set in at the time, being almost unaware what was happening (Young 1988:208). Examples of this would be the slaughter of innocent women and children in a combat situation, which Saul was commanded by God to carry out via his prophet Samuel (1Sm 15:3), acceptable simply because they were the enemy (Young 1988:205). Young does not mention King Saul at all but I have applied the principles of PTSD to assess Saul’s illness according to his stress situations as they appear in the first book of Samuel.

It is general knowledge that different cultures have differing views on what is regarded as unacceptable and it is difficult for us in the 21st century CE to impute values to and judgment on those living during the 1st century BCE. However, even though twenty-two centuries of civilisation have passed, the human psyche, fears, emotions and good conscience have remained essentially the same.

The lives of most people in those far-off times were very stressful especially that of a king and Saul fought many battles (see below). A king was expected to judge (2 Sm 15:2), rule in a morally correct way (2 Sm 23:3), obey the law (1 Ki 2:3), formulate law (Dn 3:29), declare war and give pardon (1 Sm 11:5-11; 2 Sm
Most of the first book of Samuel narrates Saul’s gradual mental decline (Young 1988:196). PTSD can be caused by a traumatic event and watching Samuel executing King Agag of the Amalekites (1Sm 15:32) must have been horrifying to the more humane Saul (1 Sm 15:33). According to Young, Saul’s later symptoms included re-active depression, paranoia, hysteria, violence and mood swings. Saul’s many battles could have lead to PTSD. Some examples are: the bloody battle against the Ammonites at Jabesh (1 Sm 11:11) and the battle against the Philistines at Gilgal where his army was split (1 Sm 13:2) because he had underestimated the power and might of his enemies and realised he was cornered after their initial attack (1 Sm 13:5-6). Jonathan’s attack on the small garrison at the Michmash pass unbeknown to his father (1 Sm 14:1,15) which developed into a full scale war and the attack on the Amalekites in the city of Amalek where Saul was instructed by God to annihilate an entire people, their possessions and livestock (1 Sm 15:3). This principle is called *herem* in Hebrew and Saul found himself in this situation in the city of Amalek.

Because Saul had witnessed atrocities in battle, possibly even been part of them, it is my opinion that Saul suffered from PTSD. Although the Bible is silent on this it does not mean than none took place, it was probably so commonplace as not to be mentioned. 1 Samuel 16:14 makes it clear that Saul was at times possessed by ‘an evil spirit sent by God’ which was ‘tormenting’ him – part of the anti-Saul version. Quite possibly mental images of the original trauma were re-playing in his mind at times. According to Sanford (1985:61-2) Saul suffered from depression; his servants suggested music therapy in the form of the harpist, David (1Sm 16:16) which seemed to help (1 Sm 16:23). The other classic symptoms of PTSD - the nightmares and waking up screaming are not mentioned in the Bible but it is mentioned that Saul flew into jealous rages and ranted (1 Sm 18:10). The Bible does not mention at what time of day or frequency this took place. It could well be regarded as part of his possible post-traumatic stress disorder.
4.6.3 The enemy *herem* principle

It is my opinion that King Saul’s PTSD was exacerbated by the ancient Israelite adherence to the ancient principle of *herem*, which is translated as ‘forfeited property’ (Alcalay 1990:826), where forbidden people or things are sacrificed to God. To my mind this principle of *herem* seems to be an example of a sort of ‘Biblical xenophobia’.

Greenberg explains that the Hebrew word *herem* means ‘forbidden or to become sacred’ in English (2007:10). He goes on to say that there are three categories of *herem*:

- Israeliites who worship other gods. This would include groups or individuals, their idols and objects of worship;
- The seven nations who lived in Canaan;
- Persons (Jephthah’s daughter [Jdg 11:34] and/or things that were donated to God privately regarded as extremely sacred).

An enemy that was *herem* was a combination of the first and third aspects mentioned above according to Greenberg (2007:10). This meant that the utter destruction of the enemy was regarded as an act of homage to God. Greenberg elucidates that the enemy (Jdg 5:31) and the battle (1 Sm 17:47) were viewed as God’s own enemy and battle while the Israelite troops were merely God’s assistants (Jdg 5:23). According to Greenberg there are too few incidents to state that *herem* was a general rule of ancient Israelite warfare (2007:11). What it amounted to was full-scale destruction of a town or village where the battle was waged. Dunn & Rogerson (2003:224) agree with this view saying that it was regarded as a type of burnt offering to God because it usually took the form of a conflagration destroying the entire population, their livestock, crops and dwellings – similar to the so-called ‘scorched earth policy’ practiced by the Zulu king,
Shaka, and in later times, the British during the South African War (Coulson et al 1980:762).

The *herem* principle was initially strictly applied when the Israelites first arrived in Canaan as a religious protective measure to prevent apostasy among the Jews themselves (Dt 13:13-19). During the reign of Solomon it was avoided provided the conquered nation accepted Israel's conversion and peace terms (Young 1988:205). The relevance for Saul’s situation is that his possible depression was exacerbated when he was commanded by God through Samuel to follow this enemy *herem* principle when attacking the Amalekites (1 Sm 15:3).

4.6.4 Biblical viewpoints on the life of Saul

Besides the traumas of war, one cannot help but wonder whether Saul really wanted to become king. He was not ambitious – he was appointed by God and had no choice in the matter (Carson et al 1995:305). The way he hid behind the supplies at Mizpah (1Sm 10:22) is clearly part of the anti-Saul narrative, which caused some to question his willingness to reign (1Sm 10:27). The commentators, Dunn & Rogerson are unsure whether Saul’s hiding demonstrates mere modesty or a character flaw (2003:219). Sanford, a psychoanalyst offers a slightly different reason. He says that Saul was ego-centric and had run away from a situation that he perceived was a threat to him. He was too insecure within himself to handle the heavy responsibilities of kingship (1985:26-27). Green, a biblical historian, agrees with this point of view and observes that Saul was uncomfortable and hesitant (2003:43). This was borne out by the fact that after being proclaimed king at Mizpah Saul returned home, but Carson et al (1995:307) maintain that everyone went home, not only Saul, who was for a time dependent on his farm for a living because a taxation system was not yet in place at the beginning of the monarchy. Green on the other hand, feels that this was done to escape his royal responsibilities (2003:40).
Sanford speaks of the ‘individuation’ of a person – a phrase coined by CG Jung to describe personality development formed by an individual’s response to life’s lessons and it is the basis for religious ideas and desires (1985:122). He believes that every person has a ‘Jekyll and Hyde’ element to their personality - a man has a feminine side and a woman a masculine aspect. Sanford quotes Jung as saying that each person is a duality made whole by this process of individuation (1985:122). Part of this process is facing fears (Sanford 1985:131). Saul did not do this after the Mizpah gathering of the tribes (above). He went back home and allowed himself to become self absorbed and egotistical and in the view of the author, unbalanced so that when his better half needed to surface his ego once again took charge making him anxious, which was a most disenabling process (Sanford 1985:129). Interrupted during his agricultural duties by the message of an imminent attack by the Ammonites (1Sm 11:4), the Bible narrates how the spirit of God infused Saul’s personality and boosted his kingly self-confidence so that he led Israel to victory (1Sm 11:11). This was written by the pro-Saul supporters. This righteous anger replaced all his insecurities and enabled the real royal personality of Saul to manifest (Sanford 1985:30). Dunn & Rogerson agree with this point of view and refer to this as a ‘God – Saul transfer’ which won the day (2003:220).

The relationship between Saul and the prophet Samuel was a difficult one according to Carson et al (1995:310). During this period there was no clear separation between political and religious leaders and Saul was regarded as the bridge in Israel’s transition from judge-rule to king-rule Myers (1962(b):231). Cf Oded (2007(a):79) agrees with this saying that this was the main reason for the clashes between the two.

Samuel was opposed to kingship; he regarded God as his only king. Samuel had lived with the priests as a small boy because his mother Hannah had dedicated him to God in answer to her prayer for a child (1 Sm 1:27). Although the people demanded a king (1 Sm 12:3,18), Samuel was still determined to continue to
wield power over Israel by demanding absolute obedience to God by Saul and his subjects through himself (1 Sm 12:22-25). Oded agrees with this point of view (2007(a):79) and Green goes a step further to say that there was no kingly mentor for Saul to learn from (2003:46). Despite this Saul waited for the prophet to keep his promise to meet him in Gilgal after the private anointing (1Sm 10:8). Myers (1962(b):231) maintains that initially Saul was very dependent on Samuel (1962:231) and he waited for Samuel to keep his promise to meet him in Gilgal after the private anointing.

The initial rift was as a result of some pro-active behaviour on Saul's part, when he decided to make the sacrifices to God himself after waiting for Samuel who did not appear (1 Sm 13:8-9). Saul's army had dwindled by this time to a mere 600 men; some 1 400 had deserted him (Carson et al 1995:310). Samuel re-appeared on the scene after the sacrifices were completed and his anger was evident. Oded maintains that the old prophet may have regarded Saul's action as an attempt to usurp his own ritual power (2007(a):79). Sanford's view is that Saul, when he decided to perform the sacrifice he was trying to form a relationship with God (1985:59).

Myers is of the opinion that if Saul had been supported by a more sympathetic prophet such as Nathan, his story may have been a more positive one (1962(a):232).

The love-hate relationship that Saul experienced with David warrants some attention. At first Saul welcomed David into his domain: initially as a musician to heal his dark moods and grew very fond of him in the process (1 Sm 16:21-23),

---

41 Samuel is portrayed as an 'old' man when he appointed his sons as judges in Israel (1 Sm 8:1). A lifespan was not long in those times and the average age of death in the 1st century CE (Faber & Faber in Botha 1999:33) was 22-25 years for males and 18-20 for females, yet an average lifespan according to the book of Psalms (10:10) was seventy or eighty years if one was strong enough (Rosner 2000:194). It is difficult therefore to justify Samuel being termed 'old'. He was born towards the end of the period of the Judges (either 1380-1050 or 1200-1050 BCE) before Saul became king in about 1029 BCE (Bimson et al 1985:36).
then as a champion ‘giant-killer’, he joined Saul’s army (1 Sm 17:51; 1 Sm 18:5).
Saul became very jealous of David’s fame and feared that he would become the
next king (1 Sm 18:9). Around that time David had been secretly anointed as the
next king by Samuel. Although his act had been sanctioned by God, it was still
fraught with treason and deceit; Samuel had to ensure that Saul never found out
(1 Sm 16:1-13; Carson et al 1995:313). Clearly these chapters were penned by
the anti-monarchists.

Saul must have been a broken man when he consulted the medium at Endor
(1Sm 28:5-20). It is ironic that in his despair, Saul broke the law by consulting a
banned medium. Sorcery which included soothsaying, divining, necromancy and
casting spells was prohibited in Judaism because it was contrary to God’s holy
law and tantamount to human sacrifice, according to Rosner (Dt 18:9-14;
2000:287). Witchcraft was outlawed and those found guilty, were killed (Ex
22:18).

Likewise in the Talmud, there was almost zero tolerance for sorcerers for it was
against nature’s laws (Chullin 7b; cf Sanhedrin 67b); a sorcerer was usually
stoned, but if he was a prophet, he was strangled (Berachoth 21b). Any person
who practiced necromancy was stoned to death (Lv 20:27) and those who
indulged in magical practices were threatened with disaster and ruination (Is
47:8-15). This incident merely confirms Saul’s depressed state of mind at his
rejection by God (Carson et al 1995:319; Dunn & Rogerson 2003:228). It is
uncertain whether the spirit was that of Samuel or another spirit. Saul himself,
was convinced that he saw Samuel and heard what he most feared – that he was
doomed to die (1 Sm 28:19; Carson et al 1995: 319; cf Dunn & Rogerson
2003:228).

The biblical author hereby illustrates that necromancy is not advocated – spirits
cannot give advice or communicate with God (Carson et al 1995:319; cf Dunn &
Rogerson 2003:229). Clearly this chapter of the first book of Samuel is part of the
anti-Saul narrative in my opinion because it showed the king to be a weak and criminal character. This chapter is not mentioned by Boshoff et al (2000:82-3) at all in their resume of the pro-Saul and anti-Saul narratives. Although Rosner’s view is that Saul did not actually see the ghost of Samuel at Endor, but presumed it was the old prophet from the description of his garb as described by the medium (1978:313).

Saul’s fear of capture by the Philistines during his final battle was justified. He fell on his sword and committed suicide (1 Sm 31:5) rather than be taken prisoner and humiliated by the Philistines (1 Sm 31:4) – this chapter is part of the pro-Saul narrative (Boshoff et al 2000:83). Rosner finds Saul’s behaviour understandable in view of the emotive circumstances (1978:312).

It is uncertain why Saul’s bones were burnt, but Carson et al (1995:320) suggest that it was meant to honour the bodies of the king and his sons and prevent them from abuse at the hands of the Philistine victors (1 Sm 31:9-10) and it is part of the pro-Saul version. Dunn & Rogerson (2003:229) however believe that it is part of the anti-Saul narrative because burning was regarded as desecration of the body.

The second account reflects David in a good light (pro-Saul) and describes how an Amalekite (a permanent Israelite resident) found the dying Saul on the battlefield. Carson et al maintain that Saul might have survived his suicide attempt (1995:321) and pleaded to be killed by the man, who obliged. However because Saul was their anointed king, David had the Amalekite killed for Saul’s murder (Dunn & Rogerson 2003:230; 2 Sm 1:10-16).

Japhet’s view is that Saul’s death was punishment for his ‘unfaithfulness’ to God by his disobedience and for consulting a spiritual medium instead of God. The fact that God ignored Saul did not trouble the Chronicler for he believed that God would be found if he was sought and that Saul had only himself to blame for not
seeking God hard enough (1993:229). This was obviously written by the anti-Saul camp. Sanford states that there is no way of knowing which of the two camps is more accurate. His narrative lends support to the pro-Saul minority, depicting Samuel as a rather miserable and bitter old man. Sanford chose to side with the minority because in his opinion Samuel was in large measure to blame for Saul’s tragic depression during his reign (1985:137).

Perhaps Saul’s fears for the loss of his throne were justified. Kittel (in Oded 2007(a):80) hints that there might have been a conspiracy to replace King Saul with his son Jonathan because of his father’s mental condition.

Rosner, a medical doctor, is not certain that Saul suffered from a mental illness at all (1978:311). His opinion is that the king was simply overwrought and terribly stressed by various events in his kingdom:

- The guerilla warfare with his neighbours, the Philistines;
- When he tried to prevent his army from deserting, he was upbraided by Samuel.
- He knew that his days as king were numbered, that his kingdom would be given to another,
- He was rejected by both Samuel and God and humiliated before his people.

It is not surprising in my opinion, that he became depressed and terrified by a ‘demon’ (1 Sm 18:10 and anti-Saul in my opinion). According to Rosner, Josephus believed that the king was demon possessed (The Antiquities of the Jews. 8, 6:167-9) but Saul’s servants did not regard Saul as such and they recommended music therapy to calm the king (1978:311) and postulates that Saul may have been an epileptic as suggested by 1 Samuel 19:23-4 TEV:
'As he was going there, [to Naioth] the spirit of God took control of him also, and he danced and shouted all the way Naioth. He took off his clothes and danced and shouted in Samuel's presence, and lay naked all that day and all that night. [This is how the saying originated, “Has even Saul become a prophet?”].

Rosner believes that Saul was an epileptic (although he only appeared to have experienced one episode; 1 Sm 19:23-4) and compares Saul’s illness to that of Cambyses (Herodotus in Rosner 1978:312), who suffered from the sacred disease which eventually affected his mind so that he too raved like Saul did. Rosner explains that in ancient times, epilepsy and those who suffered from it were regarded as being God’s holy messengers (1978:312). It is Rosner’s view that Saul should have had many more such attacks in his thirty four years as king (Rosner 1978:312). In my opinion Saul probably suffered from epilepsy which resulted in depression. His illness probably had long periods of remission because the Bible explains that the music therapy was beneficial to Saul.

4.6.5 Treatments for depression and epilepsy during biblical times

If one can accept that Saul suffered from depression and some kind of epilepsy, there were possible treatments for both during biblical times:

- Sanford notes that the king’s courtiers did not summon a doctor to treat Saul’s illness although there must have been well-trained physicians in Israel as there were in Greece for instance. No mention is made of herbalists or herbal medications (1985:65). The reason for this was that the prophets, who had a special relationship with God, were spiritual leaders not healers and regarded illnesses as coming from God – healing also would come only from God through prayer (Sanford 1985:66).

- There is no medication mentioned in the Bible to combat depression, only indirect avoidance techniques such as: seeking out the positive (Dt 26:11),
counting one’s blessings (Ps 2:11) and laughter was recommended (Dt 28:47).

- Germer mentions frankincense\(^{42}\) (*Bosweloa serrata*) used during biblical times to ward off evil spirits (1993:35). Saul may have received this remedy because he was according to some authors of the Biblical text, ‘possessed by an evil spirit’ (which we would recognise as depression), although in ancient Israel it was used mainly in religious rites on meal offerings of the first fruits (Lv. 2:15-16). The gum of the *Bosweloa* tree was burned, the smoke had a particularly pleasant smell (Van Beek 1960:92). It was in common use in Egypt (Germer 1993:35) and Daniel (2006:96) claims that it is native to India. Modern use of the plant is to treat inflammation caused by arthritis and it is useful to combat ulcers, skin diseases and cancer. Singh (2006:96) states that the plant contains boswellic acid which renders it invaluable in the treatment of arthritis, while Kramer (2006:49) mentions its use in treating respiratory and digestive ailments.

- Pomegranate (*Punica granatum*) rind was regarded as a very important aid in warding off demons that caused sickness and disease. The tree was even held to be sacred because no demon would come near it (Harrison 1966:27). These fruits were grown in Canaan (Nm 13:23) and Chiej (1988:255) claims that they originated from western Asia. However, there is no indication that it was used in Saul’s case.

---

\(^{42}\) An essential oil is manufactured from the gum of frankincense tree (*Bosweloa serrata*) the aroma of which is reputed to be beneficial for the relief of anxiety and depression. In 2002 research in Switzerland on this plant, has led to the belief that it could be utilised to destroy certain types of cancer and German research published in the same year has resulted in frankincense being used to treat a number of diseases, amongst them the swelling that occurs around a brain tumour (Kramer 2006:49).
• Sigerist (in Powell 1993:53) believes that magical incantations, the power of suggestion and the patient’s religious beliefs were used to induce them into a receptive frame of mind so that the body could stimulate its own healing mechanisms.

• Harrison details the use of myrtle leaves (*myrtus communis*) as a carminative for children but there is no reason to suppose that it was not also used for adults (1966:24) and in possibly also for King Saul. Mentioned in the Bible, myrtle is used during the festival of *Sukkoth* (Booths) together with the citron and willow (Neh 8:15) and this is echoed in the Talmud (*Sukkah* 11b). This plant has antibiotic properties and it contains myrtol, a remedy to combat gingivitis (Chiej 1988:202). Chiej maintains that the plant grows prolifically in the Mediterranean region and Singh claims that its origins are unknown (2006:190).

• Josephus regards David as Saul's only physician who managed to restore Saul's dark moods by singing and playing his lyre for the king. Consequently Saul regarded his physician and treatment with great respect (in Kottek 1994:15).

• Originally cultivated in Assyria and found in Israel, bay laurel/sweet bay (*Laurus nobilis*) seed was used during biblical times as an antidote for seizures (possibly epileptic). The leaves and fruit were believed to have narcotic properties (Jacob, W 1993:40). Pliny is in agreement with this view (Jacob, W 1993:41). The plant's modern uses include flavouring food and alcoholic beverages; in the last century the berries were used to make ointments (Chiej 1988:170) and Kramer documents its use as an anti-inflammatory for sprains and bruises as well as to treat digestive disorders (2006:39).
• The fruit of the date palm (*Phoenix dactylifera*) was prescribed to treat epilepsy (Jacob, W 1993:41).

### 4.6.6 Archaeological evidence of skull/brain tumours that could cause epilepsy

There are few archaeological skeletal remains available in Israel because Jewish religious law (*halakhah*) views the grave of a deceased as sacred and any skeletal remains discovered in the course of an archaeological dig have to be re-buried as fast as possible (Greeff 2005:84). This unfortunate religious belief does not encourage scientific examination of any remains found (Greeff 2005:85) because the type of testing that can be performed on such remains is also restricted (2005:84). Autopsies and exhumations are similarly forbidden as it would dishonour the deceased (Talmud – *Baba Bathra* 155b; cf Rosner 2000:35). (See 4.1 Introduction above and 4.6.6 ‘Leprosy’ – Archaeological evidence above).

Many different types of bone tumour can be divided into benign (simple) and malignant. A simple benign bony tumour called an *osteomata* consists of a ‘button’ tumour that manifests as a small mound on the outside of the cranium on the skull and is depicted diagrammatically in Brothwell (1967:142 – Fig. 54B).44 Another type of simple tumour called a compact *osteoma* displays very little demarcation between the bone and the tumour itself. Some tumours of this kind however, can appear inside the skull where they can exert pressure on the surface of the brain leading to epilepsy (Zivanovic 1982:139).

An example of a malignant tumour consisting of small round lesions manifesting as holes in the bones is a multiple *myeloma* (Brothwell 1967:141-2). If Saul had

---

43 According to a medical website on the Internet both cancerous and non-cancerous brain tumours can cause ‘epileptic-like’ seizures in all patients (http://www.answerbag.com/q.view/1736).

44 Remains date back to the Neolithic times (Brothwell 1967:141).
suffered from this type of tumour, it would have been very noticeable (Brothwell 1967:142 – Fig. 54A; Figure 18 in the List of Photographs depicts a large button tumour (osteoma) on the frontal lobe of a skull excavated from a site near Lima, Peru in 1936 and Figure 19 depicts a similar but smaller type of tumour. This female skull was excavated from Pachacamac, Peru in 1936). In my opinion therefore, Saul could possibly have suffered from a brain rather than a skull tumour that developed inside his head. As it was not visible, no one was aware of it. The only symptoms of its presence were his possible epileptic fits. Only one such possible fit is mentioned in the Bible in 1 Samuel 19:23-4 although more should have been mentioned if it was a regular occurrence. It is possible though that there could have been many more undocumented occurrences. If the king had suffered from a brain tumour, it may not have left any trace on the inside of the skull.

4.6.7 Talmudic perspectives on Saul, his possible depression and epilepsy

The Talmudic rabbis were very pro-Saul as will appear from some Talmudic tractates below:

- Rabbi Nathan\(^45\) mentioned his good looks (Talmud – Berachoth 48b); he was regarded as a prince among men by Rabbi Hana ben Bizna\(^46\) (Talmud – Sukkah 52b); distinguished by his good deeds according to Zutra ben Tobiah (Talmud – Moed Katan 16b) and was God’s chosen one (Rabbi Johanan Talmud – Berachoth 12b; Eiruvin 53b). Saul was descended from Rachel and one of his descendants was Esther (Talmud – Megilah 13b).

\(^45\) Either Nathan bar Assa, a 4\(^{th}\) century Babylonian Amora; Nathan bar Rab, a 3\(^{rd}\) century Babylonian Amora and son of Rab or Nathan the Babylonian a 2\(^{nd}\) century Tanna (Kolatch 1981:170-171).

\(^46\) A Babylonian Amora of the 3\(^{rd}\) and 4\(^{th}\) centuries CE, who served as a judge in Pumbedita (Kolatch 1981:101).
• The *Midrash – Genesis Rabbah* 34:13 states that a person committing suicide is punishable, this also applies to Saul according to Rabbi Eleazar\(^{47}\) in the Talmudic tractate *Baba Kama* 91b, but it was the view of the sage Rab, that God had forgiven him for this sin (*Talmud – Berachoth* 12b).

• According to the Talmud tractate *T'murah* 15a, Saul survived Samuel by only four months.

There is surprising little Talmudic material available on Saul’s illness or his depression and Muntner states that the Talmud is not a medical textbook despite the many medical discussions found in its pages (2007(a):722). This is similar to Rosner’s view (1975:387), but if Saul had been an epileptic (*nikpheh*) literally meaning ‘one who writhes’ (Rosner 1978:300) the rabbis believed that his disorder may have been caused by the following:

• Indecent behaviour during cohabitation (this is not clarified);
• Standing naked in front of a lit lamp;
• Cohabitation by lamplight would result in an epileptic child, the same applied when a child of less than one year old lay at the foot of the cohabitants (*Talmud – Pesachim* 112b).
• Cohabitation in a room where there was a hand mill (because women were often occupied there) would result in the child being born an epileptic (*Talmud – Kethuboth* 60b),
• Cohabitation immediately after defecation (*Talmud – Gittin* 70a) and blood-letting also resulted in the birth of a child afflicted with epilepsy (*Midrash Leviticus Rabbah* 16:1).

Rabbi Nahman regarded epilepsy as a ‘hidden’ bodily defect because a woman sufferer with regular attacks could stay at home if she felt an attack was imminent

\(^{47}\) Not identifiable as there are twenty four rabbis with the same name in the Talmud (Kolatch 1981:85-91).
and nobody would realise that she was a sufferer (Talmud – *Kethuboth* 77a). If the attacks were irregular they were regarded as an ‘exposed’ bodily defect.

The Talmudic rabbis believed that epilepsy was genetically transmitted so there was a *caveat* on a man wishing to marry an epileptic as such people regarded as being socially inferior and unfit for the priesthood (Talmud – *Yebamoth* 64b; cf Rosner 1978:301; *Bechoroth* 44b). This principal was also extended to women: a woman could divorce her epileptic husband even if she was aware of this prior to the marriage if she found his illness unbearable (Talmud – *Kethuboth* 77a). The same applied to a woman married to a man with halitosis, nasal polyps or one afflicted with boils. An epileptic who had irregular or sudden attacks was regarded in the same light as one with a major defect such as an amputee or a blind person (Rabbi Simeon ben Gamaliel⁴⁸ Talmud – *Kethuboth* 77a).

### 4.6.8 Treatments in Talmudic times

These remedies were prescribed by Dioscorides for depression and epilepsy. The first three were used to treat depression and the last three for epilepsy:


- **Sweet basil** (*ocimum basilicum*) seed decoction (2:171). Singh is convinced that the herb is native to India (2006:195), while Kramer maintains that its primary use in modern times is to relieve digestive disorders but it has anti-spasmodic properties and can be used to heal wounds (2006:207).

⁴⁸ A Palestinian *Tanna*, of the 1st century CE and son of Rabbi Gamaliel I also called Simon (Kolatch 1981:191).
• A decoction of thyme (*Thymus vulgaris*), was used to treat coughs (3:35). A plant of a similar species (probably *satureja thymbra*) otherwise known as the Savory of Crete, is a shrub presently found in Israel (2). A tea made from this herb is used medicinally to treat digestive disorders, but is also used as a bactericide and to treat coughs (http://www.pfaf.org/database/plants/php?satureja+thymbra).

• The seeds of the Chaste Tree⁴⁹ (*Agnes castus vitex*; 1:135) would be applied as a poultice with oil and vinegar. Van Wyk & Wink state that the plant is used in modern times for depression and to ease the symptoms of menopause (2004:383; Kramer 2006:168). Chiej (1988:157) believes that a branch of the plant would be hung over a doorway to discourage evil spirits in ancient times but provides no further information in this regard. Van Wyk, et al claim that the plant has anti-depressant, analgesic and antidiarrhoeal properties (2009:176).

• The resin of the Gum Elemi Tree (*amyris ambroisiaca*; 1:23) taken as a drink with water or vinegar and honey for many consecutive days. This tree is native to Ethiopia and Arabia. Pomet maintains that the sap heals wounds, ulcers and bone fractures (probably applied over the bandages to maintain immobility). The oil was used for chest disorders (http://www.bookofherbs.com/g/Gum_Elemi_ruggs.htm). The essential oil of this plant was mentioned in the Bible (Ex 30:34) together with galbanum and used for incense (http://en.wikipedia.org/wiki/Galbanum).

• The roots of galbanum (*ferula galbaniflua*; 3:97) were mixed with vinegar and myrrh oil and the resultant fumes were inhaled. Singh maintains that it is indigenous to Iran and used nowadays as an anti-convulsive (2006:143). The plant also possesses antiseptic, expectorant and anti-

⁴⁹ Also known as St. John’s Wort.

Another Talmudic remedy would include being cared for by a suitable physician (Midrash – Leviticus Rabbah 26:5).

The use of amulets was permitted according to halakhah (Jewish religious law) as long as idolatry was not involved. Wearing the image of a pagan god was prohibited although it was regarded as superstitious if the patient believed that it was therapeutic (Rosner 1978:147).

The rabbis recommended the use of ‘approved’ amulets for medical purposes to ward off or to treat epileptic fits; two types were permitted, both being worn round the neck:

- An amulet consisting of parchment with words of the Torah written across it, or
- An amulet of herbs like in Africa today.

An approved amulet (kemiya) was one that had healed three men simultaneously: Rabbi Papa said: ‘It is obvious to me that if three amulets [are successful for] three people, each [being efficacious] three times, both the practitioner and the amulets are [henceforth] approved.’ The amulet could not be displayed in the street as a decorative ornament because that was forbidden as idolatry (Talmud – Shabbath 61a). Those worn around the neck had to be hidden underneath the clothing of the patient. Amulets are also used for healing in the African tradition.

The view of the famous Rabbi Akiva is that God decides when illness will strike, when healing will take place, and possibly even the remedy that promotes it. If on that appointed day the patient were to visit an idolatrous shrine, he doubted that
God would interfere with the natural healing process due to the stupidity of one individual (Talmud – *Abodah Zarah* 55a).

4.6.9 Conclusion

It is difficult to give an objective opinion on this story because the narrative is fraught with the subjective tension between the pro-Saul and anti-Saul camps. An unbiased view can be gleaned from the polarised writings, it would be that Saul was king for about thirty four years and that he fulfilled the peoples need for a king to stand up for them against the Philistine threat (Oded 2007(a):78). Most of his reign was fraught with war stress and the defences of his territory. The personality and power clash between Saul and Samuel is very obvious but this can be explained by the probability that there was in those times no clear separation between ‘church and state’. Saul did not expand his territory and did not make notable changes to the tribal organisation of the Israelites (Oded 2007(a):79). Saul’s relationship with his son-in-law that ‘he loved to hate’, was difficult and it contributed to his deteriorating mental health. He vented his rage on David.

It is in my opinion reasonable to conclude that Saul’s disease was most likely depression brought on by posttraumatic stress disorder and compounded by application of the principle of enemy *herem* in his battle against the Amalekites. The Bible mentions symptoms which could described an epileptic fit (1 Sm 19:23-24) but there is mention of only one possible episode in the Bible. If he had many attacks the Bible does not document this, nor does it mention if Saul had any pre-existing disorders before becoming king.

The Talmudic sages sing Saul’s praises – his father was rich and important (1 Sm 9:1) and Saul was very tall and handsome (Talmud – *Berakoth* 48b). Saul was held in high regard (Talmud – *Sukkah* 52b) because of his good deeds
(Talmud - *Moed Katan* 16b), and Saul’s family was beyond reproach (Talmud – *Yoma* 22b).

