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John Wilkinson

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## The Body in the Old Testament

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*Swift on the heels of his essay on 'Physical healing and the atonement' in the last issue of THE EVANGELICAL QUARTERLY we present another biblical-medical study from Dr Wilkinson.*

In his book on *Ethics*, Dietrich Bonhoeffer has reminded us that God willed that there should be human life on earth only in the form of bodily life.<sup>1</sup> Therefore, bodilyness and human life belong together. This is confirmed by our everyday experience. We are born as a body, we express our personality and creativity through a body and so take our place in the ranks of society and the pages of history.

It is not surprising, therefore, that there is a great deal said about the body in the Old Testament. However, as we read the Old Testament, we soon realise that it is not describing the body in terms of the anatomy and physiology with which we are familiar today. We need not be surprised at this for its books were written at a time when knowledge of the structure and function of the human body was not very advanced, and when the appropriate methods of study were not encouraged. Hence John Robinson can maintain that 'from the standpoint of analytical psychology and physiology the usage of the Old Testament is chaotic.'<sup>2</sup>

Nevertheless, the Old Testament proceeds on its own principles in its presentation of the subject of the human body, and its references to human anatomy and physiology are understandable in the light of these principles.

### Old Testament Anatomy

Although in Old Testament thought, the body is a distinct entity within the human constitution, the Old Testament presentation of the body is incidental to its main purpose. In most cases its

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<sup>1</sup> Dietrich Bonhoeffer, *Ethics* (London, 1955), 131.

<sup>2</sup> John A.T. Robinson, *The Body: A Study in Pauline Theology* (London, 1957), 16.

comments are made by the way and not as part of a complete and systematic account of human anatomy and physiology.

An exception to this apparent lack of interest in anatomy may be found in the instructions for the offering of animal sacrifices in the early chapters of Leviticus.<sup>3</sup> In observing these instructions, the priests in particular would have a good opportunity of acquiring a knowledge of the gross anatomy of the animals they sacrificed, especially of the contents of their abdomen. Another possible opportunity for the observation of gross anatomy, this time in human beings, would be the results of the violent methods of injury and killing applied in warfare and personal feuds. However, the prohibition on contact with dead bodies in Nu. 19:11-22, which apparently did not apply to those offered in sacrifice, would exclude the possibility of dissection for the purpose of increasing anatomical knowledge.

Such an account of human anatomy as the Old Testament provides is made on principles which differ from those of modern anatomy and physiology. These principles we must now seek to identify. They appear to be five in number.

#### *1. The principle of organic unity.*

In Old Testament thought the emphasis is on the unity of the human body and organism and not primarily on its parts. When the parts are mentioned they frequently stand for the whole by the employment of the figure of speech known as synecdoche (*pars pro toto*).

#### *2. The principle of the independence of organs.*

Although they participate in the whole, the organs of the body are represented as independent of each other without any central controlling or co-ordinating system. No arrangement of organs into systems is recognised as it is in modern anatomy.

#### *3. The principle of synthetic thought.*

When a part or organ of the body is named, it is frequently its function which is meant rather than its physical character. Wolff gives Jdg. 7:2 and Is. 52:7 as illustrations of this principle.<sup>4</sup> The Hebrews, therefore, were more interested in the function of an organ than in its form and location.

#### *4. The principle of psychical significance.*

No organ of the body which is mentioned in the Old Testament is described as having a purely physical function.<sup>5</sup> They are all

<sup>3</sup> See especially Lv. 1:3-13; 3:3-16 & 4:3-12.

<sup>4</sup> H.W. Wolff, *Anthropology of the Old Testament* (London, 1974), 8.

<sup>5</sup> An apparent exception to this observation is the *womb* when it is referred to in the singular by the word *rehem*. However, when this latter word is used in the plural it commonly means mercy or compassion as in 1 Ki. 8:50; Is. 47:6 & Lam. 3:22.

credited with psychical or spiritual functions. This is particular true of the heart and the kidneys.

### 5. The principle of non-specific terminology.

The principle of psychical significance means that the same word may denote both a physical organ and a mental state or activity. Thus the word *mē'îm* may be used to refer to the intestines or to the feeling of compassion, and even the feeling of anguish (as in Je. 4:19). In addition, one and the same term may also mean different physical parts of the body. Thus *beten* can mean the reproductive organs, the abdomen and even the whole body, and the word *bāsār* has a whole range of meanings.<sup>6</sup>

It is obvious that these five principles are not those on which present-day anatomy and physiology are based. Nevertheless, they provide a basis on which the presentation of the concept of the human body in the Old Testament can be understood.

