

First 9 Months of Human Life

MONTH 1.

The life of the child begins as a single cell measuring around 0.1 mm in diameter. After the mother's and father's genes have been combined many child's features are determined. These are among others: sex, the colour of eyes, hair and skin, face features, build, height.

In the third week embryo reaches about 2.5 mm. Its heart starts beating on 21 day after conception. Blood circulates in a simple system of vessels; the system is separate from its mother's blood system.

In the fourth week embryo is more than half a centimeter long. It has already got a head, a trunk and the nucleus of upper limbs. Such body organs as: kidneys, liver, alimentary canal, blood vessels and the heart.

MONTH 2.

It is the time when the child grows very intensively, e.g. every minute the child has got several thousand new nerve cells. On 41 day first nerve reactions and movements of little hands and legs appear. Brain functions so intensively that in the 6th week after conception electromagnetic signals produced by the brain of this little human being can be registered. Mouth are formed, and the area close to lips becomes sensitive to touch; when it is irritated, the child revolves. All the basic body organs have been already formed. They all function well: the heart beats rhythmically 40-80 times per minute, stomach produces gastric juice, kidneys remove uric acid from blood. Child's bone structure is created.

Towards the end of the second month of life fetus is around 2 centimeters long and weighs around 2-3 grams.

MONTH 3.

The child keeps growing very intensively. All the essential parts of the brain have been formed so far. Every second several thousand new nerve cells come into being. Gradually, all the body becomes more sensitive to touch. The number of nerve-muscular connections grows quickly.

The child trains its own moves, playing around inside the matrix. It can already yawn, and stretch its little body. The child begins to exercise the muscles that it will need after birth for breathing, taking food, producing sounds, taking in and pushing out of its lungs fetal waters, sometimes swallowing the liquid at the same time. The child lifts up the upper lip, which is an introduction to sucking. The child is constantly on the go- it keeps dancing, going up and down, jumping, stretching itself, swinging its hips, bending its limbs, making faces, moving its eyeballs, clenching its fists, and raising its brows. Its skin is covered with down. Little nails and milk teeth appear. Bone marrow begins to produce blood corpuscles, gall bladder - gall, pancreas - insulin, hypophysis (pituitary gland of the brain) - growth hormone. Child's life is dependent on placenta, which acts as a kind of laboratory that plays the role of the respiratory and hormone systems as well as the alimentary canal.

Towards the end of the third month the child shows its individual features through its behaviour. Face muscles, e.g. bear resemblance to child's family according to the features that run in the family blood. This little human being reaches the height of around 9 centimeters and the weight of around 30 grams.

MONTH 4.

The child keeps growing intensively. The child reaches around 25 centimeters and the weight of around 20 decagrams. Body organs increase their efficiency, e.g. little heart pumps 30 liters of blood twice as quickly as its mother's heart, that is it beats 120-160 per minute. The body synthesizes protein and produces hormones.

If the child is a girl, egg cells in her ovaries are formed. Some of these egg cells will give life to future generations.

More and more fissures and convolutions are created in the brain. Thus, the brain becomes bigger and the network of nerve cells in the whole body dynamically increases. The child is very active; it makes around 20.000 of different movements per day. Child's movements become more graceful and gentle. The

little one reacts to taste and smell of fetal waters, and is very sensitive to changes of pressure. For example, if its mother's tummy is pressed down, it twists and kicks. Fetal waters, in which the child is immersed, relieve all the convulsions, and according to Archimedes' principle the weight of child's body is kept up, what allows the child to freely play around. In the fourth month child's hair begins to grow.

MONTH 5.

During this month the child reaches 30 centimeters and 40 decagrams. Child's hair, brows, and nails grow. You can hear its heart beating with your own ear only, without a stethoscope. Mother starts feeling her child's first movements. They are still very delicate; they give the impression of blowing bubbles or of a butterfly's touch. The child is in deep sleep, or is on the alert, or is very active, e.g. it stretches itself, kicks, turns around, has a hiccup. Its being active depends on its temperament and its mother's lifestyle, e.g. it usually starts playing around when its mother is having a rest, and becomes peaceful when its mother is active.

The child practices sucking, reacts to the taste of fetal liquid, and swallows it when it's sweet and does not drink it when the liquid is bitter, sour, or salty. Being sensitive to touch allows the child to experiment with the world inside matrix on its own. The child touches its own body, the navel string, the placenta, and the sides of the matrix. Strong stimuli can cause discomfort, which the child tries to actively resist. It is possible to gently talk to the child, to listen to gentle music, so sing something nice or read something that makes the mother feel comfortable in this period to calm the child down.

MONTH 6.

Child's body becomes similar in terms of proportions to those at birth. The child is 25-30 centimeters long and weighs 50-70 decagrams. Its skin is covered with fetal grease. Ligaments are formed, the skeleton becomes ossified, lungs begin to produce surfactant, which will enable the child to breathe (hence, the chances are bigger for the child to survive next month if it was born too early). The child stores all the substances that will be necessary after birth, e.g. calcium, iron, protein, and strengthens its immune system. All the nerve cells have been created. However, the number of connections between nerve cells is on the increase. For example, in the brain in the area as big as the pin head, there are around 70.000 nerve cells, and in 24 week of life there are around 124 million connections between them.

While the child is asleep, it is in the so called REM phase, which means the phase of quick movements of eyeballs. During this phase the brain becomes more mature (it sorts out all the impressions, selects them, and remembers them). The child practices sucking. It learns from its mother the rhythm of both having a rest and being active.

In further child's development, its body organs and systems will be improving their efficiency, the child will be putting on weight and growing.

MONTH 9.

In the 9 month of life the child is born. It leaves its mother's womb and enters into the unknown world, where the loving arms of its parents are awaiting it.

The time of life in mother's womb was the time of incredibly quick development, learning, remembering, and establishing the special emotional bond with its mother, in whose body the child has lived for 9 months, and who will be looking after the child lovingly for the next years.

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