His reign was fraught with tension, anxiety and battle stress. Although reluctant to rule (1 Sm 10:22) he won many battles and was more humane than others of his time which resulted in him eventually loosing his throne to his’ music therapist’, David. I regard Saul as a free spirit who did not accept Samuel’s authority and his brutality in killing King Agag. Saul did not seem to think and react in the way that kings of his day were expected to. The divide between politics and religion had not yet been clearly demarcated in Israel which seemed to result in a personality clash between Saul and Samuel.

Although Saul was a tragic figure, he was human and made mistakes. His paranoia regarding David’s kingly ambitions may have initially been absurd but there must have been an intuitive side to Saul as his fears proved to be well founded – God had indeed chosen another king, leaving Saul on the throne until ‘his time was up’ and seemed to sideline him until his death. The incident with the spirit medium at Endor was born out of desperation. It is almost as if he expected confirmation that he would not win the battle of Mount Gilboa. Perhaps in Saul’s case, it was a matter of living with so much fear and negativity that his anxieties eventually became his reality and it is not surprising that he took his own life. It could be justified under the circumstances.

Unlike the Bible, the Talmud mentions epilepsy in some detail – its many causes, and treatments but there is no mention of King Saul ever suffering from it. The Talmudic perspective therefore, does illuminate Saul’s illness to some extent in that the rabbis recognised the existence of epilepsy. Some rabbis recommended the care of a physician (*Midrash – Leviticus Rabbah* 26:5), while others preferred the use of amulets (although against Jewish *halakhah*), because it was efficacious (Talmud – *Shabbath* 61a; cf Rosner: 1978:147).
Archaeological evidence of skulls manifesting tumours is very sparse in Israel on account of the *halakhah* that requires any skeletal discoveries to be hastily buried because of the desecration of the grave. But there is no evidence that Saul suffered from such a condition. Unfortunately this procedure does not favour acquisition of new archaeological knowledge and only certain tests can be performed on the human remains. It is very difficult in Israel for ‘science’ and ‘religion’ to co-operate in this discipline and the subject is a very contentious one.

4.7 ‘TUBERCULOSIS’ AND FEVERS

4.7.1 Introduction

As the illness ‘tuberculosis’, is referred to as ‘consumption’ in the Bible (KJV), a few definitions are necessary. The disease referred to as ‘consumption’ is defined by the Oxford Dictionary as ‘a wasting disease’ (Coulson et al 1980:182), while the medical meaning of the word is ‘pulmonary tuberculosis’ (Davis et al 1968:149). Consumption derives from the Latin word *consumptio* meaning ‘wasting’ or to ‘use up’ but it is also the name for tuberculosis or pulmonary tuberculosis (Coulson et al 1980:182) used in the 1611 and 1901 King James and Revised Standard Versions of the Bible.

The Hebrew word *shakhefet* means ‘tuberculosis, consumption or the Greek word *phthisis’* - the three words are used interchangeably (Alcalay 1990:2586). Jastrow translates *shakhefet* in the Hebrew Bible as ‘wasting away’ or ‘consumption’ (1996:1549), but does not refer to it as ‘tuberculosis’.

Consumption could also refer to other diseases such as: malaria, typhoid fever, dysentery and cholera, all highly contagious also called pestilences (Jr 21:6). This is alluded to in the book of Jeremiah when King Nebuchadnezzar was besieging Jerusalem *circa* 787 BCE (Bimson et al 1985:118) where overcrowding and lack of food was the norm (Tenney 1963:219). Rosner however, tends to
believe that the word *shakhefet* in the Hebrew Bible refers to tuberculosis (2000:83). I have referred to ‘consumption’ as ‘tuberculosis’ in this discussion.

Medically speaking, tuberculosis is defined as an infectious disease caused by *Mycobacterium tuberculosis* bacteria, which causes the formation of tubercles in body tissue (Davis, McKusick & O’Rahilly 1968:637).

*Mycobacterium tuberculosis* was discovered by Robert Koch\textsuperscript{50} in 1882 (Coulson et al 1980:466; Siebert & X\textsuperscript{51}:297) and attacks not only lungs, but also bones and joints (Tenney 1963:219; cf Levitzky 1990:478). The hunchback referred to in the book of Leviticus (21:20) could well have suffered from spinal tuberculosis rather than a spinal injury. Zivanovic (1982:147) states that tubercular inflammation damages bone especially the knee-joint and this affects more children than adults causing cavities in the bones clearly visible by means of an X-ray.

### 4.7.2 Background information on tuberculosis

Anderson is of the opinion that tuberculosis is the most serious disease in the world today and it kills more people than any other infectious disease (19[68]:240). In fact he believes that everyone at some time in their life has become infected with these rod-shaped bacteria that are protected by a outer waxy layer, making it difficult for the body to fight the infection unless the immune system is strong enough to destroy them before they gain a foothold (Anderson 19[68]). The disease is so called because a tiny lump or tubercle forms in the body when the white blood cells, in an attempt to isolate the bacteria, build a cell wall around them; despite this many continue to breed in the ‘isolated’ tubercle (Anderson 19[68]:240). If the body can destroy the bacteria the lump disappears leaving a hole over which scar tissue forms, preventing blood from entering the

\textsuperscript{50} He lived from 1843-1910 CE.

\textsuperscript{51} Anonymous contributors are noted in this manner in *EB* 1967.
lungs and so impairing its function. This is further exacerbated by calcium and lime deposits that can develop in such areas (Anderson 19[68]:240).

Tuberculosis\(^{52}\) often develops undetected in some persons and in others causes symptoms such as a chronic cough and chest pain (Berkow & Talbott 1977:115), a high fever, a rash and nausea (Levitzky 1990:478). A diagnosis would be based on a chest X-Ray while treatment would consist of multi-drug therapy, including several antibiotics that are administered simultaneously as the bacilli frequently become resistant to only one drug\(^{53}\) (Levitzky 1990:478).

Lietman, Porco & Blower believe that there is sufficient evidence to show that if a person has been exposed to one species of mycobacterium, for example tuberculosis, it can offer some protection against infection by another species for example leprosy (1997:1923). It appears similar to the cross-immunity that

\(^{52}\) The disease is also very contagious and is spread by coughing and sneezing: the bacteria travel on dust and moisture droplets in the air. (Anderson 19[68]:240). Levitzky agrees with this but says that many bacteria are swallowed and destroyed by the hydrochloric acid in the stomach (1990:477). Late signs of the disease are: extreme fatigue after very little or no exertion and gradual weight loss due to lack of appetite (Anderson 19[68]:240; cf Levitzky 1990:478). Later a chronic cough develops with occasional blood being discharged from the lungs, chest pains, night sweats and high fever especially in the late afternoon (Anderson 19[68]:242). Sometimes a tubercular patient dies after a short illness but usually the disease and the patient’s deterioration is slow (Levitzky 1990:478). In the past sufferers would be isolated in sanatoria to prevent infection but cures took months or even years and left many invalids for life (Levitzky 1990: 478; cf Tenney 1963:219). In the modern era, patients are treated either at clinics or in the out-patient department of hospitals (Levitzky 1990:478).

\(^{53}\) The patient should follow a good diet with plenty of fresh air, and no smoking (Anderson 19[68]:242). Surgery that involves the collapse of a diseased lung allowing it to recuperate, is no longer carried out. Surgeons nowadays prefer removal of the diseased section of the lung while the remainder continues to function normally (Levitzky 1990:479). Babies, children, the elderly and those already suffering with other diseases are particularly susceptible to tuberculosis (Levitzky 1990:479). In the Southern African countries tuberculosis is very prevalent (8 million new cases with 2 million deaths annually) and the BCG vaccine\(^{53}\) (Bacillus of Calmette and Guerin) is given to all children under three years of age (http://en.wikipedia.org/wiki/Tuberculosis).
Jenner found to exist between cowpox (vaccinia) and smallpox (variola) resulting in his famous smallpox vaccine in 1796\(^{54}\) (Guthrie & Rhodes 1992:782).

Manchester points out that if a child recovers from tuberculosis he/she would thereafter be totally immune to leprosy but if the child by way of an example, had recovered from leprosy, he/she would not be immune to tuberculosis (1984:174).

### 4.7.3 Biblical references to tuberculosis and fever

A fever in biblical times was regarded as a disease itself not a symptom of an illness (Rosner 1978:160). There are references in the Bible to a ‘burning ague’, (a cold shivering fever, commonly associated with malaria), ‘fever’ (possibly typhoid fever) and ‘consumption’ (or a disease that resulted in extreme weight loss in the patient in the text of Leviticus 26:16 King James Version and the Masoretic Text):

I also will do this unto you; I will even appoint over you, terror, consumption and the burning ague, that shall consume the eyes and cause sorrow of heart: and ye shall sow your seed in vain, for your enemies shall eat it [Italics – mine].

Also in the text of Deuteronomy 28:22 (KJV):

The Lord shall smite thee with a consumption, and with a fever, and with an inflammation, and with an extreme burning, and with the sword and with blasting, and with mildew; and they shall pursue thee until thou perish. [Italics – mine].

\(^{54}\) Jenner noticed that milkmaids who had developed cowpox (common in cows) were thereby rendered immune to the far more serious disease of smallpox. He then used the matter from the milkmaid’s cowpox lesions to inoculate a small boy with cowpox. Once the boy recovered he was rendered immune to the more serious smallpox. The authors explain that cowpox is the bovine form of smallpox.
I have used the text of the King James Version to discuss this illness in preference to Today’s English Version of the Bible where ‘consumption’ was referred to as ‘incurable disease’ (Lv 26:16) and as ‘infectious diseases’ (Dt 28:22).

Daniel & Daniel are of the belief that ‘consumption’ probably refers to tuberculosis as it was a common disease in those times, the patient became emaciated and they are convinced that the ancient Jews encountered it during their time in Egypt (1999:1557) as archaeological evidence below will show. These authors also state that the authors of the books of Leviticus and Deuteronomy (and their later translators) could not distinguish tuberculosis from other diseases such as cancer which also manifested in bodily deterioration (1999:1557; cf Morse, Brothwell & Ucko 1964:524).

Plaut (2006:866) is uncertain what ‘consumption’ and ‘fever’ in the passages above really mean, he argues that it could even refer to plant diseases that would destroy the crops hence the admonition ‘You will sow your seed, but it will do you no good, because your enemies will conquer you and eat what you have grown’ (Lv 26:16). Dunn & Rogerson view the two passages quoted above as threats that firmly discourage any disloyalty to God that would be punished most severely (2003:169). Their opinion is that the wording bears a surprising similarity to the sort of treaties that the king of Assyria, Esarhaddon (680-669 BCE) concluded with his vassals (2003:169; cf Brown et al 1990:78, 106). Dunn & Rogerson believe that during the 7th century BCE, the kings of Judah possibly even Manasseh (2 Chr 33:11-13), were forced to agree to such treaties and the wording may have formed part of the book of Deuteronomy illustrating that God’s blessings would follow the Israelites’ obedience but disregard would result in disaster, disease and death (2003:170). Dunn & Rogerson did not mention specific diseases but explained that it was necessary to cause extreme suffering to a king (or a nation) that was socially unjust and dealt with his subjects, even his own sons, so brutally (2 Chr 33:6; 2003:170). The writers of Deuteronomy
knew that bad things do happen to good people but realised that the people needed the faith to believe that good fortune would follow if they adhered to God’s will (2003:170).

Adeyemo regards the passages in Leviticus 26:16 and Deuteronomy 28:22 to refer to disease and drought generally but does not elucidate further (2006:246), while Carson et al regard the passages as manifestations of God’s punishment for human disobedience (1995:156, 225). Hertz explains the meaning of several words in the first passage:

- he regards ‘consumption’ as a bodily wasting disease,
- and ‘fever’ to refer to ‘burning within the body’ (1987:543),

and in the second passage:

- he regards ‘consumption’ as Mediterranean fever,55 but does not explain his reasoning,
- ‘inflammation’ as typhoid fever, and
- ‘fiery heat’ to refer to erysipelas.56

Daniel & Daniel mention other Biblical references to a wasting disease called reson in the book of Psalms 106:15 and Isaiah 10:16 but the Hebrew word in the passages is translated as ‘leanness’ and not ‘consumption’ (1999:1557). There is another reference to fever in the Bible in the book of Lamentations (1:13): ‘He sent fire from above, a fire that burnt inside me...’ Rosner believes this to refer to ‘fire in the bones’ or a burning, aching fever (1978:163). This can be explained with reference to the Talmud (below).

55 Also termed Malta fever or brucellosis (Davis et al 1968:105) a fever found in cattle, sheep and goats capable of producing a severe disease in man usually passed via infected milk or meat.

56 A febrile disease causing skin and mucous membranes to appear inflamed and red due to the bacterium Streptococcus pyogenes (Davis et al 1968:231).
I agree with the opinion of Daniel & Daniel (above) that the passages in Deuteronomy (28:22) and Leviticus (26:16) most likely refer to tuberculosis because it was so prevalent in Egypt, encountered there by the ancient Jews (1999:1557; cf Rosner 2000:83). The archaeological evidence mentioned below strengthens my conviction.

4.7.4 Archaeological evidence for tuberculosis

Manchester is of the opinion that humans first contracted tuberculosis from drinking milk or eating beef from their early cattle herds who were infected with the bovine type of this disease (1984:163), but the authors of Wikipedia believe that the human strain of tuberculosis did not evolve from the bovine type and it is not clear whether this disease originated in the cattle and transferred itself to the human population or deviated from a common ancestor that infected a different species (http://en.wikipedia.org/wiki/Tuberculosis).

Prehistoric humans have suffered from tuberculosis since circa 4000 BCE because evidence of the disease has been found in mummies dating back to before 3000 BCE (http://en.wikipedia.org/wiki/Tuberculosis).

Manchester postulates that cattle first became domesticated during the period between the seventh and sixth millennia BCE and their milk was first used during the fifth millennia BCE in Northern Iraq, Syria and Palestine (1984:164).

Hippocrates noted that tuberculosis (phthisis - the Greek word for tuberculosis) was common in 460 BCE and he describes the symptoms as coughing up blood and fever which was fatal in most cases he observed (http://en.wikipedia.org/wiki/Tuberculosis).

57 There are two other types of tuberculosis – one that affects cold-blooded animals and the other that affects birds and some mammals (Greeff 2005:116).

58 Animal tuberculosis seems to have originated with the Indian elephant that roamed the area from Mesopotamia to the Asia Minor borders before 2000 BCE (Manchester 1984:164).
Greeff states that no archaeological evidence has yet been found to prove the existence of tuberculosis in ancient Israel and believes that a reason for this is possibly that the ancient Jews were more resistant to tuberculosis than their Arab counterparts because of their laws of hygiene (2005:117). He believes however that it is still possible that skeletal remains in Israel could be found in the future that could throw more light on a disease like tuberculosis (2005:94).

In ancient times, tuberculosis was very prevalent in Egypt. Three figures with spinal deformities that seem to point to spinal tuberculosis (Pott’s disease) were found in Egypt:

- An emaciated male clay figure with a spinal deformity common in cases of spinal tuberculosis was found in a pottery vessel by Bedouins in the Assuan desert dating to the Predynastic period (before 3000 BCE) but the authors feel that the date may be suspect (Morse et al 1964:524).

- There is a wooden statue in the Brussels Museum of unknown origin, showing a bearded male figure in a kneeling pose with a large round hunchback that has been noted as dating back to Predynastic times (before 3000 BCE; Morse et al 1964:525).

- A small ivory statue with a protruding or ‘pigeon chest’ and hunched back thought to have been made in the Predynastic period, again the date is uncertain (Morse et al 1964:525). Jackson (1988:182) refers to an ivory figurine of a Negro male depicted with an asymmetrical chest and exhausted expression which he avers is characteristic of Pott’s disease. Jackson believes that the figure dates from the 1st century CE (1988:182) but his description of the statue is insufficient to claim that both figures are the same work of art (Figure 20 in the List of Photographs).
There is artwork that also depicts men with deformed spines that could be diagnosed as tuberculosis:

- A carving on a priest’s tomb door that dates back to the Old Kingdom (2700 – 2190 BCE) housed in Copenhagen (Morse et al 1964:527).

- A painting from the tomb of Ipuy near Thebes, dated to the 19th dynasty (1295 – 1069 BCE) depicts a gardener with a humped back (a possible sign of tuberculosis) drawing water with a shaduf (water lift): Morse et al are of the opinion that the man had received medical treatment because his hump was smaller in comparison to others examined whose humps were a clear indication of spinal tuberculosis (Morse et al 1964:528).

- Clear evidence of spinal tuberculosis existing in Egypt has been found in a 21st dynasty (1070-946 BCE) mummy (Manchester 1984:164).

- Human vertebrae of nine persons from Nubia also show signs of deformities being either eroded or fused together as a result of tuberculosis of the spine (Morse et al 1964:530). These specimens date back to the Middle Kingdom (2033-1650 BCE).

- Human bones from Nagada, in Upper Egypt, all of which are later than 1400 BCE, appear to show signs of tuberculosis in most of the cases (according to Morse et al), but it is possible that the sufferer had another type of osteo-myelitis and the authors admit that spinal tuberculosis was no simple matter (1964:535).

- Gill states that 29.4 percent of the mummies studied from the more affluent burials in Thebes West, Upper Egypt, between the Middle Kingdom (circa 2050 BCE) and the Late Period (circa 500 BCE), showed
• Recent evidence from Jericho may predate the Egyptian findings according to researchers led by Professor Spigelman at the Hebrew University of Jerusalem. He is studying bones that are 6000 years old collected between fifty and seventy years ago, many of which indicate that tuberculosis could have affected a large percentage of the population in those times (http://news.bbc.co.uk/1/hi/sci/tech/7510334.stm).

4.7.5 Treatments for tuberculosis and fevers in biblical times

Despite the paucity of Biblical references to tuberculosis there were many remedies used by the peoples of the ancient Near East for these diseases:

• Extract of the water-lily plant (*nymphaea coerulea*) was mentioned in Egyptian and Assyrian medical texts and used to treat lung ailments.59 Jacob, W states that the plant cannot be positively identified today but it was taken orally mixed with wine or beer (1993:39). There is no mention of the part of the plant used. Plants of the *nymphaea* family have properties that combat insomnia and weakness (Van Wyk & Wink 2004:418) and Chiej maintains that the plant also possess tranquillising properties (1988:206) perhaps to expedite healing.

• The pleasant scent of the Aleppo/Jerusalem pine resin (*Pinus halepensis*) led to its use for lung problems in ancient times (Jacob, W 1993:40), but reference to this plant could also apply to the cypress plant (*Cupressaceae sempervirens*). Scott’s pine (*Pinus sylvestris*) indigenous to northern Europe and Asia, is another species of pine with similar properties and Kramer is convinced that pine resin obtained from the

59 Presumably this applies also for blood from the lungs.
leaves and young branches was used in ancient Egypt to treat respiratory problems because of its decongestant effect (2006:155).

- The seeds of meadow saffron (*Colchicum autumnale*, also called autumn crocus), were taken orally for lung ailments during biblical times but Jacob, W says excessive use of it is now known to be dangerous (1993:40). Modern research has shown this plant to contain anti-inflammatory and analgesic properties but it also contains an alkaloid called colchicine that inhibits the formation of microtubules making it ideal for the treatment of tuberculosis. The plant originates from Europe and North Africa (Van Wyk & Wink 2004:110; See

- The fruit of the date palm (*Phoenix dactylifera*) was taken to treat coughs amongst its other uses – as an enema, as treatment for an epileptic episode and ear infections, and used externally in poultices (Jacob, W 1993:41). The fruit was mentioned in the prophetic book of Joel (1:12) and the Talmud mentions date honey (*Berachoth* 38a) as being different to that produced by bees.

- The root of the perennial stinging nettle plant (*Urtica dioica*) mixed with rose water was taken for coughs in ancient times (Jacob, W 1993: 41). The plant has been found to possess analgesic, anti-inflammatory and diuretic properties and is used nowadays in the treatment of arthritis and inflammation of the bladder and kidneys (Van Wyk & Wink 2004:332; cf Daniel 2006:14). Another species of nettle (*Urtica urens*) is used in the eradication of bladder stones (Chiej 1988:319).

- According to Harrison, the pomegranate (*Punica granatum*), indigenous to both Persia and India and was one of the Canaanite fruits that Moses’ spies retrieved from the brook of Eshcol (Nm 13:23f). Its juice was used to treat fevers (1966:28). These days the root bark is used as a vermifuge
and the dried fruit rind or pulp is a useful remedy for diarrhoea (Van Wyk & Wink 2004:263). Chiej reports that the root bark is poisonous and should be used under medical supervision (1988:255). It is the tannin in the plant that eradicates tapeworm (Ebadi 2007:507).

• The cypress plant (*Cupressaceae sempervirens*) was used to treat lung disease in biblical times and was also mentioned by Theophrastus, Hippocrates and Galen (Kottek 1993:97 footnote 7). This plant is used today for its anti-spasmodic properties (pinene camphene) in the treatment of coughs and coughing spasms (Van Wyk & Wink 2004:407) especially in the case of whooping cough (*Pertussis*). This is a highly contagious disease characterised by severe bouts of coughing ending in a high-pitched crow-like intake of breath (Anderson 19[68]:187). Kramer documents that the plant contains dimeric proanthocyanidins which improve blood circulation in the extremities (2006:77). Chiej mentions its wound healing and antiseptic properties (1988:105).

• Both Theophrastus (1:12) and Dioscorides (3:36) mention the use of the thyme plant (*Thymus vulgaris*) in cough medicine for the treatment of coughs and bronchitis (Rosner 1979:113).

• The Hebrew word *nataf* mentioned in the Book of Exodus (30:34) has been translated as *storax* in Greek and English with the Latin plant name *Liquidambar orientalis* (Zohary 1982:192). This plant could have been the Biblical balm (Zohary 1982:192) which was referred to by Dioscorides and used in cough medications for persistent coughs (1:79; Singh 2006:176). According to Harrison (1966:49) Pliny mentions its use in an ointment to treat festering sores and to promote menstruation (*Natural History* 24:15). Singh believes that the plant is native to Asia Minor (2006:176).
• The twigs and leaves of the willow (*Salix safsaf*) were used in Egypt to treat inflammation according to Jacob W, who states that the plant was used to control fever (1993:45; cf Ebadi 2007:105). It was administered probably in the form of a decoction or the drug was pounded and eaten or mixed with water (Rosner 1978:434) and it is very possible that the two countries used similar medicines for the same ailment (Jacob W 1993:45). The willow contains salicin; this is converted into salicylic acid (a natural form of aspirin) during digestion, possessing analgesic, anti-inflammatory and fever reducing properties (Kramer 2006:197).

4.7.6 Talmudic perspectives on tuberculosis and fevers

• The Talmudic rabbis had a very good knowledge of animal anatomy because they were obliged to examine the internal organs of the animals that had been ritually slaughtered before they could be declared *kasher* (fit for human consumption; Rosner 2000:23) and this knowledge can be applied to human anatomy as well. Imperfections such as bleeding from the lungs (Talmud – *Gittin* 69a), lung cysts, nodules and holes in the lung (Talmud – *Chullin* 48b) which made the animal unfit for human consumption are all symptoms of tuberculosis although not mentioned as such in the Talmud. It is possible, in my opinion that some of these defective animals may have been suffering unknowingly from bovine tuberculosis.

• The Talmud refers to the passage in Leviticus 26:16 where the word *shakhefet* is translated as tuberculosis, which accords with the Biblical passage (Talmud – *Shabbath* 32b). Most of the remaining Talmudic references to ‘consumption’ mean ‘to eat or drink’ or ‘to use up’ or ‘to consume food’ (Talmud - *Kiruvin* 46b) and not to the illness ‘consumption’. Rabbi Eleazar son of Rabbi Judah said that evil, illness, misery and food shortages were inflicted upon the ancient Jews because they failed to
observe the commandment of setting aside bread (challah) for God. This law was given to Moses before entering the promised land:

When any food produced there is eaten, some of it is to be set aside as a special contribution to the Lord. When you bake bread, the first loaf of the first bread made from the new corn is to be presented as a special contribution to the Lord. This is to be presented in the same way as the special contribution you make from the corn you thresh (Nm 15:19-20).

The priests are to have the best of everything else that is offered to me. Each time the people bake bread, they are to give the priests the first loaf as an offering, and my blessing will rest on their homes (Ezk 44:30).

- **Challah/Hallah** (bread) refers to a portion of bread dough baked on the Sabbath that was set aside and given to the ancient priests (Wald 2007:278). The idea behind this was to provide the priests with food that had to be consumed while they were in a ritually pure state (Wald 2007:278). Nowadays the custom is to take a piece of dough the size of an olive and burn it since this obligation in modern times is purely of rabbinical origin (Milgrom 2007:277).

- The Talmud mentions various lung diseases such as cysts on the lungs (Chullin – 46b) and holes in the lung (Chullin 48b). Today we know that tuberculosis can produce tubercles or cyst-like nodules on the lungs which can eventually heal leaving holes (Anderson 19[68]:240).

- The Talmudic sages would examine blood that came from the mouth with a wheat straw to determine its origin. If it was of a sticky consistency they believed that it was probably from the lungs and if not it was probably from the liver and Rosner (1978:173) states that this was symptomatic of extreme liver damage (Talmud – Gittin 69a).
A fever can be symptomatic of many diseases and is defined as body temperature that is higher than normal (Davis et al 1968:245). The sages made many observations in this regard:

- They believed that a fever was a disease in itself and that a very high fever was life-threatening so much so that Rabbi Johanan said that the Sabbath laws could be broken to heal the sick (Talmud – *Abodah Zarah* 28a).

- The rabbis observed that fevered patients never ate much food and drank little leading them to the conclusion that fever sustained the body (Talmud – *Yebamoth* 71b). Yet it is mentioned that a feverish patient drank a lot of water and this explained why Hagar ran out of water while in the desert with Ishmael who was feverish (*Midrash – Genesis Rabbah* 53:13). Rabbi Hana ben Bizna\(^{60}\) said that fever sufferers ate very little because they believed that the fever nourished the body but they agreed that nobody could survive more than thirteen days without food (Talmud – *Sanhedrin* 108b).

- The rabbis would postpone the rite of circumcision if the baby had a fever (Talmud – *Yebamoth* 70a) allowing the child seven days to recover (Talmud - *Yebamoth* 71b).

- According to Rabbi Nahman ben Isaac\(^{61}\) if a day labourer developed a fever during his employment, he was entitled to his wages although he might not be able to complete the day’s work (Talmud – *Baba Metzia* 77a-b).

---

\(^{60}\) A Babylonian *Amora* of 3\(^{rd}\) and 4\(^{th}\) centuries CE. He served as a judge in Pumbedita (Kolatch 1981:101).

• Rabbi Judah believed that bathing was harmful for a patient with a fever arising from a wasp sting, a thorn wound, an abscess or a sore eye (Talmud – *Avodah Zarah* 28b). Blood-letting was not recommended if the patient had a fever according to Rabbi Judah (Talmud – *Avodah Zarah* 29a) although it was recommended for a fever of more than two days duration, claimed Abaye (Talmud – *Gittin* 67b).

• The physician, Mar Samuel recommended visiting the sick often but discouraged the practice in the case of diarrhoea, eye diseases or headaches because of gastric embarrassment in the first case and in the second instance; he believed that talking exacerbated headaches and sore eyes thereby worsening the fever (Talmud – *Nedarim* 41a).

• The Talmud elucidates the passages in the Bible that contain the word consumption (Lv 26:16; Dt 28:22) because the sages referred to consumption as a disease but did not term it ‘tuberculosis’ (*Shabbath* 32b). They were aware also of fevers but did not regard a fever as a symptom of tuberculosis but as a separate disease (*Abodah Zarah* 28a).

### 4.7.7 Treatments for fever and tuberculosis in Talmudic times

#### 4.7.7.1 Remedies from the Talmud

There were many treatments mentioned in the Talmud:

• Radishes (*Raphanus sativus*) are recommended to treat a fever and beetroot (*Beta vulgaris* - sometimes called mangold) was recommended for cold shivers (*Abodah Zarah* 28b) as well as a sore throat (Talmud – *Berachoth* 36a). There is however a scientific basis for these two remedies. Modern research has indicated that radishes are still used in herbal expectorants (Van Wyk & Wink 2004:424) and Singh states that
they contain a volatile oil with methyl which is used to treat urinary problems and haemorrhoids. The plant is native to India and Iran (2006:218).

- Beetroot (*Beta vulgaris*) has been found to contain betanin which stimulates the body’s immune system and is invaluable after radiation and chemotherapy (Van Wyk & Wink 2004:401).

- Where a fever lasted twenty-four hours, the patient just drank water, a fever of two days duration was treated by blood-letting. Red meat and diluted wine was given to those who had been ill for three days or more presumably to provide extra nourishment (Talmud – *Gittin* 67b).

- Heat-stroke was also regarded as a fever because the rabbis had observed that the symptoms of both were similar (Talmud – *Gittin* 67b).

- Chronic fever treatment involved a rather unpleasant remedy – placing a torn black hen on the patient’s shaved head where it would remain until it stank! The second part of the treatment is akin to hydrotherapy. The patient would be immersed in water and remain so until he/she grew weary and had to leave the water to sit down (Rosner 1977:161). The scientific value of this chicken remedy is very doubtful but bathing in cold water is highly recommended to bring down a high fever (Anderson 19[68]:184).

- Rabbis Joseph⁶² and Sheshet⁶³ used to perform manual labour to ease their cold shivers and feelings of extreme cold – both fever symptoms (Talmud – *Gittin* 67b).

---

⁶² This rabbi is one of six rabbis mentioned in the Talmud with the same name (Kolatch 1981:146-147).
• Soil from the grave of Rabbi Judah the Prince was a well-known remedy applied to the body at the first sign of a fever; seemingly the physician Mar Samuel approved this forbidden practice of using anything that had come into contact with a corpse because his view was that ‘natural soil does not become forbidden’ (Talmud – *Sanhedrin* 47b).

• The rabbis’ remedy for blood from the lungs – another symptom of tuberculosis:

  Seven handfuls of mashed beetroots (*Beta vulgaris*)
  Seven handfuls of mashed leeks (*Allium porum*)
  Seven handfuls of jujube berry (*Zizyphus jujuba*)
  Three handfuls of lentils (*Lens esculenta*)
  A handful of cumin (*Cuminum cynimum*) and
  A handful of flax (linseed; *Linum usitatissimum*).

This mixture was cooked in the large intestines of a first born animal, eaten with strong beer made in the winter months so that the brew would be potent (Rosner 2000:195). The sages attributed magical properties to the numeral seven – it was regarded as a sacred number: seven days in a week, the seventh day was the Sabbath day. The rabbis disapproved of superstition but realised that the remedy was efficacious (*Shabbath* 67a, footnote 1). Recent research has revealed that beetroot contains immune boosters and is used to treat liver and kidney disorders (Van Wyk & Wink 2004: 401). Jujube berries have sedative properties and some studies seem to suggest that the plant can help strengthen the body’s immune system (Kramer 2006:119). Cumin is used for dyspepsia, to preserve food (it contains bactericide) and it has anti-inflammatory properties (Kramer 2006:407) and linseed is most useful as a laxative (Van Wyk & Wink 2004: 415). From a scientific viewpoint, the only remedies that might have helped the problem above are beetroot and jujube...
berries because they contain immune boosters (Van Wyk & Wink 2004: 401,350).