## The Body as a Whole

The word *body* is not common in the standard versions of the English Old Testament. The actual number of occurrences is as follows:

Authorised Version:	57 times.
Revised Standard Version	139 times.
New International Version	127 times.

The reason for the wide variation in the occurrence of this word is that Old Testament Hebrew has no specific term to denote the body. The word which comes nearest to denoting the body is the term *ḡwîyyâ*, but this word occurs only thirteen times in the whole Old Testament and in only two cases does it mean a living human body (Gn. 47:18 & Ne. 9:37). In view of what we have said above, it is interesting to find that this word does not bear any psychical meaning.

However, the word *body* occurs more frequently in the English versions than this word does in Hebrew, and these versions are not alone in this. The LXX uses the word *sôma* seventy-nine times and the Vulgate uses the word *corpus* forty-five times.<sup>7</sup> This means that other words are used in the Hebrew Bible to denote the body. Three are used to denote the living body, namely, *beten*

<sup>6</sup> See N.P. Bratsiotis in *TDOT* (Grand Rapids, 1977), vol. 2, 317–322, s.v. '*bāsār*'.

<sup>7</sup> These figures do not include the occurrences of these words in the deuterocanonical books.

(e.g. Ps. 31:9), *bāśār* (e.g. Is. 10:18) and *'esem* (e.g. La. 4:7). These words are also used for parts of the body—abdomen, muscle and bone respectively. Their application to the whole body provides an illustration of the use of synecdoche to which we have already referred. Three other words are used for the dead body, namely, *gūpā* (only in 1 Ch. 10:12), *nēbēlā* (e.g. Ps. 79:2) and *peger* (e.g. 1 Sa. 17:46). These latter words refer to the whole body and are never used for parts of it as those for the living body are.

### **The Creation of the Body**

There are two passages in the Old Testament in which the creation of a new adult body is described. One is in the second chapter of Genesis and the other in the thirty-seventh chapter of Ezekiel.

The account of the creation in the first chapter of Genesis says simply that God created man in his own image and male and female, using the verb *bārā* (Gn. 1:27). More detail is given in the second chapter where a different verb (*yāsar*) describes the action of God as like that of a potter moulding clay. The description occurs in Gn. 2:7, which von Rad describes as the *locus classicus* of Old Testament anthropology.<sup>8</sup> This verse reads as follows:

The Lord God formed man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being (NIV).

The body was formed by God from the dust ('āpār) of the ground. The word 'āpār has usually been taken to mean the fine dry loose dust lying on the surface of the ground in which plants and trees grow, as in Job 8:19 & 14:8. However, Luther in his German translation rendered it *einem Erdenkloss*, a clod of earth, and Speiser in the Anchor Bible supports this translation.<sup>9</sup> All the English versions translate it as *dust* except the New American Bible which renders it as *clay*.<sup>10</sup> Certainly for the particles of dust (or even clods of earth) to adhere together, water would be required (as provided in verse six). So we are not surprised to find Eliphaz in Job 4:19 speaking of men as,

<sup>8</sup> G. von Rad, *Genesis* (London, 1961), 75.

<sup>9</sup> E.A. Speiser, *Genesis* in *The Anchor Bible* (New York, 1964), 16.

<sup>10</sup> Alone of all the early versions, the Vulgate translates 'āpār' not as 'dust' (*pulvis*), but as 'mud' or 'slime' (*limus*). Tertullian in *Adv. Marc.* 1.24 also uses the word *limus* and not *pulvis*.

those who live in houses of clay,  
whose foundations are in the dust.

In the same book, Elihu says that he was like Job, a man 'formed from a piece of clay' (Job 33:6 RSV).

The chemical elements of the human body are the same as those found in nature. As von Rad points out, man's creation from the ground constitutes a bond of life, which is made even more relevant by his appointment as God's steward of nature.<sup>11</sup>

Into the lifeless body which he had moulded from the clay, God breathed the breath of life (*nišmat hayyîm*, Gn. 2:7) and man became a living being. Both man and animals were given the breath of life (Gn. 7:22), but only of man is it recorded that God himself personally breathed it into his nostrils. Thus to the body was added the principle of life, the breath which produced life and gave rise to the non-physical element of the human constitution.

