

Foetal Development



Conception



19 weeks



1 month



6 months



9 weeks



7 months



3 months



8 months



4 months



9 months

Momentous Milestones of Early Life...



"A new baby is like the beginning of all things – wonder, hope, a dream of possibilities."

*Eda LeShan
(psychologist and family counsellor)*

Copies of this brochure available from:

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Those Momentous Milestones of Early Life

Life begins at conception and ends at death. In between, as Sir William Liley has pointed out, life does not develop – it is simply there.

“What does develop is the morphological structure, the earthly home of life, the physiological performance of that structure, behavioural traits and personality.”

These are some of the milestones of the first nine months of life:

Conception

Father's sperm penetrates mother's egg cell. Within the hour genetic instructions from both parents interact to establish the design and inheritance of a new and unique individual – at this stage no bigger than a grain of sugar.

1st Day

Cell division begins. The first cell divides into two, then two to four, and so on.

5-9 Days

Now a ball of hundreds of cells, the new individual burrows into the wall of the womb. Already the child's gender can be determined.

14 Days

Mother misses her first menstrual period – suppressed by a hormone produced by her child.

17 Days

Blood cells are forming.

18 Days

The heart is forming.

20 Days

Foundations of the brain, spinal cord and the entire nervous system are laid.

24 Days

The heart begins to pulsate.

28 Days

Forty pairs of muscles are developing along the future spine. Arms and legs are budding.

30 Days

From one to millions of cells, the embryo has grown 10,000 times and is 6-7mm (1/4 in.) long. The brain has human proportions. Blood flows in veins (but the child's bloodstream remains separate from the mother's throughout pregnancy).

35 Days

The pituitary gland is forming in the middle of the brain. Mouth, ears and nose are taking shape.

40 Days

The heart's energy output is already 20 percent of an adult's.

42 Days

The child's skeleton is formed (in cartilage, not yet bone). The brain co-ordinates movements of muscles and organs. Reflex responses have begun. In boys, the penis is forming. (And the mother misses her second period.)

43 Days

Brainwaves can be recorded.

45 Days

Spontaneous movements have begun. Buds of milk teeth have appeared.

7 weeks

Lips are sensitive to touch. Ears may already resemble a family pattern.

8 weeks

The child is a well-proportioned, small-scale baby measuring just 3cm sitting up and weighing a gram. Every organ is present. The heart beats sturdily. The stomach produces digestive juices. The liver manufactures blood cells. The kidneys begin to function. Taste buds are forming.

8 1/2 weeks

Fingerprints are being engraved. Eyelids and palms of the hand are sensitive to touch. The child feels pain.

9 weeks

The child will bend his or her fingers around an object placed in the palm. Thumb sucking occurs. Fingernails are forming.

10 weeks

The entire body is sensitive to touch (except for the sides, back and top of head). The child squints, swallows, puckers up his or her brows and frowns.

11 weeks

The baby urinates. He or she can make complex facial expressions – even smile.

12 weeks

Activity has become vigorous and behaviours shows distinct individuality. The child can kick legs, turn feet, curl and fan toes, make a fist, move a thumb, bend a wrist, turn the head, open the mouth and press lips tightly together. Breathing is practised.

13 weeks

Facial expressions already resemble those of the parents. Movements are graceful and flowing. Reflexes are vigorous. Vocal chords are formed (but in the absence of air the baby cannot cry aloud). Sex organs are apparent and primitive sperm or egg cells are present.

4 months

The child can use hands to grasp, swims and turns somersaults.

4-5 months

Mother first feels her baby's movements.

5 months

Sleeping habits appear. To sleep, the child settles into a favourite position. A loud noise, such as a door slamming, will provoke activity. The child also responds to sound in frequencies too high or low for adults to hear. Babies born at this age have been known to survive – ie. Amillia. <http://www.telegraph.co.uk/health/main.jhtml?xml=/health/2007/02/20/nbaby120.xml>

6 months

Fine baby hair grows on eyebrows and head. A fringe of eyelashes appears. Most of the skeleton has hardened. Weight is about 640g and height about 23cm. Babies born at this age have been known to survive.

7 months

Permanent eye teeth are present. Eyelids open and close, and eyes look around. Hands grip strongly. Mother's voice can be heard and recognized. The baby begins to accumulate some fat.

8 months

Weight increases by 1kg and the baby's quarters begin to get cramped.

8 months

Labour begins (triggered by the child) and birth occurs, usually 255-275 days after conception. Of the 45 generations of cell divisions between conception and adulthood, 41 have taken place. The remaining four will occur during the rest of childhood and adolescence. The milestones listed above have been documented by scientific research. Slight variations, of hours or days, may exist and future research using more sensitive methods may show that some of these milestones occur earlier than is now realised.