

## Guidance from Holy Quran

# Human Embryology and Nutrition–Some Facts From the Holy Qur-ān

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Received: December 22, 2005 Accepted: February 18, 2006

### ABSTRACT

The Holy Qur-ān has provided vast information on various stages of human embryology.. It has been stated that man has been created from the elements provided mainly from water and soil. Qur-ān states that after fertilization, *nutfah* (zygote) rests in the mother's womb for some time, where it gets its nourishment and protection from the outside stresses. It grows into *alaqa* (a clot of congealed blood) and then into *mudgha* (fetus lump). Then the *mudgha* is converted into *izaman* (mass of bones). Then the mother gives birth to the child. The term used in Qur-ān for giving birth is *nukh-rajā-kum tiflan* (expulsion of the baby). The newborn feeds on the mother's breasts for at least two years or two and a half years, as Allah states in the Holy Qur-ān. (Rawal Med J 2006;31:29-31)

### INTRODUCTION

Islam is a complete code of life. Its teachings encompass almost all walks of life. The Qur-an mentions the precise mechanisms in many places and clearly defined stages in reproduction. The different stages during embryonic development are described in the Holly Qur-ān. The term used for semen in the holly Qur-ān is *Maa-in-daafeqan* (fluid ejected fastly). The other terms used in the Book for various stages of embryo are “*Nutfah*” (zygote) *Mudghatan* (lump of flesh or developed gastrula), *Izaman* (soft bone structure just before organogenesis). The details of the embryonic stages mentioned by the wholly Qur-ān, though, are in brief but are in excellent agreement with the modern scientific knowledge.

The objective of the present paper is that to analyze the Qur-ānic approach on the subject. Wherever, there is translation of the verses of the holy Qur-ān from Arabic to English, help has been taken from ‘The holy Qur-ān, English Translation of the meanings and Commentary by Abdullah Yousaf Ali’, wherever translation of the verses was required.

## HUMAN REPRODUCTION - SOME BASIC CONCEPTS

After ovum is fertilized, it enters into the fallopian tube. The fertilized ovum gets implanted on the wall of the uterus.<sup>1</sup> The development of the fertilized ovum into an embryo and a complete baby takes place in three distinct phases.<sup>2</sup> **First Trimester** is the first three months of fetal development. During this period all the major organs of the body are formed. From this point on the developing human being is referred to as fetus rather than embryo. **Second Trimester** involves mainly the fetal development that is under the control of various hormones. The circulatory system of the fetus completes and is ready for the exchange of materials between the fetus and the mother. During **Third Trimester**, weight of the fetus doubles during this period and nervous system completes. During **Birth or Parturition**, the baby is born after the muscles of the uterus develop enormous muscular contractions that the baby is expelled. At **Lactation**, a denser liquid called colostrums is secreted from the breasts. After some time, production of mature milk begins. The mother's milk is full of almost all essential nutrients a baby needs for its physiological and physical requirements.<sup>1</sup>

## HUMAN BODY AND SOIL

Human beings derived their food from plants or animals. Plants, in turn, get their food from soil. It means humans depend upon soil for their food. In the Holy Book this fact is described in these words, "Man We did create from a quintessence (of clay)".<sup>3</sup> Also in *Sura Al-Room*, it is stated "and He created you from dust".<sup>4</sup> At another place the same idea is described in these words, "The creation of man from clay".<sup>5</sup> The inorganic constituents of the earth are absorbed into living matter by way of food and living matter reproduces itself by means of sperm. From the fertilized ovum develop bones, flesh and then organs and nervous system. Then there is the breathing from Allah's spirit into him.<sup>6</sup> The child is born; it grows; it decays and dies. After death, the elements once man had derived from earth years ago, go back to the earth as stated in one of the verses of *Sura Ta-Ha*: "from the earth did We create you and into it shall We return you and from it shall We bring you out once again".<sup>7</sup>

## THE CREATION OF HUMAN BEINGS FROM WATER

Human has its origin from water as stated in the Holy Book in these words, “now let man but think, from what he is created! He is created from a drop emitted – proceeding from between the backbone and the ribs”.<sup>8</sup> Also at another place, it is stated that “has there not been over man a long period of time, when he was nothing- (not even) mentioned. Verily We created man from a drop of mingled sperm”.<sup>9</sup> Also in *Sura Al-Furqan*, it is stated that, “it is He Who created man from water”.<sup>10</sup> In *Sura Al-Qiyama*, the same idea is presented in these words, “was he (man) not a drop of sperm emitted (in lowly form)”.<sup>11</sup> In *Sura Al-Alaq* it is stated that “created man, out of a leech-like clot”.<sup>12</sup> And in *Sura Al-Sajda*, “And made his progeny from a quintessence of despised fluid”.<sup>13</sup> In *Sura Al-Mursalat*, “Have We not created you from a fluid (held) despicable; which We placed in a place of rest, firmly fixed”.<sup>14</sup> The adjective which in this text refers to the ‘firmly fixed’ *makin* means the spot where man grows in the maternal organism.