We are given no clue about the appearance of man's body at his creation. The only part of his anatomy which is mentioned are the nostrils into which God breathed the breath of life. The Old Testament appears to assume that when man's body came into being, it had the same form and function as it had when the various books of the Old Testament were written. In fact, there are no references in its pages which require the anatomy and physiology of the human body to be any different from that with which we are familiar today.

There have been suggestions that the body of man bore the image of God in which man was created according to Gn. 1:27. Wheeler Robinson goes so far as to say that the natural meaning of this verse 'is that the bodily form of man was made after the bodily form of God (the substance being different).'<sup>12</sup> He does not, however, define 'the bodily form of God.' Von Rad writes similarly that 'the marvel of man's bodily appearance is not at all to be excepted from the realm of God's image. This was the original notion . . . the whole man was created in God's image.'<sup>13</sup>

This is not, of course, a modern idea. John Calvin held that there was no part of man, not even his body, which did not reflect the image of God.<sup>14</sup> There were also precise suggestions about which human physical characteristics reflected the

<sup>11</sup> G. von Rad, op. cit., 75.

<sup>12</sup> H. Wheeler Robinson in his essay on 'Hebrew Psychology' in *The People and the Book*, ed. A.S. Peake (Oxford, 1925), 364.

<sup>13</sup> G. von Rad, op. cit., 56.

<sup>14</sup> John Calvin, *Institutes of the Christian Religion*, I, xv, 3.

divine image. Gregory of Nyssa proposed man's erect posture and his ability to look upwards as such characteristics.<sup>15</sup> These characteristics were also noted by the classical Latin authors Ovid (quoted by Calvin)<sup>16</sup> and Cicero<sup>17</sup> as distinctive of man in contrast to the animals. However, we have no indication in the Old Testament of how the body of man might reflect the image of God in which he was created, and can only speculate on the possibilities.

Jewish cabalistic scholars believed that God possessed literal physical parts as described in the Old Testament where it describes 'the arm of the Lord', etc. They also believed that the tetragrammaton *YHWH* disclosed the human form of God when it was written vertically to produce a likeness of the human body similar to the stick men used in modern cartoons. The *yôd* represented the head and neck; the first *hê* represented the shoulder girdle and upper limbs; the trunk was represented by the *wâw*, and the pelvis and lower limbs by the second *hê*.<sup>18</sup>

### **The Formation of the Body**

In the last section we were concerned with the formation of the adult body of man as created by God. Has the Old Testament anything to say about the embryological development of the body as seen in human procreation as opposed to direct divine creation?

Human procreation is regarded as a wonder and a mystery in the Old Testament. One of the four things that Agur, son of Jakeh, found amazing was 'the way of a man with a maid' (Pr. 30:19), i.e., the way in which the union of a male human being with a female produced a new human being. The fact that such a union does produce a new life was already known in Old Testament times is shown by the case of Onan in Gn. 38:8–10. The method of contraception which he used was coitus interruptus which prevented the union of sperm with ovum which was necessary for conception. It was well-known that children were developed in the womb of their mother for there are references to this fact in almost half the books of the Old Testament. A not

<sup>15</sup> Gregory of Nyssa, *On the Creation of Man*, 8, 1.

<sup>16</sup> Ovid, *Metamorphoses*, I, 84–85.

<sup>17</sup> Cicero, *On the Nature of the Gods*, II, 56, 140.

<sup>18</sup> P.E. Hughes, *The True Image* (Leicester, 1989), 12–13. See also his article 'The Jewish Cabala and the Secret Names of God' in *Philosophia Reformata* (Kampen, 1956), 86.

uncommon description of children is that of 'the fruit of the womb' (*perî beten*, e.g. Dt. 7:13; 28:4; Ps. 127:3; Is. 13:18 & Mi. 6:7).

There are two passages in the Old Testament which describe the formation of the child in the womb. The first of these is in Ps. 139:13–16 where the Psalmist is meditating on the attributes of God and in the course of his meditation considers the wonder and origin of his own body as created by God.

Thou it was who didst fashion my inward parts (*kēlāyot*, kidneys),  
thou didst knit me together in my mother's womb.