The Talmudic rabbis recommended goats milk for heart problems (Talmud – *Kethuboth* 60a) but Rosner (2000:192) believes that the reference should be to chest problems or possibly tuberculosis because the word for heart (*lev*) also denotes the chest (Talmud – *Moed Katan* 22b).

### 4.7.7.2 Pliny’s remedies

- A sea voyage was beneficial for tuberculosis (*Natural History* 28:53-4).

- Pliny mentions that the followers of Erisistratus deemed cabbage (*Brassica oleracea*) very beneficial for ‘coughing up blood’ although not a medicinal plant, it was prescribed (*Natural History* 20:85). Nowadays cabbage is used as a poultice for treating wounds and cuts (the leaves are pounded and warmed before being placed onto the wound; Palmer 1985:99). Ebadi (2007:625) maintains that the juice is useful in the treatment of peptic ulcers.

- Vinegar was taken for chronic coughs and ‘catarrh of the throat’\(^{64}\) (*Natural History* 23:56).

- Pliny believed that terebinth resin cured chest complaints (*Natural History* 24:35). The type of terebinth that was in use at the time was (*Pistacia atlantica*; Zohary 1982:110). There were other types of terebinth mentioned by those translators and exegetes, who were not well acquainted with Biblical flora, but in his opinion this tree can only be the Atlantic terebinth (Zohary 1982:110; cf Dioscorides 1:91). Singh maintains

---

\(^{64}\) This seems to describe a post nasal drip in my opinion.
that the mastic tree (*Pistacia lentiscus*), another species of terebinth (Coulson et al 1980:876), is an excellent expectorant (2006:209).

4.7.7.3 *Dioscorides’ remedies:*

- A decoction of myrrh root (*Commiphora abyssinica*) would be taken for pulmonary tuberculosis (4:116; cf Singh (2006:115); Ebadi (2007:99) recommends it for respiratory disorders). Daniel (2006:105) avers that the use of the resin of this plant goes back to antiquity and is very well documented in the Bible as an anointing oil (Ex 30:23) and as a perfume (Ps 45:8). It is used in modern times as a tonic and antiseptic (Daniel 2006:105). Kramer believes that there are many species of this plant found mainly in Ethiopia and Somalia (2006:141). The plant contains furanosesquiterpenes, which give it anti-inflammatory, antiseptic and analgesic properties. Myrrh is used in modern dentistry for gum and mouth infections (Kramer 2006:141).

- A cough mixture was made with parts of the cedar of Lebanon tree (*Cedri libani*) which were boiled in (raisin wine) or *passum* (Kidd 1984:233) until syrupy and this medication was taken to treat ulcerated lungs (1:107).

- Bay laurel (*Laurus nobilis*) mixed with raisin wine was used to treat coughs and tuberculosis (1:106).

- Garden thyme (*Thymus vulgaris*) was a useful medication for coughs and colds (3:35). This plant has antibiotic and antispasmodic properties and is used in ointments. It contains thymol, an anti-inflammatory that is useful to treat coughs and antiseptic ointments and the plant is native to Southern Europe (Van Wyk & Wink 2004:323). Cf wild thyme (*Thymus serpyllum*; Chiej 1988:308).
• The Greater plantain herb (*Plantago major*), indigenous to Europe and Asia (Kramer 2006:106) was used in a tea for tuberculosis (2:153). Its main compound is aucubin which is used to treat broncho-spasms. This plant is indigenous to Europe and Asia (Van Wyk & Wink 2004:246). Chiej maintains that it is used to staunch bleeding wounds (1988:237). Kramer maintains that the plant contains mucilage which renders it excellent for treating inflammation of the lungs and bladder (2006:106).

• The gum of the laudanum shrub (*Cistus incanus*) was mixed with wine and taken as an expectorant (Zohary 1982:194; Dioscorides 1:128). Singh refers to this plant as the hairy rockrose. It is native to Italy and its aerial parts are used as a gastro protective (2006:111).

• The dried medicinal sea squill/sea onion plant (*Scilla maritima*) was steeped in vinegar for six months and the resulting liquid was deemed beneficial for epilepsy, depression and a swollen spleen (5:25). Van Wyk & Wink (2004:331) state that this plant’s traditional use was for bronchitis and whooping cough. Research has revealed that it has expectorant properties and is still employed as such although not mentioned by Dioscorides.

• Mother’s milk was deemed an excellent preparation to treat tuberculosis (2:78). Presumably it was not only used by babies but no detail is given as to its collection!

4.7.8 Conclusion

The Talmud provides some information at least as far as the existence of lung disease is concerned. Lung cysts or holes are mentioned in the Talmud (*Chullin* – 46b; 48b) and the sages realised that blood of a sticky consistency probably originated from the lungs (Rosner 1978:173).
'Tuberculosis’ (consumption) has been around for many centuries. Ancient art, pottery and human remains point to its existence in ancient Egypt during the period from 4000 – 1000 BCE and there is every reason to presume that the ancient Jews also suffered from this disease during the same period. Bimson et al date the period that the Jews spent in Egypt as one of two alternatives: The low date is between 1700 and circa 1270 BCE and the high dates are between 1800 and 1450 BCE (1985:39). Both of these dates fall into the same period that tuberculosis existed in Egypt.

There were many different kinds of fever, shachefet was just one of them and the ancients believed that fever was not just a symptom of a disease but an illness in itself. Some commentators believe that it affected humans, while others maintain that it refers to a crop disease. The Talmudic sages regarded the word ‘consumption’ to refer to tuberculosis (Lv 26:16; Dt 28:22). They believed that a fever was also a disease but it does not appear that they realised that it was a symptom of tuberculosis.

Many plants mentioned in the Bible were used medicinally such as the fruit of the date, pomegranate juice the cypress plant, others like the willow and garden thyme were used in Egypt but not mentioned in the Bible. Medicines for coughs were made from thyme (Thymus vulgaris) and fevers were treated with the bark of a species of the willow plant (Salix alba) and these plants are still in use today for treating the same complaint.

The Talmudic sages applied their knowledge of the animal sacrifices to human beings in that they noted that an imperfect animal such as one with a bleeding lung, lung cysts or nodules was not considered worthy of sacrifice to God (Lv 4:23). They were able to differentiate between blood from the liver and lung by its appearance. They were not too rigid in their religious beliefs to break Shabbath laws to treat the sick. They realised the importance of a feverish patient drinking water because this brings down the fever. Magical cures that smacked of
superstition were strongly disapproved of but were accepted by the sages because they had proved efficacious.

The Talmudic sages explained the passage in Numbers 15:19-20 where the word ‘consumption’ is mentioned to refer to God’s punishment or curse for failure to sacrifice *challah* to Him and not to the disease tuberculosis. They actually referred to tuberculosis by its main symptom as ‘bleeding from the lungs’ or ‘chest or heart problems’. The rabbis recognised and treated fevers as a separate disease and not as a symptom of another illness.

Ironically enough, goat's milk, although used to treat tuberculosis, can harbour tuberculosis bacteria and the organisms that cause undulant fever. It is uncertain whether the Talmudic sages realised this before prescribing it. Of all the remedies used in Talmudic times, the most useful ones are beetroot and jujube berries, both of which are immune boosters and cumin is still used for dyspepsia. Many kitchen herbs such as bay, Crete Savory are used in the treatment of chronic coughs, while the Greater plantain still forms part of Chinese herbalism, its anti-inflammatory properties being used in cough syrups.

Tuberculosis is a very serious illness being very infectious and contagious especially in Southern Africa despite the advents in modern medicine with the development of a drug resistant strain, which is persistently difficult to treat.

4.8 ‘LEPROSY’ – FIVE BIBLICAL CASE STUDIES

4.8.1 Introduction

In this section, some interpretations of the word *tzara‘at* (which refers to a skin ailment), will be described and how it came to be translated as ‘leprosy’. The stigma of leprosy, which unfortunately still remains after several thousand years, despite the fact that the disease is now curable, will be considered. Modern
leprosy or Hansen’s disease together with its symptoms will be defined in the hope of ascertaining some differentiation between that and tzara’at. Biblical viewpoints of the disease with reference to the texts will be looked at. House mould called *stachybotrys* will be discussed with reference to Leviticus 14 and its unhealthy effect on those who are sensitive to fungi.

Five biblical characters will be examined, all of whom were inflicted with tzara’at and reasons for their infliction with this disease will be sought. In each case, an attempt will be made to define what their illness was. Biblical treatments and remedies used in those times will be mentioned. Talmudic perspectives on leprosy and treatments that appear in the Talmudic tractates will be referred to as well as those used by the Greeks and Romans.

Numerous interpretations have been given to the Hebrew word tzara’at. Some examples from the Hebrew Bible: Numbers 12:10 describe Miriam’s disease as *metzorah*65 kasheleg which is translated as ‘tzara’at like snow’ or *nega* tzara’at which means ‘a plague of tzara’at (Lv 13:1). *Baheret levana* means ‘a white discolouration’ (Lv 13:3) and *se’eit levana adamemet* is translated to mean ‘a white swelling streaked with red’ (Lv 13:19).

In all the English versions of the Bible (Today’s English Version) the passages mentioned above, tzara’at is translated as ‘a dreaded skin disease’, but Harrison (1962(a):111) is adamant that tzara’at is a generic term for many different skin diseases such as ringworm, psoriasis and modern leprosy. Scherman & Zlotowitz translate tzara’at as ‘leprosy’ with a note that it was regarded as a disease of ‘ritual impurity’, not a medical disease. It manifested as white patches on the skin, caused by the sin of slander, false oaths, sexual immorality, arrogance, selfishness and robbery (1998:272, Talmud – *Arachin* 16a). These two authors explain that those afflicted with tzara’at need to experience the hurt they have

---

65 *Metzora’at* means ‘a woman inflicted with tzara’at while a man inflicted with the same illness is called a *metzorah*. 
caused others so that they can repent and be healed (Scherman & Zlotowitz 1998:272, un-numbered footnote). Plaut maintains that those afflicted with **tzara’at** were isolated to protect the rest of the community from ritual impurity (2006:742; cf Carson et al 1995:140).

Hulse maintains that **lepra** was described initially by Hippocrates (469-399 BCE) in the Hippocratic Corpus as rough, itchy and scaly patches on the skin, which possibly describes psoriasis or vitiligo (1975:88; cf Harrison 1962(a):111). The term *elephantiasis graecorum* (leprosy of the Greeks) was a term used to describe an illness more serious than Biblical leprosy (tzara’at) and is reminiscent of the leprosy of modern times called Hansen’s disease. The term **lepra** was first used by the Arab writer, John of Damascus (777-857 CE) to describe *elephantiasis graecorum* and this resulted in the two distinctly different types of skin disease being incorrectly termed **lepra** or **tzara’at** (Harrison 1962(a):112). Adeyemo believes that **lepra** was a generic term for many skin diseases and the translators of the Bible mistranslated the word as leprosy (2006:150). Craffert maintains that the Hebrew **tzara’at** and Greek **lepra** appeared very similar and could even have been identical (1999:95). The NKJV translates **tzara’at** as ‘leprosy’ while the TEV call it ‘a dreaded skin disease’. Harrison states that leprosy was common in Mesopotamia as early as the 3rd millennium BCE (See 2.2.7.4; 1962(a):331).

Leprosy is described by Anderson, a medical doctor, as ‘Hansen’s disease or modern leprosy which is only mildly contagious because it requires prolonged and intimate contact’ for its contraction. It ‘is found in the hotter climates and can affect the nerves and skin’ (19[68]:346). Hansen’s disease is defined by Davis (1968:191) as consisting of two distinct types: ‘benign or tuberculoid (affecting the nerves) and malignant or lepromatous (affecting the skin)’. Harrison (1962(a):112) maintains that Hansen’s disease is caused by a tiny

---

66. The leprosy bacillus, *mycobacterium leprae*, was named after the discoverer of the bacillus, Gerhard Henrik Armauer in 1868 and described by him in 1874 (Hulse 1975:87).
schizomycetous\textsuperscript{67} fungus called \textit{Mycobacterium leprae}\textsuperscript{68} which patients can manifest in four ways:

- Lumps appear on the face and the skin thickens to produce a typical ‘lion-like mask’ because the face is so swollen it becomes expressionless. The mucous membranes of the mouth and nose gradually disintegrate. This is the lepromatous type and it is the most contagious (Neville 1992:6).

- The tubercular type is less severe and affects the nerves of the skin, which thicken and later form blisters on these ‘dead’ or anaesthetic patches. Large suppurating ulcers on the feet may appear and anaesthetised fingers and toes are often lost due to injury. The infestation of the bacilli is less but the nerve damage is the greatest (Berkow & Talbott 1977:127).

- The indeterminate type where the lesion is poorly defined and often unrecognized but can regress completely or progress to one of the other three types (Berkow & Talbott 1977:127).

- The dimorphous (borderline) type where the lesions resemble both lepromatous and tuberculoid types, but is unstable in that it may develop into lepromatous or tuberculoid types depending on treatment and the patient’s immune response (Berkow & Talbott 1977:127).

I will use the words \textit{tzara’at} to mean Biblical leprosy in this section and modern leprosy to refer to Hansen’s disease in this dissertation.

\textsuperscript{67} A type of plant organism that does not contain pigments and reproduces by fission (Davis et al 1968:492).

\textsuperscript{68} Davis et al define Hansen’s disease as ‘a chronic communicable disease due to an acid-fast bacillus, \textit{Mycobacterium leprae},’ and characterised by the production of nodular lesions of the skin, upper respiratory tract, eyes, peripheral nerves and testes’ (1968:350).
There is no accurate translation of *tzara'at* according to Scherman & Zlotowitz, and they simply use that Hebrew word in their commentary (1998:272, un-numbered footnote below the text). Plaut believes it refers to infectious skin complaints such as impetigo or gangrenous infections and postulates that it could even include Hansen’s disease but the exact meaning is still not certain (2006:742). Both Sussman and Adeyemo believe that Biblical leprosy (*tzara’at*) is not Hansen’s disease (1967:217; 2006:149; cf Pilch 1981:111). They cite a reason for this view that the Bible does not mention other symptoms of Hansen’s disease (modern leprosy) such as the numbness that occurs in the area where the lesions develop, described by Anderson (19[68]:346) when he discusses the symptoms of Hansen's disease. The deformities of modern leprosy such as ‘claw hand and toe’ and the loss of fingers and toes which result from the sensory numbness, as well as loss of the eyebrows and enlargement of the ear lobes (Berkow & Talbott 1977:128) cannot be found in the Biblical descriptions of the disease.

Browne’s view is that it is very difficult to determine the origin of Hansen’s disease (modern leprosy). It began either in India, where the earliest written records originate or China, where the earlier oral traditions predate that of India (Browne 1977:32-33). It is believed to have spread to the Middle East in the 3rd century BCE, and originated (circa 600 BCE) when Alexander the Great’s soldiers returned from India (Greeff 2005:94; cf Zias 1991:149; Yoeli 1955:331 & Verbov 1976:229). Mull & Mull however, are of the opinion that *tzara’at* and Hansen’s disease (modern leprosy) co-existed during the biblical period (1992:37) but it is the view of Zias that the two were common only from the late Old Testament times to that of the Mishna and Talmud (Zias 1999
http://joezias.com/Health/Healing/andIsrael.htm).

As mentioned above, *nega tzara’at* in Hebrew means a ‘plague or affliction of tzara’at’. When the Hebrew Bible (*Tanakh*) was translated into Greek (the Septuagint) in the 3rd century BCE, the authors translated this Hebrew phrase
nega tzara’at into Greek as aphe lepras meaning ‘a plague of leprosy’ instead of the prevailing phrase of the time, elephantiasis graecorum⁶⁹ which literally means ‘leprosy of the Greeks’ (Wiseman1986:42). Instead the authors of the Latin Vulgate used the Latin phrase plaga leprae. Unfortunately this led to the mistaken belief that tzara’at meant modern leprosy (Heller et al 2003:589) when in fact the Greek and Latin phrases (aphe lepras and plaga leprae) describe a skin condition that could cover the entire body but these words unlike tzara’at do not imply any ritual impurity. The Greek translators used the word lepre meaning ‘scales’ in Latin or leuke meaning ‘white patches’ in Greek (a benign skin disorder where the skin develops scales) to refer to ritual impurity because they did not know how to describe it (Heller et al 2003:589). Mull & Mull maintain similarly that modern leprosy is hard to diagnose in its early stages even by practicing specialists today who often confuse it with other skin conditions (1992:38; Figures 21-30 in the List of Photographs).

4.8.2 The stigma of tzara’at

Tzara’at or Biblical leprosy sufferers were regarded as being ritually unclean or impure by the rest of their society. Matthews & Benjamin echo this and emphasise that the disease had nothing to do with hygiene (1991:292). Instead they explain a system of ‘social points’ can be used to elucidate the ancient social system: people who lived in a ‘clean’ household partook in society either by working or running a business, could marry or arrange marriages, make and execute wills, serve on community bodies (Matthews & Benjamin 1991:292). They had a place in their society because they functioned as they should in terms of correct social norms – they were ‘controlled’.

Those who were ‘unclean’ were just the opposite; they were not complying with their social norms and regarded as personae non grata (undesirable persons) or

⁶⁹ This was also referred to as ‘elephantiasis’ by Celsus, Dioscorides and other Greek physicians who lived in the 1st century CE (Browne in Palmer 1986:117; Browne 1977:19).
socially deviant (‘uncontrolled’; Matthews & Benjamin 1991:293; cf. Hiemstra & Gonin 1986:254). By forcing a leper to live outside the city, the ancients thought that they would prevent the lepers’ ‘disorder’ or ‘malfunction’ from polluting others and causing chaos (Matthews & Benjamin 1991:294). The lepers were required to dress and behave differently from the rest of the community to reinforce their stigma until they could be declared ‘clean’ again by the priest and re-enter society (Lv 13:12-17; Matthews & Benjamin 1991:295). Maccoby postulates that the lepers were expressing a form of ritual grief in their dress and pattern of behaviour for their isolation from society (1999:125).

The fact that those suffering from tzara’at were ritually ‘unclean’ may also have had something to do with ‘holes and boundaries’. Pilch states that the body has a ‘boundary’ of skin protected by clothing. Holes in the skin (cuts, lesions, rashes) and in clothing was viewed as being dangerous because the boundaries were being invaded. It would appear that the priestly ideal was a perfect body (1981:111). Pilch explains that most societies in biblical times were strongly controlled, highly regulated and regarded the human body as a symbol of life but they also perceived the body to be under threat of attack (1981:109). Pilch illustrates this by reference to the idea of uncleanness or ritual purity in Leviticus 11-16 where four types are discussed: animals (11:1-47); childbirth and its subsequent menstruation (12:1-8), skin, garments and buildings with tzara’at (13:1-14:57) and unclean bodily discharges (semen and blood; 15:1-33).

The ancient Jews took an almost paranoiac view of secretions of the body being impure and purity rituals were essential to ‘clean’ the body and restore its wholeness, integrity or ‘cleanness’ (Pilch 1981:111). The author continues by saying that such anxieties are usually manifested by a minority group in society, of which the ancient Jews were first in Canaan (Pilch 1981:111). Their concern for bodily ‘cleanness’ mirrored their politics and culture as I shall explain: the underlying problem was ‘bodily boundaries’ rather than ‘uncleanness’. The first boundary of the body was the skin, covered and protected by clothes where tears
or holes were paralleled by sores/cuts on the skin – open skin was dangerous – it could be invaded\textsuperscript{70} (just as a city without its protective walls in my view). As holiness was maintained by this idea of bodily perfection, so was the social and cultural integrity of the Jewish community by protecting its members against political assimilation into the majority culture (Pilch 1981:111).

Hayes states that \textit{tzara’at} or a dreaded skin disease was regarded as ritually impure because it was erstwhile healthy flesh that had decayed - reminiscent of death (2007:746). The ancients believed that death was not holy because God did not die. Only humans did. In order to be eligible to partake in temple sacrifices, people had to be close to God and separate from death (Hayes 2007:746). Those who were ‘unclean’ therefore were prevented from entering the Temple precincts lest they ‘defile’ it (Pilch 1981:111) because they were no longer pure enough to partake in Temple worship (Brown et al 1990:69).

Lloyd Davies suggests that \textit{tzara’at} was a dermatitis induced by stress – biblical society was extremely pedantic regarding their \textit{halakhah} (Jewish religious law) and every Jew was expected to observe the law to the letter (1993:95). Those who broke the law were punished severely; consequently the manifestation of any skin condition even faintly resembling \textit{tzara’at} was considered punishment by God (Lloyd Davies 1993:95). The resultant anxiety and humiliation of the \textit{tzara’at} sufferer could have exacerbated their condition because the Divine manifestation of their sin was clear for all to see (Lloyd Davies 1993:95; cf Dunn & Rogerson 2003:113).

Carson et al note however, that the idea of \textit{tzara’at} being inflicted on sinners for disobedience is not mentioned in Leviticus 13 and 14 (1995:141). This view is shared by Adeyemo (2006:150). Carson et al believe there is a supposition that some people would become ill and might be healed by God (1995:141), which

\textsuperscript{70} It is questionable whether the ancients knew that the body has millions of ‘open spaces’ or pores on the surface of the skin (Pilch 1981:111).
contradicts the idea that God would always heal His people when they prayed, fasted and repented (Ex 15:26, 2 Sm 12:16; Dt 7:15; cf Carson et al 1995:141).

4.8.3 Biblical viewpoints of leprosy (tzara’at) in Leviticus 13 and 14

The word tzara’at stems from the Hebrew word zara which means to sow, thus tzara’at means literally to sow or disperse lesions on the skin (Rosner 1978:325).

Terms for Biblical leprosy in Leviticus 13 are described below with the English word followed by the Hebrew word in italics. These terms are all found in Leviticus 13:

A ‘swelling’ – se’eit; a ‘scab – sappachat; a bright spot – vaheret; ‘afflicted with tzara’at’ or a ‘dreaded skin disease’ – nega tzara’at; ‘white’ – lavanah (Lv 13:4); ‘raw flesh’ or ‘living flesh’ – basar chai (Lv 13:10); ‘boil’ – shechin (Lv 13:18); ‘reddish white’ – lavanah damdemet (Lv 13:19); ‘burn’ – michvah (Lv 13:25; Rabbi Matitiani, a private communication 2009, Cape Town). These are the many forms that the skin disease tzara’at can take, but in the biblical text the diseases of Miriam, Uzziah, Naaman, Gehazi and the Samarian lepers are referred to as tzara’at. There are no further descriptions of the illness.

Tzara’at appeared in clothing (cotton or woolen) and leather (Lv 13:47-59). Such a garment was probably infested with mildew or mould (Metzger & Coogan 1993:431; cf Rabinowitz 2007:651). In ancient times, garments were seldom laundered and the lack of detergents and household bleach would likely result in the mildew or mould being almost impossible to eradicate, especially from the leather goods.

If after seven days, laundering did not remove the reddish/ greenish stains, the garments were burnt as the disease was still active in the clothing. If after the first
washing, there was no further sign of *tzara'at*, the garment was re-washed and pronounced ‘clean’ (Lv 13:58).

Mildew in houses (also called *tzara’at*) that took the form of greenish or reddish spots was God-given (Lv 14:34) and when discovered, was left for seven days to ascertain whether it had deeply penetrated the walls (Lv 14:37-38). If so, the infected bricks or stones were removed from the building and replaced by new ones; the interior walls were scraped, the plaster dumped beyond the city walls and the walls re-plastered (Lv 14:40-42). The building was pronounced ‘clean’ if the mildew did not return (Lv 14:48). If the mildew re-appeared, then the house was ‘unclean’, and pulled down. The debris was later removed beyond the town’s gates (Lv 14:43-45; Adeyemo 2006:152; Alter 2004:596). It is possible that this mildew was a fungus like *Stachybotrys*.

Researchers in recent times, such as Heller et al, realise that mould or mildew (also termed fungus) infestation in buildings can cause allergic reactions (scaling and depigmentation of skin) in people who reside there. Their symptoms are similar to those described in Leviticus 13 and he recommends that *tzara’at* should be translated as ‘mould’ (2003:590). The walls of such dwellings can become so completely riddled with fungus that the only possible solution would be to burn the entire building to the ground as the mould is very resistant to the chemicals used to destroy it (Belkin, in Heller et al 2003:590). This mould, *Stachybotrys*, can cause severe health problems. Short-Ray is convinced that some common skin symptoms include the following symptoms: (http://www.toxic_black_mold_syndrome.com/Symptoms-of-Black-Most-Common.html)

- Skin irritation such as a rash
- Increased infections
The less common skin symptoms would include (http://www.toxic_black_mold_syndrome.com/symptoms-of-black-mold-less-common.html):

- Bruising, hives
- Swollen lymph nodes
- Cancer
- Hair loss

There are also other symptoms of *Stachybotrys*, such as respiratory problems, fatigue and even memory loss. Heller et al admits that many of these symptoms are not universally accepted and much has been written on the subject (2003:590), although Heller et al cannot resist comparing *Stachybotrys* to *tzara’at* because it affects both humans and buildings. Unfortunately both humans and buildings are still plagued by fungi, which are not always simple to combat (2003:591).

The priest had always to examine the *tzara’at* found on a person, on clothing or in a building to declare it either ‘clean’ or ‘unclean’ (Greeff 2005:111). Brown et al believe that the idea of leprosy in clothes and walls echoed that on the skin, which was ‘unclean’ and therefore ‘evil’ was rooted in archaic beliefs by the authors of the Levitical code (1990:69).

Adeyemo states that if a person developed *tzara’at*, the danger signals were a swelling, rash, inflammation or discolouration of the skin (2006:150). The sore was examined by a priest to see if it was deeply embedded in the epidermis of the skin (Adeyemo 2006:150). If the sore was a borderline case, the sufferer would be isolated for seven days (Lv 13:4) and re-examined for clarification by the priest. If the priest was unsure of the diagnosis, the unfortunate was left alone for another week (Lv 13:10). On the third examination the sufferer was regarded as being ritually clean if the spot had not spread and was regarded merely as a superficial sore (Lv 13:6). Harrison (1962(a):112) maintains that if the sore had
become ulcerated, the diagnosis was positive for *tzara’at* in which case the victim was banished outside the city (Lv 13:3) where the ‘living dead’ were banished (Alter 2004:592, unnumbered footnote; cf Carson et al 1995:141). Harrison states that the diagnosis was very dependant on the extent to which the disease had penetrated the dermis and affected the hairs of the skin. If it had caused the hairs to split or break and was deeply embedded in the skin, then the priest immediately recognised that the patient was infected with *tzara’at* (Harrison 1962(a):113).

Ritual cleanness was restored to the sufferer by bathing himself/herself and laundering his/her clothes (Lv 13:8). The purification rites of the newly ritually clean sufferer would involve two birds, cedar wood, hyssop and a red chord. One of the birds was killed and its blood (that had been dipped in the hyssop with the red chord and cedar wood) sprinkled onto the sufferer while the other one, possibly thought to carry away the impurity, was released (Lv 14:4-7). Alter’s view is that blood is a purifier and the released bird was reminiscent of the scapegoat ritual performed during Yom Kippur, which he claims has been borrowed from ancient Mesopotamian purification rites but does not elaborate any further on this aspect (2004:600). Brown et al’s view is that this ritual is based on the system existing at that time, that disease was associated with an evil winged demon which departed with the release of the bird (1990:70). Adeyemo maintains that the purification rituals were rites of passage from death to life and served to re-enforce that the healed sufferer was re-united with God after their period of spiritual separateness (2006:152). If however, the discolouration had spread, the priest would declare the *tzara’at* sufferer ritually unclean and he/she would have to live with the others outside the city (Lv 13:8).

If the *tzara’at* covered the whole body, the sufferer was regarded as ritually clean and the same applied if the person’s entire body had become white in colour (Lv 13:13) although the authors Brown et al and Alter regard it as a healing sign (1990:69; 2004:593). Harrison regards the description of the skin becoming white
to indicate the presence of vitiligo\textsuperscript{71} (1962(a):113). A sore, or open spot anywhere on the body was regarded as \textit{tzara’at} and ritually unclean (Lv 13:15), even the remnants of a boil or a burn (Lv 13:18-19).

The \textit{tzara’at} sufferer was doomed to a life of poverty and isolation beyond the city limits, far from their home and were expected to behave like mourners shouting their ‘uncleanness’ to all who might venture near them as long as their disease lasted (Lv 13:45-46; cf Dunn & Rogerson 2003:113).

Browne and Rosner find the descriptions of \textit{tzara’at} too vague for any accurate diagnosis to be made (1977:104-105; 1978:323). Both Alter (2004:591, footnote 2) and Brown et al (1990:69) are of the same opinion. The Biblical descriptions of \textit{tzara’at} could describe a boil (Lv 13:10), or a freckle (Lv 13: 39), or even a skin infection following a burn (Lv 13: 24). Ringworm (a fungal infection of the skin characterized by ring-shaped patches) of the scalp or beard (‘affection’ Lv 13:29) was another possibility or pustule dermatitis (‘scall’\textsuperscript{72} Lv 13:31; compare Figures 25 and 26 in the List of Photographs).

Alter maintains that the word ‘inflammation’ derives from the Hebrew word \textit{se’eit} meaning ‘to raise’ or ‘shiny spot’ (Lv 13:1). Alter believes that the ancient descriptions of disease were different to modern ones (2004:591). What the ancients thought was one disease was actually several and were not all related (2004:591) and he postulates that modern leprosy did not exist in the ancient Near East during biblical times (2004:591). He also goes to say that the ancient practices appertaining to quarantine for \textit{tzara’at} are a blurred mix of ritual and pathology without a clear boundary between the ritual and medical contamination of sufferers (Alter 2004:592). It is with this in mind that photographs by Jacyk (1986:21-30) appear as Figures 21-30 in the List of Photographs. One can

\textsuperscript{71} A condition due to failure of melanin formation in the skin, producing sharply demarcated milky-white patches with hyper-pigmented borders (Davis et al 1968:683).

\textsuperscript{72} Davis et al describe ‘scall’ as ‘a crusty disease, as of the scalp’ (1968:555) and Harrison believes that the word ‘scall’ means ‘itch’ (1962:112).
sympathise with the Levite priests who also had problems in diagnosing their patients (Lv 13).

4.8.4 Biblical Leprosy (tzara’at) – Five case studies

The ancient Jews viewed disease as a sign of God’s displeasure or God’s power – most diseases fell into one of the two categories. In the case of Miriam it was a manifestation of God’s anger at her criticism of Moses’ marriage to a Kushite woman (Nm 12:1-10). She contracted tzara’at for a week but was healed by prayer. When Uzziah had the audacity to usurp the priests’ role in the temple, God punished him by inflicting him with lifelong tzara’at (2 Chr 26:16-21). Naaman, the Syrian general suffered from tzara’at and was cured by God’s power through Elisha (2 Ki 5:14-17). Gehazi, Elisha’s servant who was a greedy liar, was stricken with tzara’at as punishment for his wicked ways (2 Ki 5:25, 27). There is also the story of the four lepers of Samaria who became war heroes despite their outcast status (2 Ki 7:3-15). Cures for diseases including tzara’at were prayer (1 Ki 8:37-38) and fasting (2 Sm 12:16). The lepers of Samaria were depicted as being either decent people or opportunists depending on the individual interpretation of the story (2 Ki 7:3-10).

