

First Trimester

0-2 Weeks from Conception

(3-4 weeks after the last menstrual period)

The egg is released from the ovary. It is fertilized in the fallopian tube by the sperm. The fertilized egg starts to divide and forms a ball of cells. The ball of cells digs into the lining of the uterus.

- The ball of cells begins to form layers and fluid-filled spaces.
- The earliest part of the afterbirth begins to form.
- At this point in its growth, the ball of cells is called an “embryo.”
- The embryo grows to a length of 0.2 mm (about $\frac{1}{100}$ inch).

3-4 Weeks from Conception

(5-6 weeks after the last menstrual period)

The embryo changes from a flat disc to a curved, C-shaped form. Organs begin forming. At this point, the menstrual period is missed.

- A tube forms along the embryo’s length. This will grow into the brain and spinal cord.
- The heart starts as a tube, which begins to beat as it grows.
- Simple structures form on the sides of the head. They will become eyes and ears as time goes on.
- Limb buds, which look like bumps, start to form. Later they will become arms and legs.
- The embryo grows to a length of 6 mm (about $\frac{1}{4}$ inch).

5-6 Weeks from Conception

(7-8 weeks after the last menstrual period)

About half of the embryo’s length is the head, due to the rapid growth of the brain. The heart starts to form the normal four chambers. A heartbeat can be seen on ultrasound.

- The eyes and ears move toward their normal places on the head.
- Kidneys begin to form.
- “Rays” appear in the limbs, which will later form fingers and toes.
- The umbilical cord joins the embryo and the placenta (or afterbirth).
- The embryo is about 14 mm ($\frac{1}{2}$ inch) long.
- The neural tube that becomes the brain and spinal cord closes.

7-8 Weeks after Conception

(9-10 weeks after the last menstrual period)

The embryo changes shape as the face forms. It begins to straighten out from its C-shape. The small tail bud begins to go away. All of the essential organs, including the basic parts of the brain and the heart are now formed.

- There are fingers on the hands.
- The toes are almost formed.
- There are eyelids over the eyes, but they cannot open yet.
- Nipples can be seen and the first hair buds form.
- Muscles begin to form. Early bones are formed. The arms can bend at the elbow.
- The intestines grow rapidly.
- The embryo is about 31 mm (1¼ inches) long.

9-10 Weeks after Conception

(11-12 weeks after the last menstrual period)

By this time, all the main body parts are formed and present. The embryo now is called a “fetus”. Growth becomes most important. Fetal length is measured from the top of the head to the curve of the rump (crown-rump) length.

- The ears move up from around the neck to their normal position.
- Fetal movements and heartbeat can be seen on ultrasound.
- Various glands begin to work.
- The kidneys begin to make urine.
- The crown-rump length is 61 mm (about 2⅓ inches).
- The fetus weighs 14 grams (under one ounce).

11-12 Weeks after Conception

(13-14 weeks after the last menstrual period)

Often, at this point, the sex of the fetus can be seen. The fetus begins to swallow fluid from the amniotic sac (bag of waters). The fluid is replaced with urine made by the kidneys. The placenta is fully formed.

- Blood cells are made in the bone marrow.
- The neck can be clearly seen between the head and body.
- The crown-rump length is 86 mm (about 3½ inches).
- The fetus weighs 45 grams (about an ounce and a half).

Second Trimester

13-14 Weeks after Conception

(15-16 weeks after the last menstrual period)

The fetal head is still large as the body straightens out. The arms and legs are formed, and can move and bend.

- Sex organs are almost fully formed.
- Toenail and fingernail growth begins.
- The eyes move forward. The ears reach normal position. Now the face is well formed.
- Tooth buds may appear for the baby teeth.
- The crown-rump length is 120 mm (about 4¾ inches).
- The fetus weighs 110 grams (about 4 ounces).
- The eyelids close.

15-16 Weeks after Conception

(17-18 weeks after the last menstrual period)

Some women begin to feel the first fetal movements, called “quickening.” Growth begins to speed up. The legs grow longer, so the fetal head seems less large. Slow fetal eye movements can be seen by ultrasound. The mouth begins to make sucking motions.

- The bones gain calcium at a rapid rate.
- The ears stand out from the head.
- The crown-rump length reaches 140 mm (about 5½ inches).
- The fetus weighs 200 grams (about 7 ounces).
- The skin is almost transparent.
- The fetus may sleep and awaken regularly.

17-18 Weeks after Conception

(19-20 weeks after the last menstrual period)

Many women feel fetal movement or “quickening” by this time in pregnancy. The fetal skin is covered by something called “vernix caseosa”. Vernix caseosa looks a little like cream cheese. This is about the halfway point of a normal pregnancy.