I will praise thee, for thou dost fill me with awe;  
wonderful thou art, and wonderful thy works.

Thou knowest me through and through:  
my body ('esem, bones) is no mystery to thee,  
how I was secretly kneaded into shape  
and patterned in the depths of the earth.  
Thou didst see my limbs unformed (*gōlem*, embryo) in  
the womb, and in thy book they are all recorded;  
day by day they were fashioned,  
not one of them was late in growing (NEB).

This passage speaks of how God had formed the body of the Psalmist. We may summarize it in a more systematic way for our purpose as follows:

1. God made me in my mother's womb by a process which resembled modelling clay, knitting or weaving.
2. My body was unformed at first, but was fashioned into shape according to the human pattern.
3. The development of my body was programmed and each part appeared and developed in its correct time-sequence.

The second passage is Job 10:8–10, where Job is enquiring of God the reason for God's treatment of him. In the course of his enquiry he asks of God,

You modelled me, remember, as clay is modelled,  
and would you reduce me now to dust?  
Did you not pour me out like milk,  
and curdle me then like cheese;  
clothe me with skin and flesh,  
and weave me of bone and sinew?  
And then you endowed me with life,  
watched each breath with tender care (Jerusalem Bible).

The terms of this passage are reminiscent of the Psalm, and we may try to reconstruct the picture in the same way as we have just done for the Psalm.

1. God modelled my body like a potter models a shapeless mass of clay.
2. My body began as a soft white fluid mass like milk which then became firmer until it resembled cheese in colour and consistency.<sup>19</sup>
3. My developing body was then clothed with skin and muscle.
4. My growing tissues were woven together with bones and sinews.
5. Finally, my body was born endowed with life which was indicated by the onset of breathing.

If we now try to sum up the teaching of the Old Testament on the formation of the human body, we may do so in the following terms. Our bodies are God's creation. They are brought into being by human procreation in which both male and female human beings share. They develop in the maternal womb according to a definite pattern and time-sequence. They begin as an unformed substance which differentiates as it grows, into the various parts which form the body. The framework is formed of bone, sinews, muscle and skin, and within this framework the various organs develop and grow.

### **The Structure of the Body**

When we discussed the creation of the body, we mentioned that there were two passages in the Old Testament which were relevant to our discussion. We considered the first one at that time, namely, Gn. 2:7. The second passage is the first fourteen verses of the thirty-seventh chapter of Ezekiel which describe the formation of new adult bodies as seen in the prophet's vision of the valley of dry bones. The value of this second passage is that it sheds light on the Hebrew concept of the structure of the body and confirms what we have just learned from the tenth chapter of Job.

The scene which the prophet describes, resembles that of an ancient battlefield where the dead had been allowed to go unburied and their corpses had rotted to their bones. These bones were the foundation of the structure of their bodies and it was on them that the soft tissues were to be laid down to restore the bodies to a state in which they could be given life once more.

The bones were first brought together bone to bone (v.7), i.e.,

<sup>19</sup> H.W. Wolff, op. cit., 97. Wolff suggests that the mention of poured-out milk is a reference to 'the pouring out of the milky seminal fluid into the female organism.'

in their correct anatomical position which would reconstitute the joints between them. Sinews or tendons and muscles were then attached to them to permit movement, and the body was then covered with skin. This sequence of bone, tendon, muscle and skin from within outwards was familiar to the Hebrews for it is mentioned in such passages as Job 2:4–5; 10:11; 19:20; La. 3:4 & Mi. 3:2–3, although tendons are mentioned only in Job 10:11 and here in Ezekiel. These four tissues formed the framework and covering of the body and enclosed the internal organs which, however, are not mentioned in this passage, and are listed nowhere else in their entirety.

If we may judge from the usage of the words, the muscle layer of the body was the most important. This is represented by the word *bāśār* which is more familiarly translated in the English versions as *flesh*. This word *bāśār* is used 273 times in the Hebrew Old Testament and refers to man in 169 cases. It does not however always mean the muscular layer of the body. About fifty times by synecdoche it refers to the body as a whole, and can also refer to other parts of the body. It may also denote the skin, as in Ex. 4:7; Lv. 19:28; Nu. 8:7; Job 4:15 & Ps. 102:5. This latter use is of interest because the original meaning of the word *bāśār* may have been *skin*, a meaning which is still preserved in the Arabic *bāsara*, hide. It is also of interest to note that it is recognised in the Old Testament that in starvation or wasting disease, it is the muscle or *bāśār* which is chiefly affected (see Job 19:20; 33:21; Ps. 22:17; 102: 5; Is. 10:18; La. 4:8 & Zc. 14:12).