## IMPLANTATION OF THE EGG IN THE FEMALE GENITAL ORGANS.

After fertilization, zygote is formed which continues its growth inside the mother’s womb till birth as stated in the Book; “Man We did create from a quintessence (of clay). Then we place him as (a drop of) sperm in a place of rest, firmly fixed”.<sup>15</sup> The fetus is protected in the mother’s womb like a king in a castle; it is firmly fixed, and gets the protection of the mother’s body, on which it depends for its own growth until birth.<sup>16</sup> The ball of cells become relatively denser and this particular shape is termed “*Alaqa*” by the Holy Qur-ān. This stage is described in these words “then we made the sperm into a clot of congealed blood; then of that clot We made a (fetus) lump, bones and clothed the bones with flesh; when We developed out of it another creature”.<sup>17</sup> The mass of bones is made into organs as stated, “He is Who shapes you in the womb as he pleases”.<sup>18</sup> This fact is also mentioned at another place, “We created you out of dust, then out of sperm, then out of a leech like clot, then out of a morsel of flesh, partly formed and partly unformed”.<sup>19</sup> The final phase of the human embryo is organogenesis i.e., formation of organs.<sup>2</sup> This is stated in the Book in *Sura Al-Sajda* in these words “but He fashioned him (man) in due proportion, and breathed into him of His spirit and He gave you the faculties of hearing and sight and understanding”.<sup>20</sup> In *Sura Al-Infitar* Allah says, “Him Who created thee, fashioned thee in due proportion, and gave thee a just bias”.<sup>21</sup>

## DETERMINATION OF SEX

The sex of a child is determined by the type of sperm that fertilizes the ovum-that is, whether it is a male sperm or a female sperm. A male sperm carries a Y sex chromosome while a female sperm carries an X sex chromosome. On the other hand, the ovum always has an X sex chromosome. It is the X or Y sex chromosome of male, which determines whether there will be a male child or a female child.<sup>1</sup> Allah describes the same fact in the holy Qur-ān in these words, “that He did create the pairs, - male and female, from a

sperm-drop when lodged (in its place)".<sup>22</sup> In *Sura Al-Qiyama*, it is stated, "and of him (man) He (Allah) created two sexes, male and female".<sup>23</sup>

## **EMBRYONIC PERIOD**

Qur-ān gives a description of the embryonic period with a reference that how a mother faces all the sufferings while she bears a baby. It is stated that, "We have enjoined on man kindness to his parents: In pain did his mother bear him, and in pain did she give him birth. The carrying of the (child) to his weaning is (a period of) thirty months".<sup>24</sup> The time of weaning was stated to be at the age of two years, i.e., 24 months that leaves six months as the minimum period of human gestation after which the child is known to be viable.

## **NUTRITION OF THE EMBRYO**

The embryo gets its nourishment from the blood of its mother. Allah provides food to every organism, no matter where it is. This fact is referred to in the Book in these words, "there is no moving creature on earth but its sustenance depends on Allah".<sup>25</sup>

## **BIRTH AND NUTRITIONAL CARE OF THE INFANT**

In *Sura Al-Namal* Allah states, "it is He Who brought you forth from the wombs of your mothers".<sup>26</sup> In these verses Almighty mentions that after a specific period of time inside the mother's womb, the baby is given birth.

The mother nurses the baby and the baby gets strength and power. Mothers are advised to breastfeed their babies for an appropriate period. It is mentioned in *Sura Al-Baqara* that, "the mothers shall give suck to their offspring, for two whole years".<sup>27</sup> In *Sura Al-Ahqaf*, it is mentioned that "the carrying of the (child) to his weaning is (a period) of thirty months".<sup>24</sup> The maximum period of breast-feeding (2 years) is again in accordance with the time that the first dentition is ordinarily completed in a human child. Nature now expects him to chew and masticate and be independent of his mother's milk completely.

## **CONCLUSION**

From the verses of the holy Qur-ān, it is evident that Qur-ān gives scientific description of how a human embryo develops. The close agreement between the teachings of Qur-ān and those of science is not only interesting but also confirmative to the fact that only Qur-ān is the true book and humanity should seek guidance from it.

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