- A very fine hair called “lanugo” covers the fetal body.
- The crown-rump length is 160 mm (about 6¼ inches).
- The fetus weighs 320 grams (about 7 ounces).

19-20 Weeks after Conception *(21-22 weeks after the last menstrual period)*

The skin is red and wrinkled. Blood vessels can be seen very clearly beneath it.

- Eyebrow and eyelashes start to form.
- Fingerprints begin to form.
- The crown-rump length is 190 mm (about 7¾ inches).
- The fetus weighs 460 grams (just over a pound).

21-22 Weeks after Conception *(23-24 weeks after the last menstrual period)*

Fetal weight gain is fast during this time. Rapid eye movements can be seen by ultrasound.

- Lung growth reaches the point where some gas exchange sacs are formed.
- The heartbeat can be heard with a stethoscope.
- The crown-rump length is 210 mm (about 8½ inches).
- The fetus weighs 630 grams (1 pound, 6 ounces).
- At this time, there is a chance the fetus may live if delivered.

23-24 Weeks after Conception *(25-26 weeks after the last menstrual period)*

The lungs continue to grow. The lung cells begin to make a chemical called “surfactant.” Large amounts of surfactant are needed to keep the lungs open between breaths after birth. Fat gradually builds up under the skin.

- The fetus can suck on fingers or hands.
- The fetus begins to store fat under the skin.
- The fetus will blink and act startled in response to loud noises near the woman’s belly.
- The crown-rump length reaches 230 mm (about 9 inches).
- The fetus weighs 820 grams (a little less than 2 pounds).

Third Trimester

25-26 Weeks after Conception

(27-28 weeks after the last menstrual period)

The lungs continue to grow. The fetus continues to gain weight. The brain grows and starts to do more complex tasks.

- Fetal eyes will open slightly.
- Eyelashes are formed.
- The crown-rump length reaches 250 mm (about 10 inches).
- The fetus weighs 1000 grams (about 2 pounds and 3 ounces).

27-28 Weeks after Conception

(29-30 weeks after the last menstrual period)

The fetal brain can now control body temperature and direct regular breathing. The fetus can weakly grasp at things. Different growth rates from one fetus to another become clear. Some grow more quickly than others.

- The eyes open wide.
- Toenails begin to form.
- Blood cells are made in the bone marrow.
- The crown-rump length is around 270 mm (nearly 11 inches).
- The fetus weighs 1300 grams (almost 3 pounds).

29-30 Weeks after Conception

(31-32 weeks after the last menstrual period)

More fat builds up under the skin. The skin thickens. The fetus starts to look more like a newborn baby. The lanugo hairs on the face go away.

- The pupils of the eyes react to light.
- The fetus may now hiccup.
- The crown-rump length is around 280 mm (just over 11 inches).
- The fetus weighs around 1700 grams (about 3¾ pounds).

31-32 Weeks after Conception

(33-34 weeks after the last menstrual period)

Fat is still building up under the skin as the fetus grows. The lungs keep growing and making more surfactant. Surfactant helps the lungs to remain open if the fetus is delivered at this point.

- The ear holds its shape when moved.
- Fetal muscle tone increases.
- The crown-rump length is around 300 mm (just under 1 foot).
- The fetus weighs around 2100 grams (over 4½ pounds).

33-34 Weeks after Conception

(35-36 weeks after the last menstrual period)

The lungs and the nervous system keep growing. Also, more fat builds up under the skin. The fetus begins looking chubby. Hair on the head begins looking normal.

- Testes in male fetuses start to move from the abdomen into the scrotum.
- The labia (vaginal lips) in female fetuses begin to cover the clitoris.
- The fetus moves into a head-down position to prepare for delivery.
- The average crown-rump length is over a foot.
- The fetus weighs around 2500 grams (over 5 pounds).

35-36 Weeks after Conception

(37-38 weeks after the last menstrual period)

In almost all cases, fetal lungs are mature at this point. The fetus drops lower into the mother's pelvis. The mother may notice increased pressure on her bladder. Lanugo hairs are almost all gone except for around the shoulders and upper arms. The fetus may be born now or may stay in the womb while more fat builds up under the skin.

37-38 Weeks after Conception

(39-40 weeks after the last menstrual period)

This is full term in pregnancy. Most babies are born during this time. The average crown-rump length is 360 (over 14 inches). The total length counting the legs is about 20 inches. On average, a full-term baby weighs 3400 grams (or 7½ pounds).