The strength and the stability of the bony skeleton is recognised by the use of the most common Old Testament word for bone which is '*esem*', derived from the verb '*āsam*', to be powerful. This strength and stability could, however, be affected by fear and distress (Ps. 31:10; Je. 23:9 & Hab. 3:16). The bones were not solid, but contained marrow (*mōah*) which contributed to their health (Job 21:24 & Pr. 3:8).

Within the framework of the body formed by the four tissues we have just considered, lie the body cavities containing the internal organs or the inward parts. The cranial cavity containing the brain is not mentioned, although the skull is on four occasions, and in one case was fractured (Jdg. 9:53).<sup>20</sup> The trunk, which may have been the original meaning of the word *ḡewîyyâ* (see Dn. 10:6), is thought of as one long cavity. This cavity is

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<sup>20</sup> The word *mōah*, which in post-biblical Hebrew was used for the brain, occurs in the Old Testament in Job 21:24 where it refers to the bone marrow. The brain was thus described as the 'marrow' of the cranium.

called the *kereb* and contains the inward parts which may be referred to by the same name, as in Ex. 29:17 and Lv. 1:9. The lower part of this cavity is also called the *beten*, the belly or abdomen, though this word may also mean the womb or even the whole body as we have already seen. It was known that the heart was located in the upper part of the *kereb*, an area which we would call the thorax today. When Aaron wore his priestly robes, it was recognised that the breastplate lay over his heart (Ex. 28:29-30). When Jehu shot King Joram between the shoulder blades, his arrow penetrated the king's heart which must therefore have been located in the upper *kereb* or thorax (2 Kg. 9:24).

At least some of the contents of the abdomen must have been known to the Hebrews. When Joab inflicted a penetrating wound of the abdomen on Amasa we are told that his intestines (*mē'îm*) came out from the abdomen through the wound (2 Sa. 20:10). It is also mentioned that this wound of Amasa's was immediately fatal. However, a stab wound of the abdomen which produces prolapse of the intestine through the abdominal wall, does not of itself produce sudden death. This requires damage to some structure in the abdomen whose injury would result in a massive haemorrhage which would be immediately fatal. Joab obviously knew about this structure and its approximate position in the abdomen, so much so, that he damaged it with his first blow. He had used this method previously to kill Abner when we are told simply that Abner died (2 Sa. 3:27). However, in the case of Amasa we are specifically told that his death was associated with a massive haemorrhage for he is described as 'wallowing' or rolling about in his own blood on the highway (v. 12). The structure which Joab penetrated was most likely to have been the abdominal aorta which is the lower portion of the largest artery in the body, which lies in the middle of the upper part of the abdomen. Thus Joab, and presumably others, knew the fatal effect of a stab wound directed towards the midline of the upper part of the abdomen, although they were ignorant of its precise anatomical explanation.<sup>21</sup>

The liver and kidneys are mentioned in the Old Testament, but

<sup>21</sup> The AV translation of the narrative of Amasa's murder introduces another possible anatomical reference when it describes the location of the fatal wound as 'under the fifth rib' (2 Sa. 20:10). This would mean that the dagger entered the thorax at the level of the lower part of the heart and cut open the heart producing a massive haemorrhage and sudden death (See J. Wilkinson, 'The Incident of the Blood and Water in John 19:34', *SJT*, 28, 1975, 149-172 (April)). Unfortunately, the AV translation cannot be sustained, and the more

there is no indication of their location in the human body. Those who offered sacrifices in the Tabernacle or the Temple would be familiar with their location in the bodies of sacrificial animals because they had to remove them according to the regulations in Leviticus (see Lv. 3:4, etc.). One organ which is specifically located in the abdomen is the womb, called more precisely the *rehem*, and less precisely the *beten*.