Greeff states that most scholars are aware that tzara’at is not Hansen’s disease and that no skeletal evidence has been found in Syro-Palestine to indicate the existence of modern leprosy. He believes though, that somewhere in the Southern Levant are human remains that may yet be unearthed to reveal the presence of Hansen’s disease in ancient bones. The fact that no evidence has been found does not mean that it did not exist at that time (2005:93, 108). Mull & Mull (1992:36) are similarly of the opinion that the symptoms of tzara’at are applicable to many skin diseases even Hansen's disease. They cite the case of King Uzziah where the leprosy first appeared on his forehead (2 Ki 26:19; Figure 27 in the List of Photographs) and lasted for the rest of his life forcing him to live alone in a separate house until his death (2 Ki 26:21). He could have been
inflicted with modern leprosy. Mull & Mull also state that leprosy nodules often make their first appearance on a forehead. (Cf Cochrane 1963:14, a leprosy specialist).

Aaron begged Moses to intercede with God for her healing so that she would not ‘become like something born dead with half its flesh eaten away’ (Nm12:12). This sounds similar to Hansen’s disease of long duration where the de-sensitised nerves cannot detect areas of infection or injury, this spreads to the bones resulting in deformities (Craffert 1998:159). Hansen’s disease does not manifest as white skin patches developing on the body, so often referred to in Leviticus 13. It is often given as a symptom of tzara‘at but photographs of leprosy patients clearly manifest pale patches, much lighter than the surrounding skin, indicating the presence of Hansen’s disease (Figures 24, 27 in the List of Photographs). Mull & Mull are of the opinion that the description ‘white’ is ambiguous (1992:37).

4.8.4.1 Miriam

The name Miriam has several meanings: the Talmudic rabbis interpreted it as 'bitterness' but Jerome believed it to be ‘star of the sea’, the similar Arabic word is maram (the wished for child), the Egyptian word mer (beloved of Yahweh) and the modern interpretation is ‘plump’. She is first mentioned in the Bible as the older sister of Moses who watched over him in his water-tight basket of bulrushes hidden in the Nile papyrus (Ex 22: 2-4). He had been hidden there by his mother Jochebed (who was married to Amram, her nephew; Ex 7:20) in defiance of a command by the reigning pharaoh to drown every Israelite baby boy (Ex 1:2). After the Egyptian princess discovered the crying child (aged about four months) in the basket, she was approached by Miriam regarding a wet nurse. The Bible does not mention her age but she was old enough to be responsible for Moses and to recommend her mother be a wet nurse to her own son. That meant she could take him home and care for him safely, protected by royal patronage, and was even paid to do so (Ex 2:8-10)!
According to the book of Micah (6:4) not only Moses but his older siblings Aaron and Miriam rescued the Israelites from slavery in Egypt. She was called a ‘prophetess’, Ha-Neiv’a chosen by God like holy servant (Zch 1:6), when she was depicted playing the hand-drum (women in the ancient Near East maintained the tempo according to Plaut (2006:442; un-numbered footnote), leading the joyous dancing women, celebrating their people’s safe crossing of the Red Sea (Ex 15:20-21 TEV). The role of prophet was not confined to men. The Bible enumerates three more prophetesses: Deborah (Jdg 4:4), Hulda (2 Ki 22:14) and Noadiah (Neh 6:14).

The Bible tells of Miriam being punished with tzara’at almost immediately after she had criticized Moses for his marriage to a Kushite 73 (black Sudanese) woman and in my opinion, engaged in slander (in Hebrew – lashon ha-ra) by discussing Moses behind his back. Mull & Mull believe that God punished her by turning her ‘white’ with tzara’at (Nm 12:1; Mull & Mull 1992:36; Stern & Sperling 2007:311). The original Hebrew text indicates that the diseased areas of Miriam’s skin were white and scaly. This does not mean however, that the tzara’at covered her entirely. If she was entirely covered with white afflictions then she would not have been ritually impure (Lv 13:13) and would have been no need for Moses to have prayed for her recovery or for her being shut out of the camp for seven days (Nm 12:13, 15).

Dunn & Rogerson state that Miriam’s leprosy was a variety of skin ailment but do not elucidate any further on the possible diagnosis (2003:143). Plaut (2006:970) maintains that Miriam’s affliction was a warning that God would not tolerate slander and rebellion and believes that Miriam’s illness was ‘divine irony’ for God caused her to be covered in white scales perhaps to imply that if she preferred to

73 Ilan quotes Josephus (Antiquities of the Jews 252-3) who writes that while Moses was still a prince in Egypt had married an Ethiopian princess, whom he met while on a campaign to that country. The Talmudic sages do not mention this because they are convinced that the Ethiopian woman was Zipporah. The term kushit meant ‘Ethiopian or Kushite’ and the rabbis believe that this refers to her beautiful appearance (2008:863).
be white, that parts of her body were ‘whiter than white’ (Plaut 2006:973; cf Friedman 2003:468; cf Brown et al 1990:85).

The fact that Miriam was suddenly white and scaly could not have been an indication of Hansen’s disease which would have manifested in possibly several pale patches on her body (if it was tuberculoid) and many nodules that were not scaly (if it was lepromatous). Her disease was visible almost immediately after her criticism of her brother. Aaron begged Moses to intercede for her healing with God so that she would not ‘become like something born dead with half its flesh eaten away’ (Nm12:12). This description is reminiscent of Hansen's disease of long duration where the de-sensitised nerves cannot detect areas of infection or injury but it develops very slowly, often taking a full decade to manifest after prolonged contact (Browne 1977:29) which does not seem to be the case here. The Bible is silent on whether there were other people similarly afflicted so I believe that she was the only sufferer. I am convinced that Miriam’s tzara’at may have been one of three skin diseases detailed below:

- The first one, a skin complaint called *post inflammatory hypo-pigmentation* which can occur on skin that has been damaged by burns or infections and can develop on old scars, becoming paler in colour but often in time spontaneously reversing (Berkow & Talbott 1977:1607).

- Miriam may have even developed vitiligo which manifests as white lesions on otherwise normal skin (Davis et al 1968:683). Vitiligo is defined by Davis et al as ‘a condition due to failure of melanin (skin pigment) formation in the skin, producing sharply demarcated milky-white patches with hyper pigmented borders’ (1968:683).

- A disease that also manifests in white dermal scaling is psoriasis. This is a chronic condition (Anderson 19[68]:524) usually with a family history
Psoriasis commonly affects the skin of the scalp, the face, the back and that of the elbows and knees. Berkow & Talbott state that it is rare for the disease to cover the whole body (1977:1593). Anderson is convinced that psoriasis is linked to high stress conditions when it worsens. There is no permanent cure, only symptomatic relief (1968:524; Figure 29 in the List of Photographs).

Miriam might have suffered from vitiligo because it is quite possible to confuse vitiligo with Hansen’s disease because of the pale skin patches that appear. It seems unlikely that she suffered from psoriasis because it would seem as if she was covered with the illness, as the Bible states

Miriam’s skin was suddenly covered with tzara’at and turned as white as snow (Lv 12:10).

Israels (in Rosner 1978:325) postulates that tzara’at was a generic term that referred to an illness that has disappeared since biblical times. Israels explains his hypothesis by stating that Biblical diseases could have mutated through the ages and changed their form to such an extent that many modern diseases would probably not be recognised today by the ancients e.g. HIV/AIDS is a good example.

Friedman (2003:468) believes that her disease was a form of leprosy and her skin turned white as a punishment for being a racist, while Brown et al (1990:85) maintain that Miriam’s illness was Divine chastisement for her criticism of Moses. Friedman continues to say that Aaron admitted that both he and Miriam were wrong in their criticism of Moses but Aaron was the high priest and could only be punished by God for his sin as it would demean his holy position but he did atone by pleading with Moses for his sister’s plight (2003:469).

Carson et al (1995:182) state that the Kushite woman was Moses’ second wife, Zipporah was the first. Aaron had also spoken against the marriage but went
unpunished, which Graetz believes, correctly in my opinion, is unfair and discriminatory and jeopardised Miriam’s leadership ambitions (in Carson et al 1995:186). Aaron pleaded with Moses for Miriam to be healed and suffered greatly from guilt (Nm 12:10-12). Plaut maintains that Miriam’s disfigurement was only a temporary one but Aaron’s punishment of seeing his sister’s hideous appearance and the humiliation of begging his brother for Divine intercession left lasting scars (2006:970).

Dunn & Rogerson believe that in an earlier version of this account Miriam was the only critic (2003:142) but in my opinion the fact that both she and Aaron challenged Moses’ leadership and his unique authority to interpret and prophesy God’s word, may have been the result of some earlier unresolved sibling rivalry issues. Carson et al agree with Dunn & Rogerson in that leadership issues were being challenged but they postulate that Miriam and Aaron wanted similar leadership rights as Moses, and saw themselves as part of a future triumvirate (1995:182). Miriam may not have been the instigator of the slander against Moses’ wife but she was punished harshly. Considered possibly from her viewpoint, she was a prophetess and leader of the Israelite women consequently she possessed some authority which she used against Moses (Carson et al 1995:182).

The fact that she had to be isolated in disgrace for seven days at Hazeroth (as if her father had spat in her face) was in the opinion of the commentators a reminder to her of her insensitivity and rudeness to Moses and to exclude her as if she had been disowned by her father (Dunn & Rogerson 2003:142). This was a stern indication of God’s power by the Biblical authors. They used the analogy of a father’s severe punishment to refer to God’s harsh chastisement of Miriam in my opinion. Plaut’s view is that God regarded Miriam as His daughter in His house and had to chastise her to maintain domestic discipline, hence her isolation (2006:966). The community waited for her before moving on to Paran (Nm 12:16). Graetz believes that the situation would have resulted in far less
trauma for all concerned if Miriam had spoken to Moses personally rather than behind his back (1990:190).

Moses’ leadership over seventy elders and his sole access to God, made him very privileged. Consequently his authority was deemed to emanate directly from God. As a result those who questioned his decisions were harshly dealt with. The commentators’ view is that Moses’ leadership had to be firmly entrenched by the authors of Deuteronomy to ensure the health and happiness of the community (Dunn & Rogerson 2003:143) and Miriam had to be severely punished by being inflicted with tzara’at (Carson et al 1995:182).

Dunn & Rogerson reasonably assume that Miriam was completely free of tzara’at when she was re-admitted into the camp after seven days (Nm 12:14; 2003:143). Alter is convinced that the usual quarantine would have been fourteen days but maintains that seven was sufficient time to enable her to recover from her public shaming (2004:744). She would have had to undergo the ritual cleansing mentioned in Leviticus Chapter 13 although the Bible is silent on this. Miriam died and was buried in the wilderness of Zin at Kadesh (Nm 20:1). Dunn & Rogerson mention that Moses became a revered leader and the lawgiver and Aaron father of the priesthood (2003:143). Unfortunately, in my view, Miriam’s reputation and image was tarnished by her unfounded slander of Moses. (See 4.8.6 for Biblical and ancient Near Eastern treatments and remedies).

4.8.4.2 King Uzziah of Judah

Uzziah means ‘Yahu is my might and strength’ according to Dunn & Rogerson but he was also known as Azariah, which could have been a ‘throne name’ (2003:307). Wiseman disagrees because Uzziah’s son acted as co-regent for about ten years (1993:250-1). He was the son of Amaziah, became king at age sixteen, and a contemporary of Jeroboam and ruled Judah for 52 years (circa
Assyrian records disagree and maintain he ruled for only 42 years (circa 783-742 BCE; MacLean 1962:743).

Adeyemo maintains that Uzziah was initially very obedient to God's laws but disobeyed them during the last years of his reign, Saul and Asa behaved in a similar fashion (2006:522).

It was a time of great prosperity for both the kingdoms of Israel and Judah (Cook & Weingreen 1967:1059). Uzziah achieved fame even in Egypt (2 Chr 26:8) with his final defeat of the Philistines by his presumed re-conquering of Elath on the Red Sea (Brown et al 1990:379). He was also successful in his battles against the Arabs and Meunites because he ‘did what was pleasing to the Lord’ (2 Chr 26:6-7; Adeyemo 2006:523). Uzziah reconstructed Jerusalem’s wall with watch towers to keep cattle thieves in check. Brown et al mention that a depiction of a tower and cistern in the desert, constructed in the 8th century appear in the pottery of this pre-Qumran period (1990:379).

Adeyemo states that Uzziah was a good agriculturalist, described as a ‘man of the soil’ (2 Chr 26:10) he built cisterns and dams for water and reclaimed desert areas for cattle farming. He rebuilt Elath, had a powerful military force of 307 500 soldiers and 2 600 officers plus secretaries and scribes (2 Chr 26:10-12; 2006:523). The king employed military engineers to install equipment that would facilitate shooting of arrows and hurling rocks from the walls and towers of Jerusalem (Adeyemo 2006:523; 2 Chr 26:15). Uzziah co-operated with his religious mentor, the prophet Zechariah (Brown et al 1990:379) but was criticised for not destroying the early pagan Canaanite shrines by the author of the Book of Kings (Heidt 1967:831). Carson et al (1994:413) attribute his success to his vision, he was humble enough to accept advice and the authors of the Book of Kings believed that he had found favour in God’s eyes (2 Chr 26:15). Adeyemo maintains that Uzziah’s prosperity was God-given: perhaps a case of the maxim ‘God helps those who help themselves’ (2006:523).
Unfortunately his power must have gone to his head because he interfered in religious affairs like Jeroboam (1 Ki 12:28 – 13:5) and Saul before him (1 Sm 13:7-8). The latter could be excused because there was no clear demarcation between political and religious leaders at that time. Uzziah decided to burn incense in the temple which was the prerogative of the priests (Ex 30:1-10) despite probable vehement protestations and warnings to the contrary by Azariah the priest and eighty ‘strong and courageous priests’ (TEV 2 Chr 26:17; Carson et al 1995:413). The arrogant king was determined to carry out his desire and lost his temper but was struck with leprosy (the word tzara’at appears in the Hebrew text) which lasted the rest of his life (2 Chr 26:21; cf Carson et al 1995:413). It is the view of Brown et al that confusion arose over the identity of Uzziah’s religious advisor, the high priest Azariah and the prophet Zechariah (1990: 379).

He postulates that Azariah was probably not the king’s alternative name, but the name of the high priest who performed certain ‘regent-priest duties’ during Uzziah’s illness before the transfer of kingly powers to his son, Jotham (Brown et al 1990:380). On the other hand, Brown et al are prepared to concede that Azariah might have been a private name adopted by the king after his abdication because the Hebrew names Uzziah and Azariah differ by only one letter (1990:380) but does not give any further reasons for his belief.

Josephus (Antiquities of the Jews, 9, 10:22ff) relates on the same matter, how King Uzziah, on a religious festival, dressed in priest’s clothes, entered the temple and proceeded towards the altar with the offering despite the priests attempts to prevent him from doing so (2 Chr 26:16-18). An earthquake then occurred causing a crack in the temple and his affliction with tzara’at resulted from a sun ray shining on his forehead through a crack in the roof (Antiquities of the Jews, 9:223ff). Such an earthquake was recorded during Uzziah’s reign but Dunn & Rogerson maintain it happened frequently in Jerusalem (Zechariah 14:4-5; 2003:728). Oded’s explanation of this is that there is no historical connection between the earthquake and Uzziah being inflicted with tzara’at - the link should
be seen to be a tradition of folklore highlighting the fact that it was extremely rare for one afflicted with such a disease also to be a king (2007(b):451).

According to Adeyemo the king became enraged at being asked to leave the temple. When *tzara’at* struck him on his forehead for all to see, it rendered him ritually impure so that he had to flee the temple unceremoniously (2 Chr 26:19; 2006:523). Harrison believes that the king was inflicted with modern leprosy (1962(a):113). By way of proof, Mull & Mull (1992:36) state that leprosy nodules often make their first appearance on a forehead and Cochrane, a leprosy specialist is of a similar opinion (1963:14; 2 Ki 26:19; Figure 27 in the List of Photographs).

Japhet postulates that the spot on Uzziah’s forehead was a reddish-whitish colour and bases this belief on ‘a trick of the light’ as it were, when Uzziah was holding the censer in front of the priests his forehead ‘shone’ with leprosy (1993:886). Japhet highlights the almost magical infliction of *tzara’at* on Uzziah’s forehead, almost as if God had suddenly ‘burnt’ the king with the disease just as Uzziah had burnt the incense in the temple (1993: 885). The lesion on the king's forehead was clearly visible if not a reddish colour, certainly different from the surrounding skin. It appeared almost instantly while modern leprosy always appears as a lesion that is lighter than the surrounding skin (Berkow & Talbot 1977: 127) and takes many years to manifest. Mull & Mull cite the case of King Uzziah where the leprosy first appeared on his forehead (2 Ki 26:19) and lasted for the rest of his life (1992:36). The king was probably suffering from modern leprosy for the following reasons:

- If the lesion on the king’s face was not red, but white, it would resemble a description of Hansen’s disease (Berkow & Talbott 1977:127) except for its sudden appearance (2 Chr 26:19). In my view, it is quite possible that the king’s *tzara’at* was in fact modern leprosy which only became obvious after the priests caught sight of the pale lesion on his face shining from the
light of the burning censer. The king then fled the temple (2 Chr 26:20). As the Chronicler does not offer further explanations, it is impossible to state whether Uzziah fled because his secret was out and he had to leave the temple precincts speedily or the realization that he was ritually impure. The Bible unfortunately is silent on these salient points.

- Verbov’s view is that Uzziah could have been suffering from modern leprosy, psoriasis or lupus erythematosus and by isolating himself from his subjects he avoided sunlight exposure (1976:236). The latter disease is defined by Davis et al (1968:361) as ‘inflammation of the skin with disc-like patches having raised reddish edges and depressed centres and covered with scales or crusts which exfoliate leaving dull white cicatrices’ (scars). Any form of lupus is exacerbated by exposure to sunlight or ultraviolet light (Anderson 19(68):347).

It is my view that the king most likely suffered either from modern leprosy or lupus. It all hinged on the lesion on his forehead and whether the king realised that he actually had leprosy but decided to keep it a secret because it was not noticeable. The only symptom of this tuberculoid form of Hansen’s disease would have been loss of sensation on his face (Berkow & Talbott 1977:127) which we do not know.

Japhet mentions an analogous incident regarding the sunlight where the Moabites (who were at war with Israel and Judah) noticed the sun was shining on the water and it appeared (by Divine means) as red as blood to them thus leading them into a trap (2 Ki 3:22).

Thereafter the king was isolated in a secluded house, ritually unclean because of his disease (2 Ki 15:7; 2 Chr 26:21). The king’s house was probably a house of confinement or a virtual prison (Japhet 1993:887). Rosner postulates that this house might have been a leprosarium for King Uzziah (2000:168).
As Uzziah was unable to perform his royal duties or associate with anyone, his son Jotham acted as co-regent (Japhet 1993:887; cf Dunn & Rogerson 2003:307). When Uzziah died he was not buried in the graves of the House of David but in royal burial grounds because he suffered from tzara’at (2 Chr 26:23; Oded 2007(b):450; Japhet 1993:887). The latter questions the reason for his burial apart from the other kings because there was no halakhic reason for such exclusion of the dead, only the living (Japhet 1993:887).

Carson et al maintain that Uzziah’s affliction with tzara’at was not clearly stated to be a punishment in the Second book of Kings (15:1-6) but merely the Chronicler’s way of asserting God’s power over sickness and health; however, the passage in 2 Chronicles (26:18-21) clearly states that it was punishment by God and if the account was known to all then it was not necessary for the Chronicler to repeat it (1995:413; cf Dunn & Rogerson 2003:307). The author of the Book of Kings mentions that King Uzziah did not destroy the pagan places of worship just before they allude to his affliction with tzara’at, it is reasonable to presume that the one is linked to the other.

Oded maintains that in the time of Uzziah there was still a power struggle between the king and the priests for ritual supremacy at the Temple (2007(b):451). The reason for the king wanting to usurp the priestly functions is by no means clear. He was an experienced ruler, a mature man who ought to have known better (Carson et al 1995:413). Oded’s opinion is that he wanted to manifest his royal authority in the Temple (2007(b):451). David wore an ephod (a priestly vestment) when the Ark was carried into Jerusalem and it appears that Solomon and all the people gathered before the Covenant Box and sacrificed a large amount of sheep and cattle - the king performed religious rites at that time without any opposition from the priests (1 Ki 8:5; 3:15). Dunn & Rogerson note with interest that the priest during Uzziah’s reign was also named Azariah and ponders where the seat of power really lay (2003:307; See 4.8.6 for Biblical and ancient Near Eastern treatments and remedies).
4.8.4.3  Naaman

Adeyemo maintains that commentators have no idea when Naaman’s healing incident occurred, possibly after Ahaziah’s reign (767-740/39; 2006:447). Naaman was a famous commander in the Aramean army, a ‘person who suffered from leprosy’ (2 Ki 5:1; 2006:447; a translation of the word mitzorat in the Hebrew text).

Although not a Jew, Naaman had heard of Elisha’s healing powers from an Israelite girl taken captive in an Aramean raid against Israel (2 Ki 5:2). Dunn & Rogerson find it ironic that such a renowned man’s fate rested on the faith and trust of an unknown slave girl (2003:267). Not much is known about this slave girl that served Naaman’s wife but Adeyemo maintains that she must have been capable and of sound character because the slaves in the household of such a high ranking man would have been of the very best caliber (2006:447). It is also possible that Naaman had prayed to Hadad Rimmon without success (Dunn & Rogerson 2003:267).

There was an uneasy peace at this time between Israel and Aram (Syria) judging by the Israelite’s king’s angry and negative reaction to the letter he received from the Aramean king requesting healing for his military commander, Naaman (2 Ki 5:7; cf Carson et al 1995:366). The king never thought of referring the commander to Elisha (et al 1995:366); either the king had never heard of the prophet or did not believe that he was a renowned healer (Adeyemo 2006:448). News must have traveled fast because Elisha soon heard of the commander’s illness and requested the king to send Naaman to him (2 Ki 5:8). Naaman went to Samaria bearing gifts: 340 kg silver, 70 kg gold and ten sets of clothing (2 Ki 5:4-6; Adeyemo 2006:448).

When the Naaman reached the prophet’s home, expecting to see him, he was met by Elisha’s servant who only had a message from him (Adeyemo 2006:448).
Consequently, Naaman’s reception was a huge anti-climax and he was very angry and disappointed by the prophet’s cure, which was to immerse himself seven times in the Jordan River (Adeyemo 2006:448; 2 Ki 5:10; cf Brown et al 1990:176). Naaman at first refused to bathe in the river, saying that he could just as well return home and cure himself in the rivers Abana and Pharpar near Damascus (2 Ki 5:12). His servants pointed out that the treatment was not difficult. Wiseman suggests that Naaman probably expected his healing to take place with pomp and ceremony and was disappointed at his low-key cure; he had to learn faith, humility and that God required his obedience for his healing to take place (1993:206). Carson et al (1994:366) maintain that this cure was God-given through Elisha and the God of Israel demanded obedience in all matters even those deemed trivial (1995:366).

Naaman must have time to reflect on the matter and was either sensible or humble enough to obey the prophet – he followed God’s instructions and was healed (2 Ki 5:13-14). Naaman was deeply impressed by Israel’s God and became an immediate believer in Him (Adeyemo 2006:448). Rosner regards Naaman’s healing a miracle saying that if merely bathing in the River Jordan could cure leprosy, then the river would have been full of those afflicted with the disease (1978:335). Verbov (1976:233) claims that Naaman’s illness may have been psoriasis, vitiligo or scabies but believes strongly that it was scabies cured by the sulphur springs of the Jordan River.

The grateful Naaman presented his gifts to Elisha by way of thanks, but the prophet refused to accept them as he was not a materialistic man (2 Ki 5:16; cf Adeyemo 2006:448). The Bible does not give a reason for the prophet’s refusal. Brown et al maintain that taking gifts to prophets was the usual thing to do in biblical days (1990:176) and in my view, probably considered good manners. Brown et al state that Elisha used his powers of healing for Naaman, a Syrian and an enemy foreign national (1990:176; Carson et al 1995:366) but God actually healed the Syrian commander. Naaman then requested some soil from
Israel to take back to Damascus with him as a reminder of his miraculous healing (Adeyemo 2006:448). Carson et al maintain that the exact quantity was two mule-loads (1995:366). Adeyemo believes the commander was worried because he would have to return home and worship the pagan god Hadad Rimmon, in the course of his duties to the king of Aram (2006:448; 2 Ki 5:17). Elisha realised Naaman’s predicament and pardoned him realising that Naaman would continue to grow in his new faith but did not expect initial perfection (2 Ki 5:18-19; cf Adeyemo 2006:448) appreciating the compromises that the commander would have to make (Brown et al 1990:176). Adeyemo states that Naaman, then joined the ranks of secret believers like Esther and Mordecai (Book of Esther) and Obadiah who served King Ahab (1 Ki 18:3; 2006:448) no longer believing that God was territorially limited (Brown et al 1990:176; cf Carson et al 1995:366).

Although the Bible is silent on a description of Naaman’s illness, Brown et al believe it is a type of skin disease as it was termed ‘leprosy’ in the Biblical text (1990:176 cf Carson et al 1995:366). Cf Adeyemo (2006:447) but he believes that it might not have been what we term leprosy today. (Cf Dunn & Rogerson 2003:267). Naaman not being Jewish would not have been regarded as ritually impure and was able to travel from Syria to Israel with ease (Dunn & Rogerson 2003:267). He would not have to follow the same purification rites as Jews who had recovered from tzara’at (Rabbi Matitiani, a private communication Cape Town, 2009).

There are no reasons given in the Bible for Naaman’s infliction of tzara’at but Dunn & Rogerson’s view is that the author of the Book of Kings used this incident as a manifestation of God’s supreme and sole power not only in Israel but in other countries as well (2003:267). Brown et al are of the same opinion and continue by describing how the story illustrates Elisha’s power over others including those in a foreign land (1990:176).
Brown et al state that Elisha maintained his mystique and high-standing by sending his servant with healing instructions to Naaman (1990:176). It is however possible, I believe, that the prophet was genuinely busy and could not meet him.

Brown et al maintain that Naaman’s servants in this story play an important role in his healing (1990:176). The high status of the commander contrasts with the slave status of the maid servant of the commander’s wife (Brown et al 1990:176). It was through the servants that Naaman was eventually healed, first by his hearing of Elisha, and secondly by the positive attitude and persuasive encouragement shown by his servants when the commander was debating whether or not he should bathe in the River Jordan (Brown et al 1990:176).

It is interesting to note that Elisha sanctioned Naaman’s worship of the pagan god, Hadad Rimmon in the knowledge that these rival gods had no power (Dunn & Rogerson 2003:267). Naaman’s healing caused him some soul-searching as he still had to go through the motions of pagan worship so as not to provoke the King of Aram. Carson et al maintain that this passage would evoke empathy in people who worshipped God alongside those of a different faith (1995:366).

Dunn & Rogerson note the difference in style between Elijah’s brutal murder of Baal’s prophets, whom he considered to be pagan (1 Ki 18:40) and Elisha’s more life affirming tolerance of Naaman’s worship of Hadad Rimmon (2 Ki 5:18-19). They postulate that Elisha was far more reasonable than Elijah (2003:267). There is no doubt that Naaman, who was not an Israelite, had a bearing on the matter (2003:267). Wiseman postulates that Naaman was a Jewish convert and could have been Ben-Hadad II’s general (1993:206; See 4.8.6 for Biblical and ancient Near Eastern treatments and remedies).
Elisha the prophet was active *circa* 848 BCE (Boshoff et al 2000:107). He had a servant Gehazi. Elisha was friendly with a rich Shumanite woman with whom he would stay over each time he passed through the town (2 Ki 4:8-9). He foretold that she would have a son (2 Ki 4:15). Years later the boy became ill in the fields and she went to ask Elisha for help (2 Ki 4:18-22). When he saw her coming in the distance, he sent Gehazi to meet her and after hearing that her son was very ill told Gehazi to hurry to the bedside of the boy and to hold his staff over him (2 Ki 4:29). Elisha later miraculously restored him to life (2 Ki 4:32-34).

Naaman, a leprous general from Syria, had been cured by Elisha who refused to accept his generous gifts of gold and clothing (2 Ki 5:10-16). Gehazi however, believed that he was entitled to these gifts because Elisha had refused them and the thought of all those riches and clothing possibly returning to Syria proved too much for him to resist (2 Ki 5:20-21; cf Carson et al 1995:366). According to Wiseman Gehazi swore by ‘the living Lord’ that he would get something from ‘that Syrian’ (1993:208; cf 2 Ki 5:20).

Gehazi ran after Naaman, artfully lying to him saying that the prophet had changed his mind (2 Ki 5:22). He took advantage of Naaman’s generosity clearly displaying the naivety of the general, and begged for the presents, which Gehazi slyly arranged to have sent on ahead (2 Ki 5:23; cf Carson et al 1995:367). Carson et al illustrate that not even those in God’s service are immune to temptation and abuse their status (1995:366). He was however, unable to deceive Elisha who realised what had happened. Gehazi lied to his master by denying that he had benefited from Naaman’s gifts (2 Ki 25-26). The Bible relates that Elisha then predicted that he would contract *tzara’at* and that he and his descendants would suffer from it for eternity – it seems as though he contracted the disease immediately, much like Miriam.
And he went from his presence leprous, as white as snow. (2 Ki 5:27 NKJV).

The Bible gives no reason for Elisha’s refusal to accept Naaman’s gifts but simply states that the prophet deemed that acceptance on this occasion would not have been appropriate (2 Ki 5:26; cf Carson et al 1995:366).

Skolnick, Berenbaum, Gafni & Gilson are of the opinion that Gehazi did not suffer from Hansen’s disease because he was not living in isolation (2007:713). Cf Dunn & Rogerson, who believe that Hansen’s disease did not exist in biblical times (2003:267). In my opinion Gehazi, like Miriam, probably suffered from vitiligo which resembles Hansen’s disease. Gehazi is depicted in the Bible as a rogue who could not resist temptation and would lie and cheat to get what he wanted (Adeyemo 2006:448) and it was for those reasons that God inflicted him with leprosy through the prophet Elisha.