We close this section with a convenient summary of the structure (and animation) of the body provided by Bratsiotis:

The disparate anthropological statements in the Old Testament affirm that the human body is clothed with 'ôr, 'skin' and *bâsâr*, knit together with 'esem, 'bones' and *gîd*, 'sinews' (Job 10:11) and perfused with *dâm*, 'blood'. Further, God has provided it with a *lêb*, 'heart' (Ps. 33:15), *kîlâyôt*, 'kidneys' (Ps. 139:13) etc. and especially with a *nepeš* (Je. 38:16) so that the whole man is a *nepeš hâyyâ*, 'a living soul', as long as the *rûah*, 'spirit' given by the *nâsâmâ*, 'breath' of God dwells in the *bâsâr* (Job 34:14–15).<sup>22</sup>

### The Systems of the Body

We have already noted that the Old Testament has no concept of a systematic anatomy of the body in which the different organs and structures are seen as part of co-ordinated systems, whose composition and functions are related to the rest of the body. Nevertheless, there are references scattered throughout the books of the Old Testament which record observations of an anatomical and physiological nature. In this section we propose to bring some of these references together and relate them as far as possible to our modern knowledge of systematic anatomy and physiology.

#### *The cardiovascular system*

In the previous section we saw that the heart (*lêb* or *lêbab*) is a physical organ known to be located in the upper *kereb* or thorax. There is even a suggestion in Ho. 13:8 (see NEB and NAB versions) that the heart is inside the rib cage which needs to be torn open to expose it. However, this verse may really refer to the pericardium or the membranous sac which surrounds the heart.

recent versions usually translate the word *hmeš*, not as 'the fifth (rib)', but as 'the belly', because the form of the word is identical for both meanings. This comment also applies to the AV rendering of the word in 2 Sa. 2:23; 3:27 & 4:6.

<sup>22</sup> N.P. Bratsiotis, op. cit., 325.

In either case, it provides an additional detail in the knowledge of cardiac anatomy.

There are two possible references to heart attacks (coronary artery occlusion) in the Old Testament.<sup>23</sup> The first is the case of Nabal in 1 Sa. 25:37–38. After his wife Abigail had told Nabal about her meeting with David, we read that 'his heart failed him and he became like a stone' (v.37 NIV), i.e., he became cold and collapsed and even unconscious due to the effect of the cardiogenic shock produced by the coronary artery occlusion. A well-known complication of heart attacks of this kind is the formation of a clot on the inner surface of the damaged wall of the left ventricle of the heart, which within ten days of the original attack may separate and move to block the blood vessels to the brain producing a fatal stroke or cerebral embolism. This is what could have happened in the case of Nabal (v.38).

The second reference is to an experience of Jeremiah where in 4:19 of his book he describes what appears to be an attack of cardiac pain and abdominal beating of his heart brought on by fear. This is more than simple angina pectoris for people with angina do not writhe in pain or experience abnormal heart beats. They remain immobile until the pain passes off, as it usually does in a few minutes. If they are restless then it is not angina, it is a heart attack. That is what Jeremiah appears to be describing.

Usually, people are not conscious of the beating of their heart until its beat becomes abnormal either in rate, in rhythm or in strength. This is true in the Old Testament where we have no mention of the beating of the heart except in those cases where the heart begins to throb (RV, RSV, NEB) or pound (NIV), usually under the influence of emotion. References to this sensation are to be found in Job 37:1; Ps. 38:10 55:4; Is. 60:5, Je. 4:19 & Hab. 3:16. In Is. 21:4 there may be a reference to the occurrence of an abnormal cardiac rhythm under the influence of strong emotion, when the prophet says that his heart 'wanders', using the verb *tā'âh*, to go astray i.e. from its normal rhythm.

This is all that we can say about the Old Testament concept of the physical anatomy and physiology of the heart. It is the most frequently mentioned organ of the body, being referred to over 850 times, but in very few of these references is the physical organ or its function in view. Edmond Jacob was able to identify only sixteen references to the heart as a physical structure in the Old

<sup>23</sup> There is a possible third reference to a heart attack in Ps. 55:4–5.

Testament. In all other cases it was the psychical function of the heart which was meant.<sup>24</sup>

This paucity of references to the heart as a physical organ is surprising in view of the obvious importance which the Hebrews placed on the heart as a psychical organ. For them it was the centre of man's knowing, feeling and willing as well as of his spiritual experience. This means that, although they may have known little of the anatomical relationships of the heart, they knew its position in the body and the physiological responses of its beat to the various events of life. These events provoked love, anger, anxiety, fear, excitement and fever which all affected the beat of the heart and so drew attention to the important and central role which it played in daily life.

We know today that the function of the cardiovascular system is to transport blood around the body to and from the tissues. Without a constant supply of blood the tissues and, therefore, the body would die. This means that literally and physically, the blood is the life, as we learn from Leviticus 17:11 & 14 and Deuteronomy 12:23, where the word translated *life* is the Hebrew word *nepeš*. Apart from this fact that the blood is or contains the *nepeš*, we learn little about the anatomy and physiology of the blood from the Old Testament. We do, however, learn to treat it with respect.

### *The respiratory system*

For the Hebrews, breathing was the most important function of the body. For them, to breathe was to live (Is. 42:5). Life was first given to the body when God breathed into its nostrils the breath of life (*nišmat hayyîm*, Gn. 2:7 cp. Job 33:4), and breathing continued to be the sign of the presence of life in the body (Job 27:3). For the body to stop breathing, was for it to die (Gn. 35:18; Job 11:20; 31:39; 34:14 & 15; Ps. 104:29; 2 Kg. 12:21 & Je. 15:9). As if to emphasise the importance of breathing as a physical function, the normal term for breathing (*n-šāmâ*) 'occurs only rarely as a metaphor to express psychical realities'.<sup>25</sup>

The nostrils ('ap) are the only part of the respiratory system to be explicitly named and regarded as primarily for breathing, although their function as the organ of smell is mentioned in Ps. 115.6 and Am. 4.10.

It is commonly held that the term *nepeš* originally meant throat

<sup>24</sup> Edmond Jacob in TDNT (Grand Rapids, 1974), vol. 9, 626, s.v. 'psuchē'.

<sup>25</sup> W. Eichrodt, *Theology of the Old Testament* (London, 1967), vol. 2, 142.

or neck, because the cognate words in Akkadian and Ugaritic have this meaning.<sup>26</sup> According to Wolff, the term usually refers to the internal functions of the throat rather than external form of the neck.<sup>27</sup> These concerned eating, drinking and breathing, and so the word *nepes̄* could mean either the oesophagus (gullet) or the trachea (windpipe) according to which function of the throat was in view. The *nepes̄* as part of the respiratory system is in view in such verses as Ps. 69:1; 124:4 and Jon. 2:6 which refer to the risk of asphyxiation by drowning. However, the obvious greater importance of the function of respiration for the maintenance of life meant that the word came to be more associated with breathing than with eating or drinking, and so came to mean *breath*. From here the word came to be applied to the non-material constituent of man as symbolised by his invisible breath, which is the predominant meaning of the term in the Hebrew Bible.

**The lungs are not mentioned in the Old Testament.**

#### *The digestive system*

The use of the mouth (*peh*) for the ingestion of food is mentioned in Ne. 9:20; Ps. 78:30; 81:19; 119:103; Pr. 18:20; Ezk. 2:8 & 3:4 and 14. There are also references to the *nepes̄* as the site of the ingestion of food and drink (see Ps. 107: 9; Pr. 10:3; 25:25; Ec. 6:7; Is. 5:14 & Hab. 2:5). The throat was, therefore, recognised as a part common to both the respiratory and the digestive system.

When food is eaten it is received in 'the inner room of the abdomen' (*hadrē bāten*, Pr. 18:8 & 26:22), and then passed on to the intestines (*mē‘im*, Job 20:14; Ezk. 3:3 & 7:19). There is no separate word for stomach as the gastric organ, nor is any distinction made between the small and large intestine. There are references to bowel disturbances (Job 30:27; La. 1:29; 2:11 & Je. 31:20), and to audible bowel sounds or *borborygmi* (Is. 16:11 & 63:15).

The liver is named *kābed* from its weight (from *kābad*, to be heavy), but the human organ is referred to only once and that metaphorically as being poured out on the earth in sorrow (La. 2:11). A wound in the liver is usually fatal in the stag, and so also

<sup>26</sup> A.R. Johnson, *The Vitality of the Individual in the Thought of Ancient Israel* (Cardiff, 1949), 9. The suggestion that 'throat' or 'neck' was the original meaning of *nepes̄* was first made by Edouard Dhorme in 1923 on the basis of his studies in Akkadian.