It is the view of Carson et al that Elisha punished Gehazi for his audacity (as a servant) because he felt entitled to the gifts that Elisha himself refused to accept (1995:367). Rosner however believes that Gehazi might have contracted tzara’at by direct contact when he wore Naaman’s clothes or that the illness could also have been psoriasis74 (1978:338). I find his view problematic because it is not known whether Gehazi’s type of tzara’at was contagious and it is highly unlikely that Naaman would have presented Elisha with second-hand clothes that he himself, had worn. Yeivin however, explains that clothes were expensive items that indicated the status of the wearer and were regarded as valuable because of the labour involved in their production (2007:12). The Bible often documents the amount of clothing given as gifts (2 Ki 5:5) or taken as booty (Jdg 14:12) but it is not certain how many clothes Naaman offered to Elisha (2 Ki 5:15). The passage in 2 Kings 5 refers to gifts that Naaman sent to the king of Israel but it is

---

74 Psoriasis is a chronic inherited skin disorder believed to result from a compromised immune system and could be the result of genetic mutations (http://wikipedia.org/wiki/Psoriasis#Genetic_factors). Psoriasis is an auto immune disease, not contagious manifesting as red scaly patches on the skin (http://en.wikipedia.org/wiki/Psoriasis; Figure 21 in the List of Photographs).
ambiguously stated so that the reader is not sure whether the same gifts were later offered to Elisha by Naaman.

Carson et al believe that the story of Gehazi was written to test the obedience of a servant to his employer or to a higher authority (1995:366; cf Brown et al 1990:176). Dunn & Rogerson (2003:267) mention that the way in which Elisha deals with Gehazi is confrontational and reminiscent of God’s dealings with and punishment of Adam and Eve (Gn 3:8-19) and Cain (Gn 4:9-16). In all these cases, the punishment is more severe because they denied their guilt and refused to take responsibility for their actions (Dunn & Rogerson 2003:267; See 4.8.6 for Biblical and ancient Near Eastern treatments and remedies).

4.8.4.5 The four leper heroes of Samaria

The uneasy peace that existed between Israel and Aram had ended (circa 870 - 840 BCE) and war resumed – The Aram army under Ben Hadad\(^{75}\) had surrounded Samaria and the city was in an emergency situation under siege (2 Ki 6:24-25; Adeyemo 2006:450; cf Brown et al 1990:176). Famine in the city had resulted in not only non-kosher donkey meat being consumed by the inhabitants, but food was scarce and prices were exorbitant – some even resorted to cannibalism (2 Ki 6:26-29; cf Adeyemo 2006:450; Brown et al 1990:177). Bright (1972:244, footnote 59) believes that the king of Israel at the time was either Jehu (841-813 BCE) or Jehoahaz (813-798 BCE). The king, claimed Brown et al (1990:177), cursed himself and put on sackcloth underneath his garments as a sign of repentance hoping to win God’s favour. He tore his clothes in horrified dismay, wanted to kill Elisha and blamed the prophet for allowing such a situation to develop (2 Ki 6:31-32). Adeyemo claims that the king probably believed that Elisha should have intervened before the situation became so terribly desperate (2006:450; cf Brown et al 1990:177). Elisha, according to Brown et al displayed clairvoyance tendencies (1990:177) and was able to predict that the whole

\(^{75}\) Bright (1972:239, footnote 47) records that his personal name was Hadadezer (Adad-idri).
situation would be reversed within twenty four hours: and promised the king the
famine would be over and commodity prices would have returned to normal but

Amid all this turmoil were four lepers, ritually unclean men, who were obliged to
live outside Samaria, close to the city walls, between the town and the enemy
camp (2 Ki 7:3). They, like the other inhabitants, were starving (Adeyemo
2006:450; 2 Ki 6:24). With no food in the city, very little hope of any sustenance
from the inhabitants and death staring them in the face, they decided to risk all at
nightfall and made their way to the nearby Aramean camp and found it to be
completely deserted (2 Ki 7:4-5). Adeyemo believes that the enemy had fled in
terror, leaving their animals and equipment behind, hearing what they believed
sounded like an advancing force of Hittite and Egyptian mercenaries hired by the
Samarian king to attack them (2 Ki 7:6-7; 2006:450).

Wiseman maintains that it was Divine intervention that saved Samaria (2 Ki 7:6-
7; 1993:211; cf Adeyemo 2006:450; Brown et al 1990:177). The four men, after
satisfying their hunger decided to take the good news to back to Samaria (2 Ki
7:9-10). On receiving their news, the despairing and doubtful king was convinced
that this was a trap but was persuaded by his military scouts to send a
reconnaissance party on a special mission back to the camp (Brown et al
1990:177; 2 Ki 7:13; cf Adeyemo 2006:450). There they found the abandoned
clothes and equipment, reported this to the king, the gates of the city were
opened and the famished Samarians rushed to loot the camp (2 Ki 7:14-16;

The Bible gives no description of their illness except to state that they were
lepers and that they lived outside the gates of Samaria (2 Ki 7:3). Modern leprosy
usually manifests as ulcers on the patients' feet and Browne's comments on the
Bible account is that these men did not appear to be suffering from such ulcers
as they were able to walk to the Aramean camp (1977:23). He believes that their
disease was another form of skin ailment (Browne 1977:23). The Bible is silent as to what they had done to merit being plagued with *tzara’at*.

Carson et al’s view is that these men were outcasts but they were generous and decent people who saved the Samarians from starvation because they never kept the good news to themselves (1995:368). Dunn & Rogerson agree with this and postulate that the Biblical authors were trying to show that lepers, despite their outcast status, could also be good citizens (2003:268).

Matthews & Benjamin are convinced that the four lepers had come to terms with their unclean status, adapted to their position in society and found it relatively easy to use their ‘labels’ to their advantage (1991:296). They conclude by saying that they were opportunists (Matthews & Benjamin 1991:297). First they satisfied their hunger, then hid money and clothing for future use (2 Ki 7:8-9). They decided to return to Samaria with their glad tidings because they realised that they were beggars, dependant on the inhabitants of the town for handouts (Matthews & Benjamin 1986:297). Their future was linked to Samaria – they realised that if the town’s inhabitants starved, so would they.

It is ironic that no one thanked them or even mentioned their names in the Book of Kings despite their venturing into dangerous territory and saving a city from famine. (See 4.8.6 for Biblical and ancient Near Eastern treatments and remedies).

### 4.8.5 Archaeological evidence

Medical historians have not been able to find any archaeological evidence of modern leprosy before Alexander the Great’s armies returned to the West from India in 325-324 BCE (Browne 1977:18; cf Greeff 2005:94; Heller et al 2003:590; Hulse 1975:91; Zias 1989:27). Cochrane states that there is mention of leprosy (*kushtha*) in the Vedic writings of India dating back to 1300 and 500 BCE.
Chinese references to modern leprosy date prior to 600 BCE and it is believed that a disciple of Confucius (circa 551-478 BCE) had it (Cochrane 1963:6-7). Mull & Mull are convinced that both modern leprosy and tzara’at were common during biblical times (1992:37) but Zias states that both of these illnesses were only common in Israel during the Mishnaic and Talmudic periods (Zias 1999 [http://joezias.com/Health/Healing/andIsrael.htm]).

Heller et al maintain that no archaeological evidence of leprosy from pre-Christian times in the Middle East has yet been discovered (2003:590), although Yoeli mentions that a pottery jar depicting the figure of a human head was unearthed in 1927 during excavations at Beth-Shan, Israel. He ascertained that it dates to the Tel Amarna period (1400 BCE; Yoeli 1985:1067). He describes the jar with a moulded face upon it that appeared to be a depiction of the face of a leprosy sufferer (Yoeli 1955:332).

The skin thickening and swelling that take place in cases of lepromatous leprosy are clearly visible resulting in what appears to be the typical lion-like appearance of a modern leper patient, lending some credence to the belief that leprosy did exist during the time of Amenhotep III - 1411-1314 BCE. Greeff is convinced that this is not sufficient proof that Biblical tzara’at co-existed with modern leprosy (2005:94). Yoeli again draws attention to the Canaanite god, Mot who was depicted with a typical leonine face of modern lepromatous leprosy (1985:1062, 1065). Browne however believes that the resemblance is merely fortuitous and compares it to a figure that might appear on a Toby-jug76 popular during the last century (1977:17; cf Cochrane 1963:4). Heller et al (2003:589) state that there is a difference of opinion between scholars as to the presence or absence of modern leprosy (Hansen’s disease) in ancient times.

---

76 A Toby-jug was a colourful beer mug shaped like a stout old man wearing a long coat and three-cornered hat.
Heller claims that Egyptologists are uncertain as to whether a disease termed $3.t.nt.h\ nsw$ that appears in 2nd millennium medical papyri could possibly be true leprosy (2003:590). Filer (in Heller et al 2003:590) believed that bones discovered in a Ptolemaic cemetery dating to circa 200 BCE showed signs of leprosy but later research by Stol (in Heller et al) challenges this hypothesis as there is uncertainty whether these bones could actually be linked to leprosy (2003:590).

It is uncertain whether there were leper houses (leprosaria) during biblical times. The only record seems to be that of King Uzziah who lived in a ‘house of refuge’ or beth ha-chophshith because he died a ‘leper’ (Rosner 1978:336; 2 Ki 15:5 & 2 Chr 26:21). The word chophshith can also be interpreted as ‘free of the obligations of his royal duties’ (Rosner 1978:336). It could also have meant that the king lived in solitude without the company of other ‘lepers’ because he was a king but still regarded as ‘dead’ just like any other ‘leper’ (Rosner 1978:336; Talmud – Nedarim 64b). Wiseman believes that the best translation of the phrase is ‘lived in freedom at home’ (1993:251).

The archaeologist, Aharoni, excavated a small building he thought to be a royal dwelling at Ramat Rahel (near Jerusalem) where he believes that Uzziah may have lived out his last years in isolation. Aharoni is of the opinion that the building belonged to royalty because similar stone buildings were found at Megiddo and Samaria before Uzziah was king (in Wiseman 1993:251). There is archaeological evidence of the king’s reburial in an ossuary that positively identifies it as belonging to Uzziah (Oded 2007(b):450). The Uzziah Tablet$^{77}$ was found by Prof. EL Sukenik, father of Yossi Yadin, the Israeli archaeologist, of the Hebrew University of Jerusalem in 1931 at a Russian convent, where it formed part of a collection from the Mount of Olives. Its origin is a mystery for it was undocumented (http://en.wikipedia.org/wiki/Uzziah_of_Judah). The stone tablet is inscribed in Hebrew with Aramaic style script that appears to date to between 30-

$^{77}$ This is housed at the Israel Museum in Jerusalem.
70 CE, some 700 years after the presumed death of Uzziah in 739 BCE and measures 35cm high X 34 cm wide X 6 cm deep (http://en.wikipedia.org/wiki/Uzziah_of_Judah). What is remarkable is the Aramaic inscription that appears on this stone tablet stating simply:

‘Hither were brought the bones of Uzziah, king of Judah – do not open.’ (Translation by Albright; Oded 2007(b):450).

Obviously death and decay of the body had little impact on the bones of a leper as they were still regarded as ritually contaminating! Sadly Uzziah’s isolation continued in death.

According to Hulse, there is no archaeological evidence for the existence of Hansen’s disease during Old Testament times (1975:91). While Mull & Mull (1992:37) believe otherwise, postulating that King Uzziah and even Miriam could have been sufferers of modern leprosy (Hansen’s disease) judging from the biblical descriptions of their illness; Greeff agrees that archaeological evidence has yet to be excavated in future to prove that modern leprosy (Hansen’s disease) existed in biblical times (2005:114).

Browne and Cochrane state that Hansen’s disease might have existed during New Testament times but Hulse finds no support for this point of view saying that if modern leprosy did exist at that time, it would have been called elephas (Hulse 1975:91). Zias suggests that Hansen’s disease first appeared in Israel after the destruction of the First Temple and was permanent by the early centuries of the Common Era (1989:30). This is borne out by skeletons found in the Judean desert at monasteries that date from Byzantine times (from about 475 CE) and Mull & Mull postulate that they were leper asylums (1989:62).

As Jewish religious law requires human remains to be re-buried as soon as possible, there is not much time to conduct desirable examinations when human remains are fortuitously unearthed (Greeff 2005:85). Exhumation is not permitted
as this would dishonour the dead (Talmud – *Baba Bathra* 155b). Even autopsies in Israel are prohibited for the same reason (Rosner 2000:35). In the light of the above other archaeological evidence of a leprosy sufferer in Europe dating back to late Talmudic times is of paramount importance. Zivanovic describes skeletal remains from excavations that took place in Naestved in Denmark by Moller-Christensen that date from early medieval times\(^78\) (*circa* 476 CE). These remains manifest characteristics common to sufferers of Hansen’s disease i.e. skull changes that are indicative of a patient with the typical leonine face of modern leprosy (1982:231).

4.8.6 Biblical and ancient Near Eastern treatments and remedies

The only ‘treatment’ that the Bible mentions for *tzara’at* was isolation outside the city walls (Lv 13:46). Once a sufferer was cured, there were purification rituals involving cedar wood and hyssop (Lv 14:4) that had to be dipped in the blood of a sacrificed bird and sprinkled on that person seven times (Lv 14:6-7). These herbs were used for ritual purposes only but seemed not to have any other significance.

Research has also revealed use of the following medicinal herbs for all types of *tzara’at*:

**Hyssop** (*Hyssopus officinalis*) is indigenous to the Mediterranean region. Modern analysis has shown the plant possess anti-spasmodic and expectorant properties and is used in herbal cough mixtures, according to Kramer (2006:118; cf Van Wyk & Wink 2004:177). She also mentions that in 2002 Italian researchers recommended the essential oil for intestinal cramp. The plant has antiseptic, antifungal and antiviral properties because of the presence of caffeic acid. Research published in *Antiviral Research*’ in 1990 reveals positive reports that extract from its leaves has strong action against HIV/AIDS but further research in

\(^78\) The middle ages was the time between ancient and modern times and is usually regarded as the period between the fall of the Western Roman Empire (5\(^{th}\) century CE) and the beginning of the Renaissance (middle of the 15\(^{th}\) century CE; Coulson et al 1980:537).
this direction is required (Kramer 2006:118). Daniel believes that hyssop is useful nowadays to treat upper respiratory infections and flatulence (2006:61). The tannins and polysaccharide fractions contained in the plant have been found to repress the SF-strain of the HIV-1 virus (Daniel 2006:61; cf Kramer 2006:118).

Cedar wood was used by the ancient Egyptians in their mummification ingredients and in the building of Solomon’s temple (2 Ki 6:9) because of its insect-repelling odour (Wooten & Saville 20[05]:255). Cedar wood is a generic term for several oils and Atlas cedar oil (Cedrus atlantica) is the one most commonly used in aromatherapy; the plant has antiseptic and antibacterial properties as well as being beneficial to the healing of wounds on the body, face or scalp (Wooten & Saville 20[05]:256). Another species of cedar wood (Cedri libani – cedars of Lebanon; Lv 14:4-7) were also used in the purification ritual of a recovered tzara’at sufferer and this is confirmed by the Talmudic sages in tractate Sotah 15b. Van Wyk & Wink document its antiseptic and expectorant effects making it a useful remedy to treat coughs and bronchitis but these authors do not mention that it is used to treat leprosy in modern times (2004:403).

Zohary mentions that the ancients used the plant hammada (hammada salicornica) to make soap by mixing the burnt plant ash with olive oil (1982:151). It is possible that this was used to clean wounds and skin lesions.

Theophrastus (circa 371-288 BCE – a Greek peripatetic philosopher and botanist) recommended black nightshade (Solanum nigrum) which was used in a decoction base and applied to all skin lesions (Rosner 1979:199). Palmer mentions this herb, also termed Nagskade or Msobo in South Africa (1985:121). A leaf decoction of the plant is used to treat skin ulcers and the leaf is used as a dressing or poultice for wounds (Palmer 1985:121). Singh mentions that the plant is used mainly as a laxative and diuretic but also for psoriasis (2006:239). Chiej states that black nightshade has been in use since ancient times because of its calming and analgesic effect and is invaluable in the treatment of toothache. The
medication is applied locally (1988:290). In my view, it is possible that it was used to ease painful skin problems.

Steinbach & Hanach (in Rosner 1993:4) mention that healing remedies were made from storax resin (*Liquiambar orientalis*) found in Northern Syria which was applied to the skin of leprosy sufferers. Singh refers to this plant as Asiatic storax and is adamant that its balsam is used for coughs, bronchitis and kidney disorders (2006:176). Van Wyk & Wink (2004:415) claim that the resin of this plant is still used to treat skin disorders but does not specify which ones and they are convinced that this plant is the balm of Gilead whose healing properties are documented in the Bible (Jr 46:11; Jr 51:8).

In the Ebers Papyrus, written *circa* 1550 BCE and discovered in 1862, a recipe was discovered for treating skin diseases such as *tzara’at* with application of castor oil. This recipe was proven many times according to Manniche (in Jacob, I 1993:84). In a similar vein is Biesenbach’s remedy (1998:10) for any sores and wounds: application of the warmed leaves of the Castor oil tree (*Ricinus communis*; also termed *Kasterolieboom* in South Africa). Chiej (1988:262) states that the ricinoleic acid contained in the oil is used to treat constipation (cf Ebadi 2007:161; Singh 2006:223) and scalp conditions such as dandruff. The seeds are highly toxic but the poison is not found in the oil.79 Nowadays castor oil is used in the soap and paint industry (Chiej 1988:262) but Daniel states that the oil is used to treat leprosy (Hansen’s disease), arthritis, piles and flatulence (2006:213).

To conclude I would state that despite the Bible’s silence on the topic of treatments for biblical leprosy (*tzara’at*), it is very probable that the ancients used a soap made by mixing the burnt plant ash of the hammada bush (*Hammada salicornica*) with olive oil and used it to wash *tzara’at* sufferers. The essential oil of the hyssop plant (*Hyssopus officinalis*) and that of the Atlas cedar (*Cedrus

79 Between five to six seeds ingested can kill a child and ten an adult (Chiej 1988:262).
atlantica) tree had uses other than that of purification rites for those whose tzara’at was cured: it was possibly also used by sufferers in a decoction base to wash and/or apply to their diseased skin. Black nightshade (Solanum nigrum) was used in a decoction base and applied to all skin lesions in circa 371-288 BCE and is still used today for much the same purpose; there is no reason to doubt that this was more than likely applied in biblical times to treat tzara’at. Just as the peoples of the ancient Near East used the castor oil tree (Ricinus communis) for treating skin diseases such as tzara’at, we use the same treatment for the sores of modern leprosy (Hansen’s disease) and wounds today.

4.8.7 Talmudic perspectives

The Talmud gives numerous perspectives on leprosy: During Talmudic times the laws of ritual purity were not as strictly enforced as during Temple times. Hulse (1975:94) affirms that the laws relating to cultic cleanness and sacrifices disappeared gradually after the destruction of the Second Temple in 70 CE, hence Jewish religious law regarding tzara’at was gradually disregarded. Rosner maintains that a person with leprosy could attend a house of study (Bet Midrash) but had to be segregated from the other students by a wall that reached to the beams of the synagogue (1978:336). The leprosy sufferers had to arrive first and leave last to avoid contaminating the other students. This is an indication of how much importance the study of Torah was accorded (Rosner 1978:348). Rabbi Joshua ben Levi studied Torah with those afflicted with leprosy as he believed that the Torah would keep him from contracting the illness (Mishnah– Nega’im 13:12). He demonstrated a similar empathy shown by a much earlier rabbi, Jesus of Nazareth.

There is an opinion expressed by the rabbis who regarded Miriam’s disease as punishment for her slander against Moses (See 4.48.4.1; Nm 12:1-16; Talmud: Mo’ed Katan 16b). Rabbi Akiva believed that Aaron also contracted tzara’at the same time as Miriam but he exchanged symptoms with her and recovered
leaving her still infected (Nm 12:10; Shabbath 97a) but she was healed by Moses’ prayer to God (Talmud – Berachoth 55b).

A person inflicted with tzara’at was permitted to co-habit with his wife and Uzziah had a son while so inflicted (See 4.8.4.2; 2 Chr 26:1-22; Talmud – Mo’ed Katan 7b; Kerithoth 8b). The Talmudic sages do not mention whether his wife or son ever contracted the disease. Normally a couple could only have co-habited seven days after the ‘leper’s’ recovery, return to the camp and cleansing mikveh (ritual immersion in water; Rosner 1978:336; Lv 14:8-9).

Naaman, the Syrian general was miraculously healed by Elisha (his name meant ‘beloved’; See 4.8.4.3; 2 Ki 5:1-19; Sotah 36b). The Talmudic sages regarded Naaman as a ‘resident alien’ who had limited rights in Israel in return for renunciation of idols (Talmud – Sanhedrin 96b). This could explain why Elisha was accepted Naaman’s worship of the gods of Rimmon (2 Ki 5:18-19). Being ‘unclean’ did not mean contagious and was not applicable to non-Jews who could not presumably catch ‘uncleanness’ nor pass it on (Mishnah – Nega’im 3:1).

The four lepers of Samaria were considered by Rabbi Johanan to be Gehazi and his three sons, who related that Elisha had traveled to Damascus after Gehazi was stricken with tzara’at, in an attempt to persuade Gehazi to repent but he believed himself to be unworthy of forgiveness, and refused (See 4.8.4.4; 2 Ki 5:20-27; cf Talmud – Sotah 47a).

Talmudic transgressions that could result in infliction with leprosy were: idolatry, blasphemy, incest, murder, theft, perjury, false testimony, arrogance, lewdness and jealousy to name a few. Of these lewdness and arrogance seemed to be the most likely which are discussed below:

- Lewdness: If a man cohabited with his wife during her menses, which was contrary to Jewish halakhah, the child would be leprous, if the couple had
intercourse on the first day, the child would become ill on its 10th birthday and if this happened on the 7th day the child would become ill on its 70th birthday, if the child lived that long (Rosner 1978:338; Midrash – Leviticus Rabbah 15:2). The rabbis seemed to believe that conception was possible while a woman was menstruating.

- Arrogance would result in a crop of scabs developing on the crown of the head of the sinner called pityriasis capitis a skin condition that forms branny scales on the head which is reminiscent of tzara’at; Is 3:16-17; cf Davis et al 1968:496; Kidd 1984:47; Rosner 1979:338).

- Zias mentions a study done in Nagpur, India in recent times which brought to light that 62 percent of the women in the study (aged between 18 and 50) first became aware of their leprosy symptoms immediately before or after a pregnancy. These were brought about by the hormonal changes that occur, which otherwise would have taken longer to manifest (Jopling, in Zias 1989:28). Men suffering from leprosy are not exempt from similar hormonal changes - sometimes they develop breasts and very noticeable skin changes in the genital areas (Jopling in Zias 1980:28). It is very probable that the rabbis became aware of this and tried to explain it by the incorrect association of menstrual coitus and the contracting of leprosy (Zias 1989:28). Based on the above Zias (1989:29) believes that Hansen’s disease existed side by side with tzara’at during the time of the Mishnah (30 BCE – 200 CE) and Talmud (200 CE – 500 CE).

- According to Talmud the removal of leprosy by surgical means was contrary to halakhah except in the case of a baby with a diseased foreskin that could be removed during circumcision. This explains the phrase that ‘circumcision takes precedence over leprosy’ (Talmud – Shabbath 132b; cf Kethuboth 40a).
• Leprosy developed when a couple neglected their marital intercourse (Talmud – Bechoroth 44b). This can be explained by their belief that a human consists of 50% blood and 50% water; if there is an excess of water, dropsy occurs and excess semen causes leprosy (Talmud – Bechoroth 44b).

• A leprosy patient had no status because he/she was regarded as dead, totally excluded from all social and religious activities (Talmud – Nedarim 64b). This made it unnecessary to put rules of exclusion in place, as was the case with the mentally challenged, who were not even permitted to attend any religious functions (Rosner 1978:337). They usually lived in isolation outside the city gates (2 Ki 7:3; cf Rabinowitz 2007:652). Rabinowitz (2007:652) writes that lepers were forbidden to venture into the city or live there with others. If a leper ventured into the city most people, and that included the rabbis, would run away from them because they were afraid of ritual contamination (Midrash – Leviticus Rabbah 16:3). Rabbi Meir would not eat eggs that originated from a street where lepers lived and Rabbis Ammi and Assi would not enter a leper district (Talmud – Kethuboth 77b) and Resh Lakish\(^{80}\) was determined to avoid lepers at all cost. When he spotted one in the city, he would attract the attention of the leprosy sufferer by throwing a stone at him/her to remind him/her to remain within their quarantine area (Midrash – Leviticus Rabbah 16:3). Rabbi Eleazar ben Rabbi Simeon\(^{81}\) (son of a rabbi) who was regarded as a holy man used to hide away from lepers. He defended his stance by saying that he did not wish to be seen by a scandalmonger! (The contracting of leprosy was thought to be the result of scandal (Talmud – Kethuboth 77b).

• The Talmudic rabbis – Raba in particular, cautioned against marriage with a leper because he believed that leprosy was genetically transmitted

---

\(^{80}\) His full name was Simon ben Lakish, a 3rd century Palestinian Amora (Kolatch 1981:1970).

\(^{81}\) A 2nd century Tanna (Kolatch 1981:90).
(Talmud – Yeabmoth 64b; Rosner 1978:453). This they must have deduced from their observations despite their lack of knowledge regarding genetics in my opinion.\(^{82}\) This means that the disease is not genetically transmitted from mother to child unlike HIV/AIDS – it does not manifest in children less than three years of age as a rule (Browne 1977:41).

4.8.8 Treatments in Talmudic times

Rabbi Johanan said that there was no leprosy in Babylon because the inhabitants ate beetroot, drank beer and swam in the Euphrates River (Talmud – Kethuboth 77b).

Scabs on the face were washed with beetroot juice (Talmud – Shabbath 134a). Beetroot (\textit{beta vulgaris}) contains betaine which is rich in vitamin A, beneficial to the skin as well and mucous membranes of the body (\url{http://www.wikipedia.org/wiki/Beet}). Perhaps the sages were aware that the beetroot therapy was beneficial for the skin. This remedy also stimulates the immune system and has been used to treat high blood pressure and liver damage, the anti-carcinogen property is linked to the red colouring matter in the plant but more research needs to be carried out in this regard (\url{http://www.femail.com.au/beetroot.html}).

The leaves of the Greater plantain (\textit{Plantago major}) indigenous to Europe and Asia were applied to wet leprous ulcers (Dioscorides 2:153). This plant has several uses today from that of staunching bleeding wounds, treating itchy and dry skin as well as soothing insect bites and cuts because of its anti-inflammatory properties (Kramer 2006:106; cf Van Wyk & Wink 2004:246). Ebadi documents the plant’s antiviral, antihistaminic and anti-tumor properties and adds that this

\(^{82}\) This has a bearing on Browne’s information that leprosy \textit{bacilli} have been found in the \textit{placenta} and umbilical cord of a newborn baby although it is most unusual for a diseased child to be born to a leprosy mother: If the baby is removed from the infectious mother, it does not develop the disease (1977:41).
plant possesses properties that regulate the body’s immune parameters. Consequently it could be important in the treatment of tuberculosis, cancer and AIDS (Ebadi 2007:498). Singh (2006:209) endorses the expectorant and anti-inflammatory properties of plantain but is not used today to treat modern leprosy.

Wild rue (*Ruta graveolens*), native to the Mediterranean region, was recommended by Dioscorides (3:52) and mixed with raisins to make a wine (*Vitis vinifera*; Dioscorides 5:4) finely pounded and applied to any kind of ulcer, presumably also leprous ones. Today wild rue has multiple uses and is taken to treat skin diseases and inflamed mucosa of the body (Van Wyk 2004:280; cf Daniel 2006:77). Chiej (1988:270) cautions that the plant is poisonous because of its abortive action and should be avoided during pregnancy.

Whey was prescribed by Dioscorides for ‘leprosy and elephantiasis’ patients to use for their sores (2:76).

Soapwort root juice (*saponaria officinalis*; Dioscorides 2:193) was mixed with meal and vinegar and used to remove leprosy. It is not known whether the remedies removed the leprosy but they possessed both cleansing and antiseptic properties. Daniel documents the detergent and antimicrobial properties of soapwort (2006:114; cf Chiej 1988:279). Chiej adds that the plant can be used externally to treat eczema and scaly skin outbreaks (1988:279). It is possible that it was used to treat both *tzara’at* (biblical leprosy) and Hansen’s disease (modern leprosy).

Gall (Dioscorides 2:96) of various animals was taken to suppress the nodules of *elephantiasis*. It was prepared by placing the gall bladder of the animal tied up with linen into boiling water and leaving it to soak. It was then dried in the shade. It was also used as a cleanser for the sores by mixing the gall with nitre (potassium nitrate) or fullers earth (ammonium silicate).
Sulphur (also called brimstone by the ancients) is described by Dioscorides (5:124) as a metallic stone but it is in fact a non-metallic volcanic element occurring in crystal form. The powder form is called ‘Flowers of Sulphur’. The powered crystals were applied to the leprosy sores. A personal interview with Otto Kingsley has revealed that modern leprosy sufferers make use of multi drug therapy including sulfones, which originated from sulphur (Davis et al 1968:593). Perhaps the remedy used by Dioscorides (5:124) all those centuries ago was able to alleviate some ancient suffering.

Silver slag (lithargyrum) or monoxide of silver, lead and molybdenum (a liquid substance made from silver pieces pounded and mixed with mineral salt and water) is mentioned by Dioscorides. It was processed for a month until it had lost its salty taste. The solution that remained was called lithargyrum; being toxic it was used to treat sores and wounds (possibly those of leprosy) but not taken internally (5:102). Pliny calls silver slag, silver dross and states that it was placed in healing plasters to treat slow healing wounds (Natural History 33:105). The only alternative remedy available used for leprosy nowadays patients is colloidal silver protein\textsuperscript{83} mentioned by Otto Kingsley, during our interview.

Surgery was carried out on leprosy patients if their arms or legs were badly disfigured and amputations were performed by the physicians (Talmud – Kerithoth 3:8) – it is not known whether any anaesthetic was administered before surgery but their limbs were insensitive due to nerve damage as a result of the leprosy: Leprosy sufferers would bury their arms in burial mounds outside the city (Talmud – Kethuboth 20b). Rosner claims that their stumps were enclosed in

\textsuperscript{83}It is used to wash the leprosy sores. It consists of minute particles and ions of silver suspended in pure water, made by a generator and can be taken orally, although in the United States the safety of the product has not been thoroughly tested by the Food and Drug Administration. It is used internally to treat leprosy, cancer, venereal disease and bubonic plague to name but a few and used externally to treat burns, fungal and skin infections. The only unpleasant side-effect is a permanent bluish skin discolouration. It works by binding to the proteins causing the disease and also neutralises certain enzymes and is an alternative treatment (http://www://en.wikipedia.org/colloidal/silver).
linen bandages so that they could move around with a stool attached to their body supported on their arms (1978:236).

4.8.9 Conclusion

The Bible gives very little information on leprosy but archaeological information the ancient Near East and a study of the Talmud result in a better understanding of the disease.

Tzara’at or the ‘leprosy of biblical times’ was mistranslated as ‘leprosy’ when the Old Testament was translated into Greek in New Testament times resulting in tzara’at being mistranslated as leprosy. The Romans called leprosy elephantiasis graecorum but John of Damascus was the first to term it lepra, erroneously in my opinion. Adeyemo maintains that lepra was a generic term for many skin diseases.

Medical historians such as Browne, Heller et al, Hulse and Zias have been unable to find any archaeological evidence of lepromatous or tubercular leprosy (mycobacterium leprae) before the time that Alexander the Great’s armies returned to the West from India in 325-324 BCE. Yoeli however, describes archaeological evidence of a pottery jar that was excavated in 1927 in Israel dated about 1400 BCE. The face on the jar was reminiscent of the skin thickening that occurs on the face of a lepromatous leprosy sufferer. Yoeli believes that this jar does lend some credence to the belief that Hansen’s disease did exist during the time of Amenhotep III – 1411-1314 BCE although this is probably not conclusive proof for either tzara’at or Hansen’s disease. Browne, a specialist in modern leprosy maintains that the figure on the jar is a random figure that resembles a grotesque face on a Toby-jug.

There is no archaeological evidence for the existence of Hansen’s disease during Old Testament times but an archaeologist, Aharoni, excavated a small building
near Jerusalem which he believes was where Uzziah probably spent the years of his illness alone.

Zias is of a different opinion. He suggests that Hansen’s disease first appeared in Israel after the destruction of the First Temple and was permanent by the early years of the Common Era. This is manifested by skeletons found in the Judean desert at monasteries that date from Byzantine times circa 475 CE and Mull & Mull postulate that they were leper asylums.

The Talmudic sages believed that Miriam’s tzara’at was Divine punishment for her public slander of Moses’ Kushite wife and Uzziah’s affliction was a direct result of his blatant arrogance displayed by his actions in the Temple. The four lepers of Samaria were regarded by Rabbi Johanan as being Gehazi and his sons, who did not recover because Gehazi believed that God would never forgive him. Although Naaman was not a Jew, the rabbis were of the opinion that he was healed of his tzara’at in exchange for accepting the God of Israel as his own God.

Leprosy sufferers in Talmudic times were shunned as were those suffering from tzara’at in biblical times, although those with leprosy were permitted to engage in Torah study. They were obliged to arrive first and leave last to avoid contaminating the other students – a clear indication that the stigma of leprosy continued into Talmudic times. Many of the Talmudic rabbis, such as Ammi and Assi avoided leprosy districts. Rabbi Simeon, a rabbi’s son was no different, he hid from them. But there were exceptions to the rule in the form of Rabbi Joshua ben Levi, who engaged in Torah studies with leprosy sufferers because he believed that God through Torah, would keep him from contracting the illness. He probably believed that leprosy sufferers should also have the opportunity of studying the sacred texts and in allowing them access to the house of study (Beit Midrash).

---

84 Rabbi Joshua ben Levi’s attitude to leprosy sufferers was a notable exception to the rule, although the Talmud, in tractate Yoma 26a states that the synagogue and houses of study were not affected by the laws of leprosy.
Zias states that the Talmudic rabbis noted a correlation between pregnancy and leprosy but seemed unaware that a menstrual woman usually cannot conceive. Zias documents a study carried out by Jopling in Nagpur, India in recent times has shown that 62 percent of the women in the study (aged between 18 and 50) first became aware of their leprosy symptoms immediately before or after a pregnancy. This was brought about by the hormonal changes that occur, which otherwise would have taken longer to manifest.

A Talmudic sage - Raba cautioned against marriage with a leper because he believed that leprosy was genetically transmitted. In my opinion it is possible that the rabbis may have deduced this from their observations or just assumed it, despite their lack of knowledge regarding genetics. Browne’s information that leprosy bacilli have been found in the placenta and umbilical cord of a newborn baby is very interesting although he emphasises that it is most unusual for an infected child to be born to a leprosy mother.

Although Hansen’s disease is curable today the stigma that attaches to the leprosy patient remains due to the fear and horror of this illness that has filtered down the centuries to us today. It is similar to the stigma of HIV/AIDS but unlike it, it is curable. Perhaps, though early treatment and education by organisations like the Leprosy Mission, leprosy will eventually lose its ancient taboo.
CHAPTER FIVE
CONCLUSION

5.1 INTRODUCTION

In Biblical times, disease and illness was regarded as punishment from God, but books such as Job and Ecclesiastes did not support that idea. The Talmud upheld the former point of view, while the Mesopotamians perceived it to be an attack on the body by spirits, demons or ghosts, although the medical texts noted the bodily effects of a fever. Magic was used in conjunction with medicine when a more effective remedy was required but usually they were utilised separately. The Egyptians had a similar belief in that disease was caused by supernatural forces that had become ensnared in their flesh. Healing was performed by doctors and magicians – the former made use of herbs and the latter amulets.

Early Greek medicine was based on magic with a belief in the supernatural. Healing took place at temples of the god, Asklepios. Apollonios of Tyana, a wandering healer, was accredited with miraculous cures. By the time of Hippocrates, Greek medicine was in a period of transition towards a more scientific approach. Their doctors were schooled in philosophy and the advent of scientific medicine took place gradually over several centuries. By the 5th century BCE, doctors received their medical training from Hippocrates, who was a lecturer at a medical school in Cos. Greek medicine was eventually transported to Rome by Galen in 164 CE, where it was assimilated by the Romans. Roman medicine was magical-rational and their doctors can best be compared to modern paramedics.

At first Greek medicine was not well received by Romans such as Cato and Pliny the Elder but later gained acceptance.
5.1.1 Physicians

Whilst the Bible reveals very little information about physicians, Josephus states that they were functional during the Old Testament period but far more prominent during Talmudic times judging from the many references to them, for instance King Asa’s foot disease (1 Ki 15:23; 2 Chr 16:12).

Although forbidden by halakhah, the ancient Jews used magical incantations and amulets to ward off illness and engaged in necromancy. The Bible states that King Asa was criticised for the practice of consulting with doctors instead of praying to God to heal him but generally a physician’s licence to heal was only recognised and respected by 190 BCE. It is evident from the writings of Ben Sira (who lived during the late Old Testament period) that God heals through the physician and creates medicine from the earth. This demonstrates a shift in the public perceptions of physicians. During Talmudic times realisation dawned that a physician played a vital role in society using his God-given skill to heal and as a result became an esteemed servant of the Almighty.

There is only scant information available on the training and status of a physician in Mesopotamia. The medical training of doctors in Mesopotamia was not uniform and this resulted in some being more adept than others. Most of the doctors were men but some texts mention the existence of women physicians. In Egypt, as in Mesopotamia, there were doctors and magician healers who would co-operate in the healing of their patients if necessary, but each usually operated independently. Every Egyptian doctor was a specialist in a particular field performing medical treatments through a specific god or goddess. Both men and women students trained at the medical schools that were attached to healing temples at Memphis or Thebes, complete with herb gardens for home-grown prescriptions. In Egypt as in Greece, there was a medical internship, where the students gained knowledge of their trade through practical experience.
In Greece medical schools were established *circa* 5th century BCE in cities such as Cos, (where Hippocrates lectured) and Cnidus, where the doctors would train their sons and relations in the medical field themselves. The students’ final examination took place in public with the candidates answering questions put to them by the crowd. In this way the inhabitants of the city were able to choose the best candidates to graduate and take care of their medical problems. The Greeks were the only ones who adopted this unusual test of skills. Greek women doctors were eventually accepted by the men as their colleagues but were limited to the treatment of women and children. In Rome the lady doctors were fully functional.

In Greece, doctors treated their patients in rooms at the local market place. Both Roman and Greek physicians made house calls with their students in attendance. Physicians in Egypt were held in high regard and they received a monthly salary according to the Vatican papyrus of the 19th dynasty. Several Greek doctors practicing in Rome were criticised by Pliny the Elder for their greed, demanding exorbitant fees which only the rich could afford. In Rome, there was free medical treatment provided to the indigent by Emperor Valentinian I in the 4th century CE. Some Egyptian doctors worked for the state but their salaries would have been much lower than those earned by the royal physicians. Patients’ complaints about excessive fees charged in Talmudic times can still be heard! A physician was obliged to charge a fee for treatment as the Talmud states categorically that only a worthless physician does not charge!

The Egyptian doctors had a high regard for their medical ethics because they viewed their ancient writings as sacred. Unlike the Egyptians, the Greek doctors did not incur any liability for the intentional death of a patient; they just lost their medical reputation. In Rome however, the Roman legal code (*Lex Aquilla*) punished a doctor who was responsible for the negligent death of a patient. An important development in Talmudic times was the question of personal liability for negligence on the part of the physician. The Talmud set down the definition and the punishment for such impropriety. If a patient died as a result of the doctor’s
negligence, the doctor was charged with murder. A negligent physician was usually dismissed from his position.

The Roman army had its own paramedics to administer first aid to the wounded so that they could resume battle. With this exception, no provision for the ill and wounded was made (they were sent home), as hospitals did not exist until the 1st century CE. Greek and Roman doctors would either provide accommodation in their own houses for treatment or the patients would be treated at their own homes.

Knowledge of surgery in Mesopotamia is evident from the medical texts: castration was performed in the royal household between the 13th and 10th century BCE and a Caesarian section was performed on a dying mother presumably to save the baby. In Rome, Greece and Egypt, doctors made use of the cautery knife so that they could control excessive bleeding while performing surgery. Pliny the Elder and Dioscorides document the use of herbal anaesthetics such as opium poppy (*Papaver somniferum*) syrup, henbane seed extract (*Hyoscyamus albus*) and mandrake root (*Mandragora officinarum*) during surgery in the 1st century CE. The Talmud mentions surgery to remove the excess fat from an obese rabbi. The patient would receive a sleeping drug then be strapped to the table and operated upon. By the time of Celsus surgery was safer than in earlier times but major abdominal surgery was still dangerous because of the risk of infection despite the use of vinegar documented by Pliny the Elder.

Archaeological excavations have revealed many sophisticated surgical instruments found at the ‘House of the Surgeon’ in the Via Consolare early in the 19th century. This indicates that Roman doctors were plying their trade in the 1st century CE. Another example is a stone engraving from the Asklepieion in Athens dating back to Roman times, depicting a small carry-case of surgical
instruments. This information adds to our existing knowledge of physicians in the Bible, where such information is very scant.

Human dissection was practiced only in Hellenistic times in Alexandria, Egypt but not in Greece itself because of the Greek taboo that existed regarding dead bodies. Respect was still paid to the dead person because a cadaver was regarded as human being and worthy of honour. This is reminiscent of the situation regarding corpses in Biblical times. The Talmudic rabbis noted that some of the animals that had been ritually killed suffered from malformations, injuries and diseases which rendered them non-kosher and unfit to be consumed. These examinations broadened their knowledge of human illness and injuries as it is against halakhah to dissect human bodies and this persists in Israel to the present.

In 5th dynasty Egypt, a fracture would be set using tree bark as a splint and bandaged with adhesive linen tape made from bees wax and resin from the cedars of Lebanon. Wounds were sutured with copper needles according to the Edwin Smith papyrus.

The Talmud documents the belief in demons, which resembled humans in their ability to eat and drink, have children and die. Protection was sought by reciting the Shema prayer before sleeping at night, but Rabbi Akiva said that people who chanted an incantation over a wound would have no place in the world to come. The Talmudic rabbis were consulted on a variety of human illnesses both physical and psychological and the Talmud records details of the maladies and treatment provided. Despite it being contrary to halakhah, some rabbis realised the efficaciousness of the use of amulets and incantations to treat or ward off sickness and the rabbis prescribed them possibly realising that it was a popular remedy and appeared to be effective.
In Talmudic times as today, doctors are called upon to give expert evidence in criminal or civil cases. The Talmud illustrates that the rabbis were even called upon to treat the Roman Emperor’s slaves and exchanged healing recipes with Roman herbalists. The doctors, who had to have a licence to practice, not only performed operations like trephinations and amputations, but also functioned as dentists, dieticians and pharmacists. Most of the folk remedies mentioned in the Talmud were home remedies passed down through many generations of woman healers. These medicines were used when the doctors’ prescription failed to cure.

5.1.2 Blood-letters

Although the Bible does not mention blood-letting at all, the Talmud sheds some light on this ancient practice which may also have been used during Biblical times, adding to the background information of the Biblical text.

There is no evidence that phlebotomy took place in Mesopotamia or Egypt. In Greece, the situation was different and it was probably an established practice before the birth of Hippocrates. This is evident by such a scene on a vase now in the Louvre, Paris dated to 470 BCE. In Rome blood-letting was believed to be a panacea for all diseases but was restricted in case the patient became weak. During the 1st and 2nd centuries CE, bronze or ivory bleeding cups were used but glass was preferred. Jackson maintains that leeches were used during the Greek era. Archaeological evidence of bronze cupping vessels was discovered in a grave in Bingen, Germany dating back to the 1st or 2nd century CE. This set of three cupping vessels was hooked onto a stand and probably used often. As phlebotomy was common in Greek and Roman medicine, there is every reason to suppose that it was practiced during Biblical times.

In Talmudic times, it was rare to find a young person without venesection scars on their bodies because blood-letting was so routinely recommended that it was
considered foolish by the sages to live in a town without a blood-letter. There were those however, who regarded puncturing the skin as being contrary to *halakhah* and Rabbi Bibi bar Abin said that venesection was akin to the mourning practice of cutting the body (Lev 19:28). This was practiced by many non-Jews and forbidden by Jewish law. Despite being prohibited, astrology played a part in determining the most auspicious time for blood-letting.

Although recommended for many diseases the rabbis in the Talmud prescribed therapeutic phlebotomy for people with symptoms of *polycythemia vera* (an abnormal increase in red blood cell production). This is treated today by donating blood. Blood-letting can perhaps be compared to the modern practice of blood donation a humanitarian form of phlebotomy because the donor still looses blood.

### 5.1.3 Circumcisers

In Biblical times, circumcision was a performed on an eight-day old baby, using a primitive stone flint knife (Ex 4:25).

It appears that no circumcision took place in Mesopotamia but did so in Egypt. Such a scene was found on a wall at Saqqara on Ankh-ma-Hor’s *mastaba* (6th dynasty, 2345-2181 BCE). This indicates that the practice of circumcision is much older than the Bible indicates and adds to the existing knowledge of the Biblical text. In Egypt, the situation was different and circumcision took place on boys between the ages of six and twelve years. It would appear from a text found on the doorway of the same tomb that some form of pain relief was administered before the operation took place.

No circumcision took place in Greece or Rome. In fact the Jews, during Hellenistic times were ridiculed by the Greeks in the gymnasia where sporting activities were performed naked. In order to fit in with Greek society, many had

---

1. Also known as Rav Bivi ben Abaye
painful surgery (*epispasm*) performed to reverse their circumcisions. This was not approved of the rabbis.

The Talmud elucidates the Biblical text by stating that a metal knife or razor was used by the circumciser. Although the duty of circumcision rested on the father, a skilled circumciser (*mohel*, usually a man) performed the delicate operation in Talmudic times. In Biblical times, women like Zipporah circumcised their babies themselves. A *mohel’s* technical skill unfortunately was not well regarded and he would never demand a fee for this service. If he was found guilty of negligence he would be relieved of his duty.

Although Rabbi Jose said that the circumcision operation was regarded as labour, the circumciser could perform his task on the Sabbath because it was a most sacred rite. The *mohel* could not operate after sunset but only during the day – the evening of the eighth day would in fact be the ninth day. The command to circumcise overrides the command not to perform labour on the Sabbath.

Some rabbis claimed that a trust-worthy non-Jewish doctor could also perform circumcisions on Jewish babies if no *mohel* was available. If the doctor was not a Jew, the usual blessings after the procedure had to be recited by the father. Rabbi Judah preferred to use a Samaritan but Rabbi Jonathan argued this point because he stressed that the one who circumcised should himself be a Jew. Most sages regarded non-Jewish doctors with misgiving because they feared that they might intentionally injure the baby.

---

2 A day began at sunset.
3 A Samaritan was regarded as being closer to being Jewish than a gentile.
5.1.4 Midwives

Two devout and religious midwives, Shiphrah and Puah, are mentioned in the book of Exodus but there must have been many others who served their communities. The Bible refers to Rachel and Tamar who were assisted during their difficult births.

Midwives were functional in Mesopotamia. This is evidenced by an incantation in the cuneiform texts for a painless birth, but otherwise information is scant. In Egypt the midwives made use of birthing stools, with the baby being delivered through the hole in the stool where the mother sat or squatted. Babies were either born at home or in the temple of Isis. In Greece there is evidence of a premature baby surviving after being born in the seventh month of gestation.

Experienced older women usually performed the duty of midwives in Rome. They had knowledge of folk medicine and were able to provide pain relief during the birthing process. A terracotta relief of a childbirth scene from Ostia, Italy, was found that dates to the 2nd century CE, illustrating a woman in labour seated on a birthing stool, the process being facilitated by a midwife and helper. The assistant has her arms around the labouring woman while the midwife checks the progress of her patient.

A Talmudic midwife (*chaya*) was respected for her experience and permitted to travel from one town to another at any time including the Sabbath to assist birthing women. A woman was not ordinarily deemed to be a reliable witness but a midwife was an exception, permitted to attend a court of law to give sworn testimony regarding the birth of twins. When there was doubt as to which one was the eldest, her testimony was preferred to that of both parents. The Jewish law of succession favoured the eldest and excluded the others.
The Palestinian sages feared that non-Jewish midwives might injure the infant intentionally during the birthing process. Consequently Rabbi Meir (active during the 2nd century CE) did not approve of such a midwife assisting the birthing women on her own. The Palestinian sages however, merely required that the midwife was reliable and trustworthy. Midwives were paid for their services but no amount is mentioned in the Talmud.

This lends credence to the idea that midwives were probably already an established practice in Biblical times and this continued into the Talmudic era.

5.1.5 King Asa’s illness

The Bible gives vague descriptions of Asa’s disease that refer simply to his feet being crippled by a foot disease (1 Ki 15:23; 2 Chr 16:12) and the Talmud identifies it as gout. The Jerusalem Talmud describes gout as a foot disease called tzinit, but the Babylonian Talmud translates the same word as ‘corn, callous or bunion’. As metal was believed to cure bunions, the sages advocated that a hard coin be placed in the shoe of the afflicted foot.

Modern researchers believe that gout was quite common in Greece but that it is a genetic disorder exacerbated by the Greek climate and aspects of Mediterranean diet, which even in modern times, manifests in urinary stones. Pliny the Elder maintained that gout was a lifestyle disease that developed as a result of ‘gourmandising’ on the many rich foods served at banquets, but he also admitted that it was an inherited condition. Jackson is certain that gout was prevalent because the syrups used in the preservation of port wine were housed in lead containers. The mixture of the syrup and acid in the grape juice would have been toxic making it difficult for the kidneys to regulate the uric acid in the blood.

Gout is a form of arthritis and there is archaeological evidence from Egypt of a wooden statue in the Liverpool Museum showing a bent man carrying a jar of
water on his back that dates from the 18th dynasty. His bad posture and the weight of the water would most likely have caused the man to suffer from osteoarthritis. Another example is the mummy of Merneptah I that manifests clear indication of spinal arthritis. From the 2nd century CE there is more archaeological evidence of a man with gout found buried in a sarcophagus in Gloucestershire.

The pain of gout was described to be ‘like a needle in raw flesh’. A Talmudic sage states that Asa had been punished with such a grievous affliction during his reign because he had instituted forced labour upon the disciples of the sages who should have enjoyed exemption. Pliny the Younger documents the tragic case of his friend, Cornelius Rufus, who despite his stringent lifestyle, found the pain of his gout so unbearable that he starved himself to death.

The rabbis of the Talmud recommended folk medication for gout such as massaging of fish brine into the hip of the affected foot or the use of a mixture of wine, vinegar or rose oil for gout. The actual rubbing motion can perhaps be regarded as a therapeutic base on which physiotherapy later developed. This remedy may have a parallel in Egypt in the tombs of Ankh-ma-Hor and Khentika situated near Teti’s pyramid at Saqqara (6th dynasty 2345-2181 BCE). There are scenes of what appears to be therapists massaging the hands and feet of people, perhaps their patients and this is suggestive of physiotherapists engaged in their work.

Archaeological excavations at Giv’at ha Mivtar, Jerusalem have unearthed skeletal evidence of the existence of arthritis and in Lerna, Greece in a Middle Bronze Age tomb a male skeleton was found with bony evidence of gout on the big toe of his right foot.
5.1.6 King Hezekiah’s illness

The Bible relates how King Hezekiah developed a serious illness in the fourteenth year of his reign (2 Ki 20:1ff; 2 Chr 32:24ff). The Bible indicates that the healing potion to treat Hezekiah was revealed by God to His prophet, Isaiah. According to the book of Isaiah an application of fig poultice (Is 38:1ff) was used to treat Hezekiah’s boil, but this would probably not have accounted for him becoming so seriously ill.

Other theories include the idea that the boil (or crop of boils) was in fact a bubo of bubonic plague that had struck the Assyrian troops when Sennacherib was at war with Jerusalem but the king was the only one affected. Carson et al believe that Hezekiah’s remedy of a fig poultice was ‘folk medicine’ and an ancient remedy for the buboes of bubonic plague. Barker is convinced that Hezekiah manifested symptoms of bubonic plague with headaches and intolerance to light. Hezekiah turned his face to the wall (Is 38:2) possibly to avoid the light. Both Pliny the Elder and Dioscorides document that wild fig poultices were used to soften tumours and encourage them to heal. A small percentage of victims treated in this way in 17th century (CE) London did recover from bubonic plague.

Another theory was that of septicaemia which weakened Hezekiah’s health or that of an abscess inside his throat. The more benign form of syphilis, yaws, that might have caused the king’s illness, was put forward as a further theory. It is rather ironic that Hezekiah hid away a useful book of remedies that might have been his own healing tool!

The Talmud mentions Hezekiah’s illness only briefly and explains that he was afflicted by a malady for failing to produce an heir but do not indicate the exact nature of his illness.
5.1.7 Parasites and the illness of King Jehoram

The Bible mentions that Jehoram languished with a painful intestinal disease for two years, that eventually killed him (2 Chr 21:18-19), but is silent on the many intestinal parasites, which existed at the time.

Parasites especially *bilharziasis*, *roundworms* and *tapeworms* were common in the ancient Near East. Snail shell fossils of *bilharziasis* were discovered in wall bricks at Tell Aqeer; an amulet (1st millennium BCE) from Nippur, which displays evidence of roundworms, presently housed in the Ontario Museum of Archaeology. Archaeology has brought to light the fact that the ancients were plagued by intestinal parasites Ancient cesspits in Jerusalem have brought to light evidence of tapeworm, whipworm, threadworm and liver flukes.

In 1910, calcified ova of *bilharziasis* were found in the kidneys of Egyptian mummies. Symptoms of this are abnormally large male breasts (*gynaecomastia*) which can be clearly seen in ancient Egyptian artwork depicting male labourers on the tomb of Mehu at Saqqara that date from the 6th dynasty (2345-2181 BCE). The mummy of Nahkt, from the time of Pharaoh Sethnakhte of the 20th dynasty (1185-1182 BCE), was found to contain many parasites, including tapeworm and pork roundworm when it was examined in 1974 at Toronto University. Grmek is convinced that malaria was as common in Greece as bilharziasis was in Egypt. The Romans and Greeks, unlike the Egyptians did not mummify their dead which makes it almost impossible to detect the presence of parasites in archaeological remains. The Roman and Greek doctors must surely have been aware of them.

The annoying Medina worm (*Dracunculus medinensis*) a parasite that still abounds in the areas of the Red Sea and Arabian Peninsula may have been the ‘fiery serpents’ of the Bible. The Manchester Museum Mummy Project has revealed that specimen No. 1770, dating from about 1000 BCE was suffering from Guinea worm infestation (*Dracunculiasis*) manifested by the presence of a
calcified worm and was missing both legs. This could have been the result of futile attempts to extract this parasite. It is surprising that there is no mention of parasites in the Bible because they were such a scourge in the ancient Near East.

The Talmud does not mention Jehoram’s illness at all. A reason for this could be that the rabbis were very disappointed in him. Rav Papa said that he had a good beginning like his father, Jehoshaphet but a dishonourable end.

The Talmudic rabbis knew that parasitic infestations were common, for which they recommended a bread breakfast, pennyroyal and dates, or even wine soaked in bay leaves. They knew that intestinal worms were found in raw meat, or half cooked meant, but mistaken in their assumption that flour larvae were the same as intestinal parasites.

5.1.8 Snake bite

The Biblical text Numbers 21:4-9 tells the story of the Nehushtan a bronze or copper serpent that God ordered be placed on a pole to heal those who been bitten by poisonous snakes. God had sent the snakes to bite the people of Israel for complaining about their desert diet of manna.

The Egyptians took great pains to avoid snakes and protected themselves against snakebite by using magic texts, amulets and incantations. The Metternich stela found in the New York Art Museum depicts the boy Horus who is associated with scorpions and snakes. Snakebite was probably treated by cautery to remove the bite and prevent the poison from spreading, while salt was then added to reduce swelling. Plaut believes that the Nehushtan healing story has parallels in Greece where Asklepios, the Greek healing god would appear in the abaton in the guise of a serpent.
The Greeks and Romans, unlike the early Jews, did not view snakes with horror or fear but regarded them as symbols of healing and renewal. Jackson relates how they were kept as pets by Asklepios’ daughter. Serpents played a vital role in the cures that took place in the *abaton*. They were considered the spirits of the underworld because they lived amongst rocks and moved in and out of the hillside cavities. Remedies for snakebite would include pulverised mandrake plant root (*Mandragora officinarum*), or snake venom as recommended by Dioscorides, while Pliny the Elder recommended vinegar.

The *Mishnah* tractate *Rosh Hashanah* 3:8 elucidates the Biblical text (Nm 21:4-9) when it states that God healed the people’s snake bites by encouraging them literally to look up to Him. This they did when they gazed up at the *Nehushtan* on the lofty pole and their hearts were attuned to Him. It was very important for the rabbis to emphasise that an idol could not affect a cure – only God’s power could heal those who were bitten and kill the snakes. The Talmud approved of King Hezekiah’s destruction of the *Nehushtan* because the Judeans began to worship it.

Although the Talmud does not shed further light on Biblical text, there are insights that appear from its tractates:

If a widow wished to re-marry and stated that her husband had died after being bitten by a snake during the harvest, her account was generally accepted as the truth by the rabbis because such deaths were so common. The well-known Talmudic physician, Mar Samuel believed that all snake bites resulted in fatalities and that all reptile venom was poisonous.

An animal that had died of natural causes was not *kosher* and could not be eaten. This included any animal that had been killed by snakebite and they were convinced that the poison was life threatening. There were Jews who were afraid
to eat fruit or vegetables with a hole lest a snake had been responsible for causing it and left it full of venom.

A gold cobra dating to between 630-603 BCE was discovered at Ekron, but there is no mention of when or by whom. It was originally attached to a diadem (called a Uraeus) and worn by an Egyptian pharaoh and it provided a protective function similar to the snake amulets that guarded the royal mummies from the serpents of the underworld.

A small copper snake was discovered at Timna south of Israel that dates back to the 13th or even 12th century BCE. No date is given but it is reminiscent of the *Nehushtan*.

### 5.1.9 King Saul’s mysterious malady

The story of Saul is divided into two camps: that of the pro-Saul and anti-Saul camps and it is hard to gain an objective view. King Saul’s reign was very stressful defending his territory and the personality and power clash between him and the prophet Samuel is very obvious from the account due to the cohesion between ‘church and state’. Saul’s relationship with David, his ‘music therapist’ and son-in-law was problematic.

Saul’s illness was most likely depression as a result of posttraumatic stress disorder, exacerbated by the principal of the enemy *herem* in the battle against King Agag. Symptoms of what could be described as an epileptic fit experienced by Saul (1 Sm 19:23-24) can be found in the Bible. Unfortunately there is only one episode and there is no documentation of any pre-existing condition before Saul became monarch.

Tablet XXV of the Akkadian Sultantepe Tablets 1, housed in the British Museum, accurately describes symptoms of epilepsy and documents possibly the first
spontaneous ‘epileptic cry’. Epileptics in Greece were treated in the abaton by the god Asklepios, who would push a magic ring into all their head orifices, suggestive of pressure application to certain points on the skull. Epilepsy was viewed by the majority of Romans as a supernatural illness which had to be healed by the gods. Both Galen and Hippocrates however, believed that all diseases were the effect of injudicious eating and purging. It would appear that a person suffering from epilepsy would wear an amulet to protect them from an attack or failing that, would spend a night at one of the healing temples of Asklepios.

The rabbis had a good deal of regard for King Saul – his father was influential (1 Sm 9:1) and his family beyond reproach. Saul performed many good deeds although the Talmud does not mention his possible illness. In my view the reason for this could be that any sickness, even in Talmudic times, was viewed as being separate from God and therefore unholy. As Saul was held in such high esteem, regarded as God’s chosen one, the sages would have been most unlikely to emphasise any negative aspects of his life including his suicide at Mount Gilboa.

The king was intuitive. He realised that God had chosen another king to succeed him and Saul seemed to have been sidelined until his death. The fact that he took his own life was perhaps realisation of his worst fears and anxieties.

It is possible that King Saul suffered from epilepsy and the Talmud throws some light on epileptics in general:

Several rabbis recommended that they ought to be under the care of a physician. Although the rabbis did not approve of amulets because they were contrary to Jewish law, they admitted that they were helpful in the case of epilepsy, which regarded as being genetically transmitted. A sufferer was consequently inferior to others and unfit to be become a priest. It was for these reasons that the rabbis of the Talmud frowned on a man marrying an epileptic. A woman already married to
an epileptic was permitted to divorce her husband although she was aware of his problem before the marriage, if she later could not tolerate the situation.

The story of King Saul indicates that the practice of sorcery and necromancy was prohibited by *halakhah* in Biblical and Talmudic times but nevertheless was still practiced. Many people most firmly believed that demons and spirits caused various illnesses.

If Saul had suffered from a malignant tumour, such as a multiple *myeloma* it would have been very noticeable according to Brothwell and surely documented in the Bible. Saul possibly suffered either from a simple *osteoma* or a brain tumour of which no one was ever aware because it developed inside his head. 1 Samuel 19:23-4 mentions only one such epileptic seizure but more should have been recorded if it was a regular occurrence; there may have been more undocumented ones.

### 5.1.10 Tuberculosis and fevers

In Biblical times, a fever was regarded as a disease and there are Biblical references to a febrile disease that resulted in severe weight loss (Dt 28:22). This might refer to tuberculosis that was common in those times. The passage in Leviticus (26:16) that refers to ‘consumption’ could have also described crop destruction resulting from the ancient Israelites’ disloyalty to God. Some Biblical commentators believe that the wording of these two passages bears a striking similarity to the type of treaties that the Assyrian king, Esarhaddon concluded with his vassal states during his reign (680-669 BCE), which may have formed part of the book of Deuteronomy.