<sup>27</sup> H.W. Wolff, op. cit., 13.

presumably in man (Pr. 7:23). Bile or gall (*mērōrā*), the product of the liver, is referred to and related to digestion in Job 20:14. It is recognised that a wound of the gall-bladder is very serious (Job 16:13 & 20:25). Such a wound results in what is called bile peritonitis as bile leaks into the peritoneal cavity, and this is still regarded as a serious condition today.

Human faeces or excrement as the waste product of the digestive process are not referred to very often in the Old Testament. Their hygienic disposal is important and instructions are given for this as part of camp discipline in Dt. 23:13. The euphemism for defaecation was *to cover one's feet*, i.e., to use one's garments as a screen (Jdg. 3:24 & 1 Sa. 24:3).

### *The urinary system*

The human kidneys (*kēlāyōt*) are referred to in the Old Testament thirteen times and never in the singular. On only four occasions are the references of a physical nature. In Ps. 139:13, the author refers to his kidneys as created by God, although most versions translate the word *kēlāyōt* as *inward parts*. In Job 16:13 and La. 3:13 there are possible references to the acute pain of renal colic described as an arrow piercing the kidney. In Job 19:27 there may be a reference to the shrinking of the kidney which occurs in chronic nephritis.

The physical function of the kidney is not mentioned, but the passage of urine is referred to in 1 Sa. 25:22 & 34; 1 Ki. 14:10; 16:11; 21:21 & 2 Ki. 9:8. Urine is called 'foot water' (*mēraglayim*) in 1 Sa. 24:3, 2 Ki. 18:27 & Is. 36:12.

### *The reproductive system*

The results of the function of the reproductive system in producing pregnancy and the delivery of a new generation are well-recognised in the Old Testament, even though its precise anatomy and detailed physiology were unknown.

The external genitalia are referred to by several euphemisms.<sup>28</sup> For example, the word *bāśār*, flesh, is used for the male organ in Ex. 28:42; Lv. 15:2, 3 & 7; & Ezk. 16:16; 23:20 & 44:7, and for the female vagina in Lv. 15:19. The male testicles are mentioned in Lv. 21:20, and the female vulva is described by the term *šōr* in

<sup>28</sup> See B.L. Bandstra & A.D. Verhey in *ISBE* (Grand Rapids, 1988), vol. 4, 432–433, art. 'Sex'.

Ct. 7.2.<sup>29</sup> Amongst the internal organs of reproduction, the womb or uterus of the female is not uncommonly referred to using *rehem* as the more specific term, or *beten* as the less specific term. The cervix uteri or the neck of the womb is described in Ho. 13.13 as the *mašber bānūm* which means the place where children 'break forth' at the time of delivery.

Menstruation is mentioned in Gn. 31.35; Lv. 15.19–30 & Ezk. 18.6, and the menopause in Gn. 18.11. The nocturnal emission of the male is referred to in Lv. 15.16 & Dt. 23.10.

### *Other systems and parts*

There is little to say about the other systems of the body. The various external parts of the body are mostly all named, especially the parts of the face and the limbs, but there is no detailed description of their anatomy. They are mainly spoken of in terms of their function or properties. The appearance of the face and its features reveal emotion, mood and disposition (e.g. Gn. 31:2). The arm and hand express power and capability (e.g. Ps. 89:13). The feet usually refer to some physical activity of the person such as standing, walking, running, treading or slipping, which may or may not have psychical, moral or spiritual significance.<sup>30</sup>

We began this article by accepting that the Bible did not describe the human body in terms of modern anatomy and physiology. However, any book which is as vitally concerned with daily life as the Bible is, cannot avoid anatomical and physiological references. This is what we have sought to illustrate by selecting and commenting on the more obvious of these Bible references, and by suggesting the principles on which their presentation is based.

<sup>29</sup> The word *sōr* in this verse is usually translated 'navel' in the English versions.

However, BDB noted that the word was often interpreted as meaning the female vulva (see p. 1057). This meaning has been adopted by recent commentators. See M. Pope, *The Song of Songs* in *The Anchor Bible* (New York, 1977), 617–618, and G.L. Carr, *The Song of Solomon* in *The Tyndale Old Testament Commentaries* (Leicester, 1984), 157.

<sup>30</sup> A.R. Johnson, op. cit., 42–69.