Lung disease is described in the Babylonian medical texts but it is uncertain whether this is reminiscent of pneumonia or tuberculosis. Although there is no archaeological evidence to prove that tuberculosis existed in ancient Israel, the
situation is different in Egypt where the disease was endemic. Reeves believes that other lung problems such as a fungus infection or anthracosis could mimic tuberculosis although there is evidence of tuberculosis of the spine (Pott’s disease; evident by the psoas muscle abscess in the chest cavity) in the mummy of an Egyptian priest Nesperehan, who lived in the 21st dynasty (1070-945 BCE). Ancient clay figurines and artwork found in Egypt also manifest signs reminiscent of spinal tuberculosis. A carving of a man with a bent spine from Old Kingdom times (2700-2190; situated in Copenhagen) and human bones from Nagada (post 1400 BCE) have been discovered that show similar signs but this may be due to another type of osteo-myelitis.

Tuberculosis was also known as a wasting disease and was evidently quite common in the overcrowded, unsanitary cities of Greece. Symptoms such as coughs and bloody sputum are well documented, although there is no archaeological evidence of tuberculosis. The hunchbacks often depicted in Greek art are suggestive of spinal tuberculosis. Greek and Roman physicians were of the opinion that tuberculosis of the lungs was spread from what was termed, the ‘bad seeds’ present in a patient’s exhalation and they were capable of polluting water and food. The ancients were not far wrong because tuberculosis is an airborne disease that targeted the sickly and the weak. Galen however, did not hold with this idea because there was no proof and he said that a bloody discharge from the lungs was a lung abscess. As some people were cured at the Epidaurus temple of Asklepios, Jackson states that it was probably the healthy food and more salubrious climate of these sanctuaries that was responsible.

The Talmud regards the passages in the Bible that contain the word ‘consumption’ (Lv 26:16; Dt 28:22) as a disease but referred to it as tuberculosis. They did not view a fever as an important symptom of tuberculosis, but they were well aware that lung disease resulted in the development of cysts and cavities in the lungs. Modern medical doctors are aware that pulmonary tuberculosis produces these cysts which heal leaving cavities in the lungs. The rabbis
ascertained that bleeding from the mouth was a sign of lung disease, especially if it had a sticky consistency.

The Talmudic rabbis recommended the use of goat’s milk for tuberculosis, probably unaware that goats are purveyors of Malta fever. The Talmudic sages made many observations regarding fevers: They believed that a fever itself was a disease and could be dangerous to life, but the Sabbath could be profaned to treat a febrile person. The rabbis noted that a feverish patient ate little but drank more and concluded that a fever was nourishing but said that no person could live more than thirteen days without eating. The rabbis did not recommend a bath for a fevered patient and some like Rabbi Judah believed that therapeutic blood-letting was contra-indicated although some recommended it for a fever of more than two days duration. There was no agreement on this because others believed that a bath would cure a fever. Although visiting the sick was regarded as an important duty, the sages believed that talking to visitors made the patient’s fever and headaches worse. If a baby was running a temperature on the eighth day, his circumcision should be postponed for seven days for his recovery and a worker who had to return home suffering from fever, was entitled to his day’s wages even if he had not completed his allotted tasks.

There were certain plant remedies such as radishes and beetroot that the rabbis found effective to treat fevers. These are still used in herbal medicines today because they have been found to boost the body’s defences. Heat stroke and fever were both treated by hydrating the patient because the rabbis observed the similarity between the two. The Talmud recommended bathing in tepid water to bring down a high fever.

5.1.11 ‘Leprosy’

The Bible describes ‘leprosy’ of people, clothing and houses in Leviticus, Chapter 13, but refers to it as tzara’at. The Greek word lepra which referred to the Biblical
tzara’at resulted in this word being mistranslated as ‘leprosy’ when the Old Testament was translated into Greek. This has led to the ongoing stigma of modern leprosy although it is now curable.

Biblical leprosy (tzara’at) in people (Lv 13:1-47) could refer to many skin diseases, such as eczema or psoriasis, ringworm, scabies, even a boil or burn to name but a few. Some Biblical commentators regard the term tzara’at as generic, used to describe many skin complaints, including that of modern leprosy. ‘Leprosy’ of clothing (Lv 13:47-59) and houses (Lv 14:34-48) could refer to mildew or fungus infestation.

Modern leprosy may have existed in ancient Mesopotamia and Kinnier Wilson believes that the lines of an Old Babylonian omen published by Kocher & Oppenheim in 1958 describe a case of dimorphous leprosy, that display signs of both the tubercular and lepromatous type. There is mention of a skin swelling or thickening (anut) in the Ebers papyrus, which is slightly reminiscent of lepromatous leprosy. Reeves is convinced that there is also archaeological evidence of modern leprosy on the male skeletons of four adult Europeans buried in the Dakhleh Oasis (a Negro cemetery) in Egypt that dates to the Greek period (332 BCE-30 CE) but that they were only diagnosed by Dzierzykray-Rogalsky in 1980, possibly they were leper sufferers outcast from Alexandria.

Democritus in the 5th century BCE mentions a disease that resulted in a thickening of the skin and permanent changes in the nasal bones. This is suggestive of modern leprosy which Grmek believes first affected Greeks in about 300 BCE, and was well known in Egypt by that time. Grmek is adamant that leprosy was present in Mesopotamia and Persia and was spread to Italy by the Roman legions around the time of Pompey the Great. Jackson believes that leprosy was better known by the Romans by the end of the 1st century CE and also regards the type of leprosy spoken of by Celsus as being suggestive of the more serious lepromatous type. Leprosy may have spread to Britain by 400 CE
judging from the skeletal remains of an adult whose leg and feet bones manifested lesions of modern leprosy.

The laws of ritual purity were no longer important after 70 CE and scholars with leprosy attended the house of study but were separated from the others by a wall to prevent the other students from contracting leprosy.

The Talmudic sages believed that leprosy was inflicted for sin, some of which included: idolatry, blasphemy, incest, murder, perjury, slander, lewdness, jealousy and arrogance. Miriam for instance was punished for her slander of Moses and his Kushite wife in public. Rabbi Akiva believed that Aaron, Miriam’s brother, contracted it very briefly although the Bible is silent on this. According to halakhah sexual intercourse was prohibited to a sufferer of tzara’at but many disregarded this law. The rabbis believed that King Uzziah’s tzara’at was punishment for his arrogance. This trait is illustrated by the fact that he had marital intercourse and fathered a child despite being afflicted with tzara’at. In Biblical times, marital intercourse was contrary to Jewish law until the sufferer had performed the necessary purification rituals.

The Talmudic rabbis viewed Naaman as a ‘resident alien’ who had acquired limited rights in ancient Israel because he renounced idol worship. Non-Jews were not subject to the Jewish laws of ritual purity laws of uncleanness. Consequently Naaman was not regarded as ritually unclean although he was a leprosy sufferer and did not have to perform such rites after his healing in the River Jordan. Rabbi Johanan was convinced that the four Samarian lepers were none other than Gehazi and his three sons. They were never healed the rabbis said, because Gehazi felt himself to be unworthy of forgiveness.

Circumcision was the only exception to the rule that surgical removal of leprosy was contrary to Jewish religious law. Despite this ruling many leprosy sufferers
had their limbs amputated if they were badly disfigured and buried them in mounds beyond the city gates.

Even in Talmudic times, the stigma of leprosy persisted and the sufferers were still shunned. Some rabbis (such as Meir, Ammi, Assi and Lakish), terrified of contracting the disease, would not even eat eggs that came from a neighbourhood where lepers lived, while others would chase them or run away from them. The devout Eleazar ben Simeon would hide from them, but there were some like Rabbi Joshua ben Levi, who trusted that God would protect him from the illness and studied Torah with leprous students.

The sages of the Talmud believed that sex and leprosy were connected. A leprous baby was the result of sexual intercourse taking place during the menstrual period of the wife. It seems that the rabbis were not aware that women cannot usually conceive at this time. Medical research carried out in India has revealed that a high percentage of women aged between eighteen and fifty years only became aware of their leprosy symptoms during their pregnancies because of the bodily hormonal changes that occur. Male leprosy patients can also manifest similar signs of enlarged breasts and genital changes. The rabbis must have noticed this and made the incorrect conclusion that menstrual coitus and leprosy were linked. Both Zias and Mull & Mull and believe that Hansen’s disease and tzara’at co-existed during the Mishnah and Talmudic period. As the rabbis of the Talmud were of the incorrect opinion that leprosy was genetically transmitted, they disapproved most strongly of marriage to a leprosy sufferer. Modern medical studies on this topic have brought to light the presence of the leprosy bacilli in the placenta and umbilical cord of a newborn whose mother had leprosy. It is most unusual for the baby to develop the disease provided it is isolated from the mother until she is no longer contagious.

To date, there is no archaeological evidence of Biblical leprosy from Old Testament times in Israel or the Middle East. There have been several
discoveries: a pottery jar depicting a human head was found at Beth Shan and considered to be that of a leprosy sufferer by some scholars but others disagreed saying that it was a face reminiscent of those on Toby jugs. Human bones were found in 200 BCE in a Ptolemaic cemetery thought to manifest modern leprosy but later research has challenged the original finding. A stone tablet interred on the Mount of Olives in Jerusalem was discovered by the archaeologist, Aharoni, indicating that the bones of Uzziah, a leper, were buried there.

5.1.12 Materia medica of the Bible, Talmud and ancient Near East

5.1.12.1 Cedar wood (Cedrus libani)

Cedar wood was used with hyssop in the purification rites to purify those who had been suffering from tzara’at (Lv 14:4-7) and this was borne out by the rabbis of the Talmud. Cedar wood was an ingredient used in the mummification process in Egypt, where it was combined with beeswax and resin to set a bone fracture, splinted with a tree branch. In Greece, a cough recipe used for ulcerated lungs, recommended by Dioscorides, was made from parts of the cedar wood tree that had been boiled in raisin wine. These facts add to my belief that the cedars of Lebanon were used medicinally and not only to build Solomon’s temple (2 Ki 6:9).

5.1.12.2 Cumin (Cuminum cyminum)

In Biblical times, cumin was used to treat sore and abscessed throats in Israel and in Egypt. The rabbis of the Talmud prescribed it as an ingredient in medication for ‘blood from the lungs’, which could have referred to illness such as bronchitis, pneumonia or even tuberculosis thus adding to our knowledge of Biblical text. It is possible that cumin was used for upper respiratory problems by the early Jews, although this is not mentioned in the Bible.
5.1.12.3  *Date palm (Phoenix dactylifera)*

Epilepsy was treated with the fruit of the date palm in Biblical times. A poultice of dates could also be used to treat an ear infection and eased a cough. In Egypt there were forty cough remedies, one of which contained dates, milk, cream and carob. It is quite plausible to suppose that dates were used to treat similar complaints by the early Israelites although the Bible is silent on this. The Talmud expands present understanding of the Bible by the explanation that the early Jews used date honey as well as that made by bees.

5.1.12.4  *Fig (Ficus carica)*

Figs were used by the prophet Isaiah to heal King Hezekiah’s boil. The Hellenistic botanist, Dioscorides and his Roman counterpart, Pliny the Elder, both document the use of a fig poultice to draw tumours and boils. The Talmudic rabbis were convinced that a fig with holes was probably made by a snake and full of its venom as a result. Consequently they would not eat such fruit. The fact that the Bible documents the use of a fig poultice to draw a boil lends credence to the view that figs were probably an ancient remedy.

5.1.12.5  *Garlic (Allium sativum)*

Garlic was used to expel intestinal parasites and to heal abscesses by the ancients in Biblical times. They also believed that the plant was effective in driving away snakes and scorpions and that it also possessed calming properties. In Mesopotamia, crushed garlic cloves were mixed with oil or beer and used as a pain killer. In Egypt the plant had culinary uses. The rabbis of the Talmud knew that garlic, an old and trusted remedy, eradicated parasites from the bowel. The Bible only mentions that the Jews wandering in the desert missed the garlic they had eaten in Egypt but not that the plant was useful medicinally.
The ancient Near Eastern study in this dissertation adds to our knowledge of ancient healing remedies.

5.1.12.6 Greek juniper (Juniperus phoenica)

A common remedy for gout and arthritis was Greek juniper, which was also used in Mesopotamia for urinary complaints and crushed for application to ease aching joints and burns. In Egypt the plant’s anti-inflammatory properties were found to be effective in improving the mobility of those who suffered from arthritis and osteo-myelitis. The Talmud documents the use of juniper to remove worms that develop inside the skull but not for the treatment of arthritis. Although the Talmud does not elucidate the Bible in this instance, it does indicate that juniper was used to treat other conditions besides arthritis and gout and adds to our knowledge of medicine in Talmudic times.

5.1.12.7 Mandrake (Mandragora officinarum)

Mandrake grew wild in ancient Palestine where it was used to enhance fertility and as an aphrodisiac. A snake bite antidote of note and most useful for painful gout, it was possibly used in the Egyptian ‘Temples of Life’ to induce a state of light anaesthesia during which exorcism and healing could take place. Pliny the Elder and Dioscorides both document its use as an anaesthetic in the 1st century CE. Pliny maintains that the smell of the leaves caused sleepiness and the ingestion of too much decoction could kill. There is an indication in the Talmud that an obese rabbi had his fat removed surgically after being administered a sleeping potion of what might have been mandrake. This knowledge indicates that surgery must have been performed at this time because pain relief was available for that purpose. The Talmud and the study of medicine in the ancient Near East elucidate our knowledge of the Bible.
5.1.12.8 Myrtle (Myrtus communis)

Myrtle leaves were used for calming children and important in the treatment of gum disease. Being very astringent, it was useful for the treatment of internal ulcers during the Biblical period. The Bible indicates that myrtle and willow tree branches were used in the Festival of Sukkoth (Tabernacles) together with a citron and the Talmudic sages confirm this Biblical information. The ancient Egyptians made a poultice from the myrtle plant, mixed it with clay; this was utilised for those who spat blood. Dioscorides documents myrtle wine for the treatment of internal ulcers. The ancients must have been aware of the plant’s many healing properties. Although the Talmud does not throw any light on the Biblical text, ancient Near East medical texts indicate that the ancient Jews probably used myrtle for more than the Sukkoth festival.

5.1.12.9 Olive oil (Olea europaea)

In Biblical times, olive oil was applied to wounds including that of snake bite and used for its emollient properties. Olive oil was also mixed with the ashes of the hammada plant (Hammada salicornica) to form a type of soap. The Romans used cold olive oil compresses to relieve inflammation of the uterus, while the rabbis of the Talmud believed that oil improved their memory. The Bible does not document the medicinal uses of olive oil but these can be found in the medical writings of Cato the Elder. Both the Talmud and the works of the Roman medical authors help us to gain a better understanding of the Bible.

5.1.12.10 Onion (Allium cepa)

Onion was a useful plant used in Biblical times to treat abscesses. This plant was well documented in ancient Egypt for its wound-healing and snakebite relieving properties. The juice of the onion was used to ease intense itching and massaged into stiff muscles by the Egyptian healers. Pliny the Elder and
Dioscorides used onions to treat tumours and boils. The rabbis of the Talmud believed that the stalk in the middle of the onion was poisonous and would not eat them. The Bible only documents the fact that the ancient Jews missed them on their way to Canaan but does not mention their medical function. The fact that other peoples of the ancient Near East used the plant medically adds to our knowledge of the Bible.

5.1.12.11 Pomegranate (Punica granatum)

In Biblical times pomegranates were used to eradicate intestinal worms because the juice is high in tannic acid, an excellent vermifuge. In ancient Mesopotamia, pomegranate was used for similar purposes, mixed with wine or beer and in Egypt a similar combination would be ingested for the removal of intestinal roundworms. Originally grown in Canaan, they were believed to ward off demons. The rabbis of the Talmud believed that the fruit was a symbol of fruitfulness. The fact that other peoples of the ancient Near East used pomegranate for medical purposes would indicate that the children of Israel probably also did so, thus adding to our knowledge of the Bible.

5.1.12.12 Rose (Rosa canina)

A species of rose (known as the dog rose) was mixed with the stinging nettle plant (urtica dioica) and used to treat coughs in Biblical times. The Romans must have been aware of the plant’s astringent properties because they applied wool soaked in rose oil to staunch a bleeding wound. The rabbis of the Talmud were aware of the fact that rose oil healed a wound and they used it in a mixture of wine vinegar and fish brine to massage the joint of a gout sufferer. This information leads to the assumption that the ancient Jews used this flower oil for its healing abilities and this enriches our knowledge of the Bible.
5.1.12.13 Willow (*Salix safsaf*)

The Bible mentions willow and myrtle branches being used with a citron in the celebration of the *Sukkoth* festival and the Talmud echoes this use. In Biblical times, willow poultices were used to treat gout and administered for fevers when the bark would be pounded and consumed with water or beer. The willow is a natural form of aspirin resulting from the digestion of the salicin in this plant that is converted into salicylic acid. In Egypt it was also a well known treatment for fevers possibly in decoction form. The study of the Egyptian medical texts has brought to light the fact that the knowledge of medical plants was also known by the ancient Jews and it is more than likely that they utilised the willow for its analgesic and anti-inflammatory benefits although the Bible does not document such information.

To sum up from all the findings: I conclude that the Talmud elucidates the ambiguous Biblical texts that refer to gout, snake bite and tuberculosis. The Talmud gives a better understanding of doctors, midwives, circumcision and leprosy. It also indicates that treatments such as blood-letting, although not mentioned in the Bible, are commonplace in the Talmud, indicating that it was an ancient practice. The Bible alludes to epilepsy in the story of King Saul while the Talmud gives many perspectives on epileptics. Many people in ancient times, as today, suffered from intestinal parasite infestation. The Talmudic rabbis’ remedy of pennyroyal is used today by herbal practitioners to facilitate removal of ecto-parasites.

Many treatments prescribed in the Talmud indicate an advanced understanding of medicine that is comparable to that of modern times. There are however, many strange folk medicines that manifest primitive practices. This can be attributed to the rabbis themselves in that some were more rational and scientifically orientated. Some were mystically orientated whilst there were those who were very superstitious.
APPENDIX A

BIOGRAPHIES OF SOME IMPORTANT TALMUDIC RABBIS

It is difficult to provide a biography of each rabbi mentioned in this dissertation because there are many that share common names, for example: Judah, Johanan and Joshua. The authors of the material that formed the Talmud were not concerned with historical accuracy because the scholars knew who the rabbis were and it was not necessary to define them in any great detail.

*Tanna* means “to teach or repeat” (plural *Tannaim*). The knowledge of a *Tanna* was acquired orally via his teacher and he learnt by repeating and memorising the *Halakhah* (Kolatch 1981:48). This period began in 10 CE and ended in 220 CE. They gave rise to the *Amoraim* (the plural of *Amora*) which means to “to say or speak” (Kolatch 1981:40).

The word *Amora* has two meanings: The first was an interpreter who worked alongside a lecturer as he taught his students. His task was to translate the lecture into Aramaic, the language of the period (Kolatch 1981:41). The second meaning described all the lecturers in Palestine and Babylonia who lived from 220-500 CE, by which time the Babylonian Talmud was completed (Kolatch 1981:41).

Kolatch concludes his explanation by mentioning that the *Amoraim* in Babylon had the title “Rab” or “Mar” and those in Palestine were called “Rabbi” (1981:41). The ordinations of the *Amoraim* in Babylon were not recognised by the rabbis in Israel (Kolatch 1981:41).

1. **ABBAHU**

Kolatch narrates that Abbahu was a Palestinian *Amora* of the 3rd century CE and principal of a Palestinian academy who was an original thinker and politically
influential (1981:56). Abbahu was a wealthy man, who enjoyed the good things of life such as Gothic slaves and ivory chairs (Kolatch 1981:56). His business interests were the manufacture of women’s veils. Being a well educated man, he had knowledge of Greek and was highly respected by the Romans for his wealth. This resulted in him being very influential in the veto of anti-Jewish legislation (Kolatch 1981:56). He delivered many popular lectures and engaged in Christian debate. He had two sons one of whom became important in Talmudic affairs of their day (Kolatch 1981:56).

2. ABBA AREKA (175-247 CE)

Kolatch says that Abba Areka was a Babylonian Amora also known as ‘Rab’ or ‘Rav’ (1981:51). One of Judah the Prince’s pupils in Tiberias and also under the tutorship of his uncle, Hiya of Cafri, Rav founded an academy in Sura in 219 CE that survived for eight centuries (Kolatch 1981:51). He was an able scholar, whose compilation of halakhah, termed the Beraitot formed a separate legal corpus not included in the Mishnah. Kolatch notes that some of the Beraitot form part of the High Holy Day liturgy (1981:51). The latter part of his working life was spend travelling in Babylonia as an Inspector of Markets where he would fix the commodity prices there (Kolatch 1981:51). Kolatch concludes his biography with the fact that his passing was mourned for twelve months in Babylonia and that he was survived by three children (1981:51).

3. ABAYE (280-339 CE)

Abaye a Babylonian Amora, says Kolatch, was an orphan raised by a governess in the home of Rabbah bar Nahmani (1981:50). He was initially a farmer by day and a student at night. He started to manufacture wine and amassed wealth and property becoming head of the Pumbedita academy from 333-338 CE. During this time the student number diminished because there was a rival academy
situated on the Tigris River. Unfortunately Abaye did not live past his prime (Kolatch 1981:50).

4. **AKIVA (AKIBA) BEN JOSEPH**

Kolatch states that Akiva ben Joseph, a talented original thinker, was a Palestinian *Tanna* born about 50 CE, although not much is known about his youth (1981:68). He played a huge role in the formation of the *Mishna* and the *Midrashim* of the Tannaim having collated much of the early legal decisions. Kolatch goes on to say that he was a highly respected member of the Jabne Sanhedrin and married his second wife Rachel after his first wife died (1981:68).

Their marriage became a classic of Jewish literature (Kolatch 1981:68). Akiva was older and of peasant stock, while Rachel was young, attractive and rich. Soon after their wedding, she encouraged him to study at a rabbinic *yeshiva*\(^1\) which took him twelve years. Kolatch narrates that when he returned he found his wife had been disowned by her father but she insisted that he return once more to study further (1981:68). He did so and became a renowned teacher at B’nai Berak. The second reunion of the couple had a happy ending with the father donating half of his riches to Akiva and forgiving his daughter. Akiva died a horrible martyr’s death at the hands of the Romans in 135 CE for defying various Roman edicts of the time (Kolatch 1981:68).

5. **ASHI (352-427)**

Kolatch narrates that Ashi was born into wealth and became head of the Sura *yeshiva* when he was only twenty years old (1981:74). At his own expense he refurbished the dilapidated academy at Sura that had shut its doors due to the bad state of repair (Kolatch1981:74). He was the first scholar to collate the material that eventually formed the *Gemara* (Kolatch 1981:74).

---

\(^1\) Hebrew for ‘Rabbinical training academy’.
6. **ELAZAR BEN SIMEON**

Kolatch remarks that Elazar ben Simeon was a 2\textsuperscript{nd} century CE *Tanna* and contemporary of Judah the Prince, who had lived with his father in a cave during the period of Roman persecution (1981:90). His knowledge of the Samaritan Torah was excellent but he disapproved of the later amendments. Kolatch tells how Elazar betrayed his own people by reporting those Jews who were opposed to the Romans but later he regretted this period of his life (1981:90).

7. **JOHANAN BEN ZAKKAI**

Kolatch relates that Johanan ben Zakai was a tradesman for forty years and a student of Rabbi Akiva before the founding of an academy in Jabneh which replaced Jerusalem as the hub of Jewish life after the Roman occupation of Judea (1981:134). Johanan was well known for his ability to counter the constant arguments of the Sadducees (Kolatch 1981:135). There is much uncertainty about his early life but it is believed that he was active between 60-95 CE although Josephus never documented him (Kolatch 1981:135). He broke with tradition by being the first ‘outsider’ for 400 years to serve as head of the Sanhedrin and became a Patriarch. This position had always been filled by a descendant of Rabbi Hillel (Kolatch 1981:135).

8. **JOSHUA BEN LEVI**

Kolatch describes Joshua ben Levi as a Palestinian *Amora* of 3\textsuperscript{rd} century who was born in Lydda and became principal of the town’s *yeshiva*\(^2\) (1981:151). He appeared to have a talent for fund-raising and visited the well-to-do families in Rome to collect money in support of the Patriarchate (Kolatch 1981:151). He was very knowledgeable in *Halakhah* and *Haggadah/Aggadah* and many legends arose about him as a result of his fame. Kolatch believes that his favourite topic

\(^2\) A rabbinical college.
was ‘life’ in Heaven (Paradise) and Hell (Gehenna) about which he claimed special knowledge; he passed away in 275 CE (1981:151).

9. JUDAH THE PRINCE (JUHUDA HANASI 135-219 CE)

Kolatch describes Judah as a brilliant scholar and prominent Palestinian Tanna, also referred to as Rabbenu Hakadosh (our holy teacher; 1981:152) and was a direct descendant of Hillel. He was a man of great personal wealth, a Patriarch and head of the Sanhedrin, which had Roman sanction. The Romans held him in high esteem. His legacy was the organisation and classification of all the important halakhot\(^3\) that were edited to form the Mishnah (Kolatch 1981:152).

10. MEIR

Kolatch states that Meir was a Palestinian Tanna of the 2\(^{nd}\) century, and second only to Akiva (1981:164). Some authorities believe that his name was Moise (Greek form of Moses) but not much is known about him although it is believed that his family were Jewish converts (Kolatch 1981:164). There is conjecture that he was born in Caesarea (Cappadocia). He was a scribe by profession and copied the books of the Torah. Kolatch documents that Meir was a pupil of Akiva and fled to Babylonia after the martyrdom of his famous teacher in 135 CE (1981:164). After he returned to Israel, he became a member of the Sanhedrin at Usha but was forced to leave due to a probable personality clash with Simon the Patriarch. Kolatch continues by saying that he eventually returned to Asia Minor to take up his former profession and became Judah the Prince’s assistant in the mammoth task of the compilation of the Mishnah (Kolatch 1981:164).

---

\(^3\) Plural of halakhah.
11. NAHMAN BEN ISAAC (280-356 CE)

Kolatch describes Nahman ben Isaac as a Babylonian Amora and a fine scholar who studied in Sura and in his mature years became principal of the yeshiva in Pumbedita (1981:166). He remained there only four years before his death. Kolatch believes that he was appointed more for his maturity than his ability (1981:166).

12. RABA (ABBA BAR JOSEPH BAR HAMA)

Kolatch documents that Abba bar Joseph bar Hama was referred to simply as ‘Raba’ in the Talmud; born either in 280 or 299 CE in Machuza (1981:177). He studied under Hisda in the Sura yeshiva and married Hisda’s daughter ten years after her husband’s death (Kolatch 1981:177). Raba was regarded as a brilliant scholar and he succeeded Abaye as principal of Pumbedita academy after first establishing his own school in Machuza on the Tigris River. Kolatch describes Raba as a great humanitarian which is illustrated by a story. Thieves had stolen Raba’s livestock that was later returned but he refused to accept it back again. His reason was that the sheep had almost cost the thieves their lives and he believed that they were entitled to the animals as a result. He lived a full life and died in 352 CE (Kolatch 1981:177).

13. RABA BAR HANAN (CIRCA 300-375 CE)

Kolatch elucidates that this 4th century Babylonian Amora was referred to as ‘Papa’ in the Talmud (1981:151). He was born into money which enabled him to devote himself to full-time study (Kolatch 1981:175). His teachers were the well-known Abaye and Raba. Besides being a rabbi, Kolatch mentions that Papa was also a businessman who manufactured beer using dates (1981:151). He became principal of the Pumbedita yeshiva in 352 CE and served there for five years. He
then relocated to Nares in Sura where he founded a new rabbinical academy and remained there for nineteen years until his death in 375 CE (Kolatch 1981:175).

14. RABINA BEN HUNA

Kolatch reports that Rabina Ben Huna, a 5th century Babylonian Amora was instrumental in the completion of the Gemara which was started by Ashi (1981:182). Rabina ben Huna served as the last principal of the yeshiva at Sura for about a year after the Jewish persecution by the Persians. After his father's death as a child, his mother had transmitted much of his late father's knowledge to him and his mother's uncle (Rabina I) took over his guardianship (Kolatch 1981:183). Rabina ben Huna also served as a judge for a time after Ashi's death. He maintained that human dignity superceded that of the commandments (Kolatch 1981:183). He was involved in charity work and inspired many wealthy women to donate their jewellery for the benefit of the poor (Kolatch 1981:183).

15. SHESHET

A Babylonian Amora of 4th century CE Sheshet was a pupil of Rab and Mar Samuel at Nahardea (Kolatch 1981:189). He had no time for grumblers and refused to listen to them. He was a man with a remarkable memory which stood him in good stead as he was blind. He managed to commit the whole of the Mishnah and the Beraitot to memory. After the destruction of Nahardea, Sheshet founded an academy at Silhi situated on the Tigris River (Kolatch 1981:189).

16. SIMEON BEN GAMALIEL

Simeon ben Gamaliel was the son of the first Gamaliel and a direct descendant of Hillel (Kolatch 1981:191). Kolatch continues to say that Simeon ben Gamaliel was active between 40-70 CE (1981:191). He was the president of the Sanhedrin and head of the Pharisees at a very difficult time – just before the destruction of
17. SIMON BEN LAKISH (200-275 CE)

Kolatch notes that Simon ben Lakish was also known as Resh Lakish and was born in Bostra the capital of Saraceus east of the Jordan River (1981:197). He was taught by Johanan ben Happaha who married his sister. Immensely strong physically, he joined a circus as a wild animal tamer when his study fees were depleted (Kolatch 1981:197). Having graduated in Babylonia, he became an *Amora* and founded a *yeshiva* at Tiberias and was joined by his brother-in-law as assistant head. Unfortunately the two rabbis disagreed on many *halakhah* and Johanan ben Happaha’s opinion always prevailed over that of Resh Lakish (Kolatch 1981:197).

18. ZADOK

Kolatch says that Zadok was a *Tanna* of priestly descent and a disciple of Shammai, who ruined his health by ‘fasting’ for forty years (1981:212). Kolatch indicates that his only sustenance was the juice of one fig every night. The reason for his fast was his anticipation of the fall of Jerusalem. He was taken captive by Emperor Titus but was released promptly owing to the direct intervention of Johanan ben Zakkai. Zadok had only one son, who excelled in commerce (Kolatch 1981:212).
APPENDIX B

EXPLANATION OF THE TALMUDIC TRACTATES USED IN THIS DISSERTATION

The Talmud is divided into tractates or treatises\(^4\), the spellings of which vary as there are no fixed rules for Hebrew transliteration.

The Talmud is divided into six orders and each order has a number of tractates, which are further divided into chapters:

1. **Zeraim (Seeds)** comprising eleven tractates
2. **Moed/Mo’ed (Festivals)** containing twelve tractates
3. **Nashim (Women)** comprising seven tractates
4. **Nezikin (Damages)** made up of ten tractates
5. **Kodashim (Holy things)** comprising eleven tractates
6. **Teharot (Purifications)** containing twelve tractates

The total of the above is sixty three tractates.

1. **Zeraim (Seeds)**

   This tractate deals with the agricultural laws especially that of Israel, and includes the contributions for the priests and Levites (Berman 1989:38).

1.1 **Berachot (Benedictions)** – Made up of nine chapters and deals with liturgical laws (Kolatch 1981:10), the blessings for different foods and special occasions (Berman 1989:38).

\(^4\) A book or writing dealing with a particular subject in a formal or methodical manner (Coulson et al 1980:906), also termed a tract.
1.2 Peah (Corners of the fields) – Comprising eight chapters and details the laws appertaining to the harvest of that corner section of the field reserved for the indigent and the laws of gleaning (Berman 1989:38). This tractate is based on Leviticus 19:9-11 and Deuteronomy 24:19-22 (Kolatch 1981:10).

1.3 Demai (Doubtful tithing) – This tractate consists of seven chapters and examines produce that has been doubtfully tithed (Berman 1989:38). This Mishnah has no Gemara commentary (Kolatch 1981:10).

1.4 Kil’ayim (Mixtures) – There are nine chapters in this tractate that deal with the prohibitions on the types of plants, seeds, animals and fabrics that may be mixed or combined e.g. yoking different species of animal together based on Deuteronomy 22:9-11 and Leviticus 19:9 (Kolatch 1981:13; Berman 1989:38).

1.5 Shev’it (Sabbitical year) – This tractate comprises ten chapters that govern agricultural laws that applied during the sabbatical (seventh) year of rest including that of debt release based on the texts of Exodus 23:10-11; Deuteronomy 15:1-4 and Leviticus 25:2-8 (Kolatch 1981:13).

1.6 Terumot (Contributions) – Comprising eleven chapters dealing with the offerings brought by the ancient Jews to the Temple. These were designated for the priests and from which they were entitled to a share. These laws are based on Numbers 18:9; 12, 24, 26 and Deuteronomy 18:4 (Kolatch 1981:13).

1.7 Maaserot (Tithes) – This is made up of five chapters and discusses the tithes given to the Levites and products not subject to tithing (Kolatch 1981:13).

1.8 Maaser Sheni (Second tithe) – This tractate comprises five chapters that discuss the second tithe that had to be consumed in Jerusalem and is based on the Biblical texts of Leviticus 27:30 and Deuteronomy 14:22-29; 26:12 (Kolatch 1981:14).
1.9 **Challah/Hallah (Dough)** – Made up of four chapters and based on Numbers 25:18-21, this tractate deals with the portion of dough to be removed by the baker and given to the priests (Kolatch 1981:14).

1.10 **Orlah (Uncircumcised)** – Consisting of three chapters dealing with the forbidden or ‘uncircumcised’ fruits of trees that could not be consumed for the first three years of their growth and based on Leviticus 19:23-25 (Kolatch 1981:16).

1.11 **Bikkurim (First fruits)** – Made up of three chapters and discusses the ceremonies and people who were permitted to bring first fruits of produce e.g. wheat, barley, grapes, figs, dates and olives to the Temple and based on the Biblical passages Exodus 23:19 and Deuteronomy 26:1-2; Kolatch 1981:16).

2 **Moed/Mo’ed (Festivals)**

This tractate comprises the laws that apply to Shabbath, all the Festivals and fasts (Berman 1989:39).

2.1 **Shabbath (Sabbath)** – Consists of twenty four chapters dealing with the laws of the Sabbath (Kolatch 1981:16).

2.2 **Erubin / Eruvin (Combinations)** – Comprises ten chapters that elucidate the Sabbath laws regarding the carrying of objects from one domain to another and combining them in a fictional way to enlarge the domain so that a Sabbath day’s journey would fall within the newly constructed boundary (Kolatch 1981:17).

2.3 **Pesachim (Passover)** – Made up of ten chapters that discuss the laws of Passover and based on Exodus 12:1 ff; and Numbers 9:1ff; (Kolatch 1981:17).
2.4  **Shekalim (Shekels)** – This tractate concentrates on the use of the monies accumulated by temple tax based on Exodus 30:12-16; there is no Gemara commentary (Kolatch 1981:17).

2.5  **Yoma (Day of Atonement)** – Consists of eight chapters that describe the Yom Kippur Temple service that is based on Leviticus 16:3-34 and Numbers 29:7-11 (Kolatch 1981:18).

2.6  **Sukkah (Tabaernacles)** – Comprising five chapters dealing with the festival of Sukkoth. It is based on Leviticus 23:24 and Numbers 29:12 (Kolatch 1964:18).

2.7  **Betzah (Egg)** – Made up of five chapters, this tractate deals with the question of work that is permitted and forbidden on all the festivals. It is also called Yom Tov Festival (Berman 1989:40), based on Exodus 12:16 and Leviticus 23:3-36 (Kolatch 1981:18).

2.8  **Rosh Hashanah (New Year)** – Comprises four chapters which determine the dates of the New Year and the sighting of the New Moon (Berman 1989:40), based on Leviticus 23:24 and Numbers 29:1 (Kolatch 1981:19).

2.9  **Taanit/Ta’anit (Fasting)** – Comprising four chapters dealing with the liturgy and laws of public fasts (Kolatch 1981:19).

2.10  **Megillah (Scroll)** – This tractate is made up of the Scroll of Esther and deals with the observance of Purim festival (Kolatch 1981:19).

2.11  **Moed Katan/Mo‘ed Katan (Minor Festivals)** – Consists of three chapters that deal with the days between Passover and Succoth and the laws appertaining to mourning (Kolatch 1981:20).
2.12 **Hagigah (Festival offering)** – Comprises three chapters and details the three pilgrim festivals (*Pesach, Shavuot and Sukkoth*) that were celebrated in Jerusalem (Kolatch 1981:20).

3 **Nashim (Women)**

The laws of marriage and its obligations is the subject of this tractate.

3.1 **Yebamot/Yevamoth (Sisters-in-law)** – Made up of sixteen chapters describing the levirate marriage laws, forbidden marriages and sexual relations, found in Deuteronomy 25:5 (Kolatch 1981:20).

3.2 **Ketuboth (Marriage Deeds)** – Made up of thirteen chapters which comprise the marital laws and rights, obligations of a married woman and her husband and are based partially on Exodus 22:16 (Kolatch 1981:22). The laws of rape and seduction are included (Berman 1989:41).

3.3 **Nedarim (Vows)** – The eleven chapters in this tractate discusses vows and the method of annulling them and is based on Numbers 30:3-26 (Kolatch 1981:22).

3.4 **Nazir (Nazarite)** – This tractate of nine chapters deals with the Nazarite laws and is based on Numbers 6:2-21 (Kolatch 1981:22).

3.5 **Sotah (Suspected woman)** – Comprised of nine chapters, this tractate deals with a wife accused of being unfaithful to her husband (Kolatch 1981:23).

3.6 **Gittin / Gitin (Divorces)** – Consists of nine chapters that make up all the laws dealing with the granting and execution of divorces and are based on Deuteronomy 24:1-5 (Kolatch 1981:23).
3.7 **Kiddushin (Betrothals)** – Comprising four chapters that discuss different types of betrothal and the conditions that are required for a valid marriage (Kolatch 1964:23). The laws of slave and property acquisition and those governing the relationship between parents and children are included (Kolatch 1981:23).

4 **Nezkin (Damages)**

Civil law, criminal law and their respective procedures together with the applicable punishments form the subject of this tractate.

4.1 **Baba Kama / Baba Kamma (First Gate)** – Made up of ten chapters dealing with delictual law such as damages caused by a man or his animals to others for which the owner is responsible based mainly on Exodus chapters 21 and 22 (Kolatch 1981:24).

4.2 **Baba Metzia (Middle Gate)** - Comprising ten chapters which deal with financial (‘mercantile’) law relating to property, trusts, prohibition of usury, buying, selling, lending, hiring and renting (Berman 1989:42). This tractate is based mainly on Exodus chapters 22; Leviticus 19:13 (Kolatch 1981:24).

4.3 **Baba Batra/Baba Bathra (Last Gate)** – Consists of ten chapters dealing with property and tenants’ rights and those of inheritance based on a number of Biblical passages (Berman 1989: 42; Kolatch 1981:24).

4.4 **Sanhedrin (Courts)** – Consisting of eleven chapters detailing with aspects of criminal law that warrants the death sentence and includes the judicial procedure and composition of the courts (Berman 1989:43).

4.5 **Makkot (Lashes)** – This is a continuation of tractate Sanhedrin which expounds the laws relating to corporal punishment and perjury (Berman 1989:43).
The crime of what we would refer today as culpable homicide, is discussed and the guilty were banished to the cities of refuge (Nm 35:11-15). This tractate comprises ten chapters (Kolatch 1981:26).

4.6 Shevuot (Oaths) – Private and public oaths administered during court hearings are discussed in this tractate comprising eight chapters (Kolatch 1981:26; Berman 1989:43).

4.7 Eduyot (Testimonies) – This tractate of eight chapters is a collection of many testimonies given by different rabbis on a variety of halakhic subjects (Berman 1989:43).

4.8 Abodah Zarah / Avodah Zarah (Idolatry) – Made up of five chapters, comprising the laws applicable to idols and idol worshippers this tractate is based on Deuteronomy 4:25 (Kolatch 1981:27). Another subject of discussion was the question of contracts and association between Jews and non-Jews (Berman 1989:43).

4.9 Avot (Fathers) – Also called the Ethics of the Fathers, this tractate consists of five chapters of ethical maxims of the Tannaim. Kolatch states that it is the only tractate that deals with moral rather than legal conduct (1981:27). There is no Gemara commentary.

4.10 Horayot (Decisions) – Made up of three chapters, this tractate reviews the incorrect decisions given by the High Priest, Beth Din or the King of Israel and the penitential sacrifices necessary to expiate them (Berman 1989:43; Kolatch 1981:28).
5  **Kodashim (Holy things)**

The laws of the Temple and the sacrifices are the subject of this tractate of eleven chapters (Berman 1989:43).

5.1 **Zevahim (Animal sacrifices)** – Consists of fourteen chapters and concentrates on the types of animal sacrifices that took place in the Temple (Berman 1989:44).

5.2 **Menachot (Meal offerings)** – This tractate of thirteen chapters deals with the laws of meal offerings as well as those appertaining to *tzitzit* (ritual fringes) and *tefillin* (phylacteries; Berman 1989:44).

5.3 **Hullin (Secular things)** – The dietary laws, the slaughtering procedure of animals and birds for domestic use, and animal diseases are discussed in this tractate of twelve chapters (Berman 1989:44).

5.4 **Bechoroth (Firstlings)** – Comprises nine chapters which deal with the law of inheritance of the first born son and the blemishes on first born animals that render them unfit for sacrifice. These tractates are based on Exodus 13:2, 12 and Numbers 18:15-19 (Kolatch 1981:30; Berman 1989:44).

5.5 **Arakin (Valuations)** – This tractate of nine chapters is concerned with the evaluation of persons and things dedicated to God or to the Temple and the amount necessary for the redemption of one who has been pledged to God. This is based on Leviticus 27:2-27 (Kolatch 1981:30).

5.6 **Temurah (Substitution)** – The law bearing on the substitution of an ordinary animal for one that has already been dedicated to the altar is dealt with in this tractate of seven chapters (Kolatch 1981:31).
5.7 **Keritot (Excisions)** – This tractate of six chapters deals with the sins that warrant the punishment of ‘being cut off’ (*karet*), based on Exodus 12:15 (Kolatch 1981:31).

5.8 **Me’ilah (Sacrilege)** – The law of the improper use of property or objects that are been dedicated entirely to Temple is discussed in this tractate of six chapters (Berman 1989:44). Kolatch maintains that they are based on Leviticus 5:15-17 (1981:31).

5.9 **Tamid (Daily sacrifice)** – The full Temple ritual of the daily burnt offering is found in this tractate of seven chapters (Berman 1989:45).

5.10 **Middot (Measurements)** – Detailed measurements of the Temple, its courts, halls, chambers and gates is the subject of this tractate of five chapters (Kolatch 1981:33).

5.11 **Kinnim (Bird’s nests)** – The three chapters of this tractate deal with bird sacrifices used for sin and burnt offerings based on Leviticus 1:14; 12:8 and 14:22-31 (Kolatch 1981:33).

6 **Teharot (Purifications)**

The law of ritual impurity is dealt with in this tractate (Berman 1989:45).

6.1 **Kelim (Vessels)** – The law of ritual uncleanness applicable to vessels is the subject of this tractate of thirty chapters based on Leviticus 11:33-36 (Kolatch 1981:34; Berman 1989:45).

6.2 **Oholot (Tents)** – This tractate of eighteen chapters deal with the laws of ritual impurity of tents that may have been defiled by a corpse and is based on Numbers 19:14-22 (Kolatch 1981:34; Berman 1989:45).
6.3 **Nega’im (Tzara’at/Leprosy)** – Comprising fourteen chapters dealing with the laws of leprosy in people, houses and clothing, this tractate is based on Leviticus chapters 13 and 14 (Kolatch 1981:34; Berman 1989:45).

6.4 **Parah (Heifer)** – The twelve chapters of this tractate deal with the laws pertaining to the Red Heifer described in Numbers 19:1-10. Details such as the required age and preparations for slaughter are given (Kolatch 1981:35).

6.5 **Teharot (Purifications)** – The ten chapters of this tractate focus on the laws of ritual impurity mentioned in the Bible and is based on Leviticus 11:24-28 (Kolatch 1981:35; Berman 1989:45).

6.6 **Mikvaot (Ritual baths)** – Kolatch states that the ten chapters of this tractate, mentioned in Leviticus 15:5 deal with bodies of water such as wells, cisterns, pools, ponds, reservoirs or ditches that could be used for ritual immersion (Kolatch 1981:35).

6.7 **Niddah (Menstruant)** – Consists of ten chapters that deal with a woman’s ritual impurity resulting from menstruation and childbirth. It is based on Leviticus 12:2-8 (Kolatch 1981:36).

6.8 **Makhshirin (Preparations)** – This tractate of six chapters deals with the problem of foods that have become ritually unclean by their contact with liquids such as dew, water, wine, oil, blood, milk and honey based on Leviticus 11:34-39 (Kolatch 1981:36; Berman 1989:46).

6.9 **Zavim (Discharges)** – Made up of five chapters that deal with bodily discharges and the subsequent defilement arising from them and various purification methods, mentioned in Leviticus 15:5 form the subject of this tractate (Kolatch 1981:36).
6.10  **Tevul Yom (Daytime immersions)** – The problem of a person who has immersed themselves in a *mikveh* (ritual bath) for purification purposes during the day but are obliged to wait until sunset before being regarded as ritually cleansed, is the subject of this tractate of four chapters (Kolatch 1981:38).

6.11  **Yadaim (Hands)** – This tractate comprising four chapters concentrates on the laws of ritual hand-washing, their impurity and purification (Kolatch 1981:38).

6.12  **Uktzin (Stalks, stems)** – The three chapters of this tractate deal with the ritual defilement of fruit caused by the stalks of the plants and trees that may have become ritually unclean. The question of whether they are considered part of the fruit itself and also ritually impure as a result are discussed (Berman 1989:46; Kolatch 1981:38).
APPENDIX C

A SHORT EXPLANATION OF THE TALMUD AND THE MIDRASH

1.1 THE TALMUD

The Talmud (also referred to as ‘Oral Law’), is the final written record of the rabbinic interpretation of the Torah. The discussions recorded in the Talmud take the form of legal debates, stories and anecdotes.

Berman writes that the Talmud consists of the Mishnah which summarises the Oral Law and the Gemara which consists of both explanation and commentaries on the Mishnah (1989:1). He goes on to explain that the Torah comprises many laws some of which are not easy to comprehend and the Mishnah was written to elucidate them. Kolatch maintains that the Talmud is primarily an encyclopaedia because it contains such a vast wealth of information appertaining to the religious duties of any Jew (1981:5). Kolatch documents that the formation of the Mishnah took place over two hundred years (circa 30 BCE – 220 CE; 1981:6).

Berman states that the scholars who wrote the Mishnah called Tannaim expressed their ideas in a very concise format but their writings do not deal with every problem that could and did arise (1989:2). The Tannaim were those who lived in that period but the term also applied to those who transferred their knowledge orally in the later Amoraic halls of learning (Berman 1989:2). The editing and compilation of the Mishnah took place over three centuries by Judah the Prince, Nathan and their associates before 220 CE (Kolatch 1981:6). After the Mishnah had been written, the oral study of it still continued (Mirsky 1981:2).

---

5 The Tannaitic Period (20 – circa 200 CE)
Kolatch explains that the *Gemara* is a commentary on the *Mishnah* which was documented by Ashi⁶ and Rabina⁷, and their associates in about 500 CE, although there were further explanations added by the *Saboraim* until *circa* 600 CE (1981:6). The *Gemara* scholars were called *Amoraim*⁸. Kolatch illustrates the above by saying that five or six lines of Mishnaic text appear, stating the law as promulgated by the *Tannaim* (1964:7). This is usually followed by five to six pages of *Gemara* commentary by the *Amoraim* on the Mishnaic law. In the Babylonian Talmud, not every Mishnaic law is accompanied by a *Gemara* commentary (Kolatch 1964:7).

Berman elucidates that many theoretical issues that were raised by the *Tannaim* were those appertaining to Jewish law (*halakhah*) and the rabbis and their students found solutions to them. Berman adds that the Talmud also consists of solutions to practical problems – the ultimate quest was to find the truth by reference to the Torah (1989:2).

Berman’s view of the Talmud is that it is dialectic in that the issues are defined and debated in minute detail simplifying and clarifying each issue until an accurate solution is found (1989:3). He adds that truths are not presumed but have to be proved by logical debate on each question that is raised (Berman 1989:3). The scholars who wrote the *Mishnah* (*Tannaim*) also produced *tosefta* (commentaries) on each tractate of the *Talmud* (Berman 1989:4). Berman says that Talmudic topics are varied and range from commercial advice to historical questions and from medical cures to Jewish law (1989:3).

Berman explains an important principle – that a ‘precedent system’ is followed in the Talmud with regard to the opinions of the Sages (1989:4). This means that the view of later scholars is based on the earlier ones; the former ones

---

⁷ His full name was Rabina ben Huna, a ⁵th century Babylonian *Amora* who completed the editing of the *Gemara* (Kolatch 1981:183).
⁸ The Amoraic Period (*circa* 220 – 500 CE)
established a base for future query and were regarded as incontrovertible, proved and established by divine revelation (Berman 1989:4). Berman explains the reason for this was that previous generations were 'closer in time to the initial revelation' (1989:4). The opposite seems to apply to halakhic decisions when the opinions of the later scholars were followed. This is the accepted norm as far as the rabbis and the Talmud were concerned (Berman 1989:4).

It was important to know precisely which scholar had expressed his opinion in the Mishnah because it assisted in the formation of Jewish law (halakha). Berman posits that if a decision in the Mishnah represented a minority point of view it is probable that it would not have any legal binding force in Jewish law (1989:5).

It can be seen from perusing the Talmud that there are lengthy debates on many subjects, including medicine that analyze every word and phrase of the Mishnah in precise detail (which could illuminate some of the Biblical tests dealing with illness and disease) but often wander off the subject (Berman 1989:7).

The Talmud comprises seven Orders and each one is divided into a number of Tractates. Appendix A lists the various Talmudic tractates.

1.2 THE MIDRASH

Herr (2007:182) states that the word Midrash means 'to examine or search' and is found in the Bible (Dt 13:15) It is translated as 'writing' (2 Chr 13:22) or 'commentary' (2 Chr 24:27). Herr describes the Midrash as a specific type of rabbinic literature that embodies homilies, sayings, sermons, aggadot or stories, even halakhot which are combined to form an account or commentary on certain Biblical books (2007:182). Herr continues to say that the Midrash was written partly in Aramaic and Rabbinic Hebrew which was interspersed with

---

9 Aggaot in Hebrew is the plural form of aggadah which means 'story' in English. The word Haggadah is an alternative form of aggadah used during Mishnaic times.
10 The plural of halakhah..
Greek\textsuperscript{11} and Latin\textsuperscript{12} words (2007:182). During the period of the Second Temple, the word \textit{Bet Midrash} was used to signify a place of study and education (Ecclus 51:23).

The \textit{Midrashim} consists of the following collections, which deal with the Torah: \textit{Genesis Rabbah, Exodus Rabbah, Leviticus Rabbah, Numbers Rabbah I & II and Deuteronomy Rabbah} (Herr 2007:182). There are more that deal with other books of the \textit{Tanakh}: \textit{Lamentations Rabbah, Esther Rabbah I, Songs Rabbah, Ruth Rabbah and Ecclesiastes Rabbah} to name but a few (Herr 2007:184).

Peters mentions that the \textit{Midrashim} dissect the Biblical text in precise detail to interpret its plain and homiletic meanings, but does not distinguish between them because the authors believed that the Torah was capable of infinite interpretations (2004:16). The \textit{Midrashim} according to Herr were edited and arranged from 400–500 CE (Early Period; 2007:184). The Middle Period comprised \textit{circa} 500 – 1100 CE and the Late Period from 1100-1500 (Herr 2007:184).

\textsuperscript{11} The language and culture of Israel was enormously influenced by the Greek language, many of the words remain: \textit{sudar} ‘scarf’, \textit{prosdor} ‘corridor’ and \textit{panas} ‘lamp’ (Berman 1989:16).

\textsuperscript{12} The Rabbis used the Latin word \textit{podagra} for gout (Kidd 1984:251). This is still true in Modern Hebrew (Alcalay 1990:2006).
APPENDIX D
HERBAL MEDICINE AND HOMOEOPATHY

1.1 HERBAL MEDICINE

Singh defines herbal medicine as ‘ ... herbs, herbal materials, herbal preparations and finished herbal products, which are contained as active ingredients in parts of plants’ (2006:4). Historically medicinal plants have been used by mankind for thousands of years because they have proved to be a safe and effective cure (2006:4). Kramer details the parts of the plant that are utilised: those that develop underground such as roots, tubers, bulbs and rhizomes (Kramer 2006:21); the bark as well as leaves, stems and flowers (Kramer 2006:20). The fruits and seeds of these plants are dried for use and the gums, resins and nectars of some plants have important medicinal properties (Van Wyk & Wink 2004:12).

Van Wyk & Wink maintain that herbal medicine (also referred to as phyto-medicine) is quite commonplace nowadays in European countries such as Germany, Switzerland, Austria as well as the United Kingdom (2004:9). It is used as an alternative measure employed to assist the body in its healing process rather than bombard it with synthetic chemicals (2004:9). Most of these phyto-medicines have been standardised and thoroughly tested on humans before being used medicinally (Van Wyk & Wink 2004:9). The sale of herbal medicine in South Africa is regulated by the Medicines Control Council, with a registry number for each product (MCC). Herbal medication may no longer be sold as a food supplement (Kramer 2006:16).

Van Wyk & Wink explain that modern Western medicine (also called allopathic medicine) originated from the use of herbal medicine (2004:8), for example quinine obtained from the bark of the Chichona tree (Cinhona pubescens); opium from the opium poppy (Papaver somniferum; Van Wyk & Wink 2004:369) and
colchicine from meadow saffron/autumn crocus (*Colchicum autumnale*; Ebadi 2007:275).

Herbal medicine takes many forms: infusions, decoctions, compresses, syrups, tinctures and poultices, which warrant some explanation:

- **An infusion** is made by placing the leaves, twigs, roots or stems of the plant in a glass or porcelain teapot and adding boiling water. This mixture is left to infuse for five to ten minutes and should be consumed within twelve hours (Kramer 2006:22; cf Van Wyk & Wink 2004:18).

- A **decoction** is made by placing seeds, bark, leaves, stalks or roots (preferably coarsely chopped) on the stove in a metal saucepan with water and boiled for five minutes or longer. It is then strained and stored in bottles (Singh 2006:7; cf Van Wyk & Wink 2004:18).

- A **compress** or **liniment** is made by placing a wad of cotton wool or soft absorbent fabric in an infusion (hot or cold) and applying to an external site on the body (Kramer 2006:22).

- **Syrups** or **linctuses** are made by mixing the medicinal substance and sugar (usually unrefined; Singh 2006:16), which is melted on the stove placed into sterilized containers (Van Wyk & Wink 2004:18).

- A **tincture** is a mixture of alcohol and the plant extract, usually acquired by maceration, which is mixed and can be applied externally or taken orally with water (Kramer 2006:24; cf Van Wyk & Wink 2004:18).

- A **maceration** is prepared by immersing the plant in cold water for some hours to release the healing substances. This can be applied to the skin on a plaster or as a lotion (Chiej 1988:3; cf Van Wyk & Wink 2004:18).
• A poultice (also called a cataplasm) is a warmed herb paste usually placed onto gauze and applied directly to the skin. It is held in place by strips of adhesive plaster (Kramer 2006:24).

It is Riddle’s view that there is a link between plant based traditional medicine and that practised in antiquity (1993:xii). He adds that the World Health Organisation (WHO) brought out a report as early as 1978 which documented the fact that 80 % of the world’s population does not receive what he terms ‘Western level medical care’ but a combination of traditional and medical treatment (Riddle 1993:xv). Plant medicines used in the Bible and Talmud are worthwhile studying because it is the medicine of our ancestors. By learning more we can develop insight and know-how to address the needs of the millions on our planet who do not receive sufficient or adequate medical attention (Riddle 1993:xv).

1.2 HOMOEOPATHY

Homoeopathy is defined in the Oxford Illustrated Dictionary (Coulson 1980:403) as ‘a system of treatment of disease by drugs usually in minute doses that in a healthy person would produce identical symptoms as that of the disease’.

During the 5th century BCE, Hippocrates, a Greek physician was the first to counteract the Law of Contraries, which was the prevailing practice amongst the medical doctors of the time (Smith & Benford 1967:629) and Speight states that he used a new method which he dubbed “like will cure like” (1986:4). Smith & Benford believe that the same idea was echoed centuries later by a Swiss physician, Philippus Aureolus Paracelsus (1493-1541 CE), who became the first medical doctor to realise the significance of a precise dose (1967:629). These authors maintain that some of Hahnemann’s treatment was borrowed from Hippocrates and Paracelsus (1967:629; cf Danciger 1987:12).
According to Danciger, Dr Samuel Hahnemann (1775-1843) a medical doctor and pharmacist from Germany, became very disenchanted with the medicine practiced in his time (1987:84). This consisted mainly of blood-letting, and purging of patients, (the accepted methods of healing in his time) and ingesting copious amounts of different medication which was generally thought to heal the patient (Danciger 1987:85).

Hahnemann, born in Meissen, Saxony, relinquished the practice of medicine and earned money by translating an English herbal (Cullen's *material medica*) into the German language when he found reference to the treatment of malaria by Cinchona bark (Danciger 1987:85). The bark of this plant contains the drug quinine, used in modern times to treat malaria. Danciger goes on to say that Hahnemann experimented on himself taking the drug over a period of several days and discovered that he developed symptoms of malaria which lasted several hours only after he had taken the medication (1987:86). Hahnemann realised that Cinchona bark, which cured malaria (he termed it ‘ague fever’) could also produce the same effect as the disease when administered to a healthy adult. Hahnemann termed this system of medical practice ‘The Law of Similars’ (*similia similibus curantur*) which translated from the Latin means: ‘A similar will cure a similar’ (Speight 1986:6) for example, heartburn and indigestion is treated by administering an acid not an alkaline. Williams maintains that Hahnemann was not the first to discover the principle of ‘similars’, but he was the first one to put it into practice (1967:1113). Speight says that he was the founder of homoeopathy (1986:1).

Almost a century later, public interest in alternative therapies has once again surged. The fact that many registered medical practitioners are also qualified homeopaths, not only in the United Kingdom but also in South Africa has led to medical aids covering treatment not only by registered homeopaths but also chiropractors, osteopaths and herbalists. Homeopathic medicines are often
cheaper than drugs and are certainly closer to nature, treating the whole individual rather than merely the disease (Speight 1986:10).

The complete opposite of homoeopathy is allopathy (derived from the Greek word *allos* (other) according to Danciger (1987:3) and is defined in the Oxford Dictionary (Coulson 1980:20) as ‘traditional medical practice which aims at curing disease by remedies having the opposite effect to that caused by the disease’. Using the same example of curing excess stomach acid that I quoted above, allopathic treatment would require the use of antacids. Danciger’s view is that treatment by allopathic medication is only a temporary cure when treating chronic illnesses (1987:6).

Initially the patient’s symptoms are relieved but in time stronger doses of the medication are required to give the same initial relief causing more harm the longer they are utilised (Danciger 1987: 6). The problem is that allopathic medication does not cure the primary disease (Danciger 1987: 6) because it does not trigger the body’s own defence mechanisms.
**ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAR</td>
<td>Biblical Archaeology Review.</td>
</tr>
<tr>
<td>BA</td>
<td>Biblical Archaeologist.</td>
</tr>
<tr>
<td>BACE</td>
<td>Bulletin for Australian Centre for Egyptology.</td>
</tr>
<tr>
<td>KJV</td>
<td><em>King James Version of the Holy Bible</em>. The British &amp; Foreign Bible Society, 19[61]. <em>Containing the Old and New Testaments translated out of the original tongues and with the former translations diligently compared and revised by His Majesty’s special command, A.D. 1611</em>. London: Cambridge University.</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


Ben-Noun, L 2003. What was the Mental Disease that afflicted King Saul? Clinical Case Studies, 2003 (2), 270-282.


Cruickshank, R & Knappett, CR 1967. s.v. 'Types of Antiseptics', in *EB* 2: 91.


Josephus, F. *The Jewish War*. Published circa 78 CE. (Translated by Whiston, W 1987.) Massachusetts: Hendrikson.

Josephus, F. *The Antiquities of the Jews*. Published during the 90s of the 1st Century CE. (Translated by Whiston W 1987.) Massachusetts: Hendrikson.


Medical website. *(Modern) leprosy*. (http://www.healthline/adamcontent/leprosy/2; site visited 20 November 2009).


Morris, JR 1967(b) s.v. ‘Commodus’, in *EB* 6: 159.


Retief & Cilliers (eds.) 2005(a). Where were the Doctors when the Roman Empire died?, in Retief & Cilliers (eds.) 2005(a): 62-78.

Retief, FP & Cilliers, C (eds.) 2005(b). The Healing Hand: The Role of Women in Ancient Medicine, in Retief & Cilliers (eds.) 2005(b): 165-188.


Skolnick, F; Berenbaum, N; Gafni, SS & Gilson, M (eds.) 2007. s.v. 'Asa', in EJ 2: 540-1.

Skolnick, F; Berenbaum, M; Gafni, SS & Gilson, M (eds.) 2007. s.v. 'Gehazi', in EJ 14: 713-4.


The Editors, 1967. s.v.'Herophilus' in EB, 11: 446.

Thompson, EA 1967. s.v. ‘Julian (Flavius Claudius Julianus)’, in EB 13: 129.


Tigay, JH 2007(b.) s.v. 'Snake - Literary and Folkoristic Affinities', in EJ 15: 626-627.

¹ Anonymous contributors are noted in this manner in EB 1967.


Walbank, FW 1967. s.v. ‘Alexander III (called the Great)’ in *EB* 1: 571.


Wehrli, F 1967. s.v. 'Theophrastus', in *EB* 21: 999.


Wooten S & Saville, K 20[05]. Cedarwood. *Aromatherapy and Natural Health,* (17), 255-256. This is a magazine part of a series that I collected. I believe that it was published in 2005.


