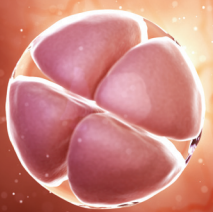






# Fetal Development from Last Menstrual Period

First Trimester	Through Week 12
	<p><b>4 Weeks</b></p> <ul style="list-style-type: none"> <li>The rapidly dividing ball of cells — now known as a <i>blastocyst</i> — has begun to burrow into the uterine lining called the endometrium. This process is called implantation.</li> <li>Within the blastocyst, the inner group of cells will become the embryo. The outer layer will give rise to part of the placenta, which will nourish the embryo/fetus throughout the pregnancy.</li> </ul>
	<p><b>5 Weeks</b></p> <ul style="list-style-type: none"> <li>The embryo is now made of three layers. The top layer, <i>the ectoderm</i>, will give rise to the outermost layer of skin, central and peripheral nervous systems, eyes, and inner ears.</li> <li>The heart and a primitive circulatory system will form in the middle layer of cells, <i>the mesoderm</i>. This layer of cells will also serve as the foundation for the bones, ligaments, kidneys and much of the reproductive system.</li> <li>The inner layer of cells, <i>the endoderm</i>, is where the lungs and intestines will develop.</li> </ul>
	<p><b>6 Weeks</b></p> <ul style="list-style-type: none"> <li>Growth is rapid this week. Just four weeks after conception, the neural tube along the back is closing. The brain and spinal cord will develop from the neural tube. The heart and other organs also are starting to form.</li> <li>Structures necessary to the formation of the eyes and ears develop. Small buds appear that will soon become arms. The body begins to take on a C-shaped curvature.</li> </ul>
	<p><b>7 Weeks</b></p> <ul style="list-style-type: none"> <li>The brain and face are growing. Depressions that will give rise to nostrils become visible, and the beginnings of the retinas form.</li> <li>Lower limb buds that will become legs appear, and the arm buds that sprouted last week now take in the shape of paddles.</li> </ul>
	<p><b>8 Weeks</b></p> <ul style="list-style-type: none"> <li>Lower limb buds take on the shape of paddles. Fingers have begun to form. Small swellings outlining the future shell-shaped parts of the ears develop, and the eyes become obvious.</li> <li>The upper lip and nose have formed. The trunk and neck begin to straighten. By the end of this week the fetus is about 1/2 inch long from crown to rump.</li> </ul>



### 9 Weeks

- The arms are growing more and elbows appear.
- Toes are visible and eyelids form.
- The head is getting larger.
- By the end of this week the fetus might be a little less than 3/4 inch long from crown to rump.



### 10 Weeks

- By this week the head has become rounder.
- The fetus can now bend the elbows.
- Toes and fingers lose the webbing and become longer.
- The eyelids and external ears continue to develop.
- The umbilical cord is clearly visible.



### 11 Weeks

- The head still makes up about half of the length, however the body is about to catch up.
- At this week the buds for future teeth appear. Red blood cells are beginning to form in the liver. By the end of this week the external genitalia will start developing.
- By now the fetus might measure about 2 inches long from crown to rump.



### 12 Weeks

- At this week the fingernails are sprouting.
- The face has taken on a more developed profile.
- The intestines are now in the abdomen.
- By now the fetus might be about 2 1/2 inches long from crown to rump.

## Second Trimester

## Week 13 to Week 27



### 13 Weeks

- Bones are beginning to harden in the skeleton, especially in the skull and long bones.
- The fetus is beginning to make urine and release it into the surrounding amniotic fluid.
- The skin is still thin and transparent, but it will start to thicken soon.



### 14 Weeks

- The neck has become more defined. Red blood cells are forming in the spleen.
- The sex will become apparent this week or in the coming weeks.
- By now the fetus might be almost 3 1/2 inches long from crown to rump and weigh about 1 1/2 ounces.



### 15 Weeks

- The fetus is growing rapidly.
- Bone development continues and will soon become visible on ultrasound images.
- The scalp hair pattern is also forming.



### 16 Weeks

- The head is now more erect in the womb. The eyes can now slowly move. The ears are close to reaching their final position. The skin is getting thicker.
- Limb movements are becoming coordinated and can be detected during ultrasound exams. However, these movements are still too slight to be felt by you.
- By now the fetus might be more than 4 1/2 inches long from crown to rump and weigh close to 4 ounces.



### 17 Weeks

- Toenails begin developing.
- The fetus is becoming more active in the amniotic sac, rolling and flipping.
- The heart is pumping about 100 pints of blood each day.



### 18 Weeks

- The ears begin to stand out on the sides of the head. The fetus might begin to hear sounds.
- The eyes are beginning to face forward.
- The digestive system has started working.
- By now the fetus might be 5 1/2 inches long from crown to rump and weigh 7 ounces.



### 19 Weeks

- A coating called vernix caseosa begins to cover the fetus. This helps protect the delicate skin from abrasions, chapping, and hardening that can result from exposure to amniotic fluid.
- For girls, the uterus and vaginal canal are forming.



### 20 Weeks

- At this stage you might be able to feel movements (quickening).
- The fetus is regularly sleeping and waking and might be awakened by noises or your movements.
- By now the fetus might be about 6 1/3 inches long from crown to rump and weigh more than 11 ounces.





### 21 Weeks

- The fetus is now completely covered with a fine, downy hair called lanugo. The lanugo helps hold the vernix caseosa on the skin.
- The sucking reflex is also developing, enabling the fetus to suck the thumb.



### 22 Weeks

- The eyebrows and hair are visible.
- Brown fat also is forming, the site of heat production.
- For boys, the testes have begun to descend.
- By now the fetus might be 7 1/2 inches long from crown to rump and weigh about 1 pound.



### 23 Weeks

- The fetus begins to have rapid eye movements.
- Ridges also form in the palms of the hands and soles of the feet that will later create the foundation for fingerprints and footprints.
- The fetus might begin hiccuping, causing jerking movements.



### 24 Weeks

- The skin is now wrinkled, translucent, and pink to red because of visible blood in the capillaries.
- By now the fetus might be about 8 inches long from crown to rump and weigh more than 1 1/3 pounds.









### 25 Weeks

- The fetus might be able to respond to familiar sounds, such as your voice, with movement.
- During sleep the fetus is spending most of that time in rapid eye movement (REM), when the eyes move rapidly even though the eyelids are closed.



### 26 Weeks

- The lungs are beginning to produce surfactant, the substance that allows the air sacs in the lungs to inflate — and keeps them from collapsing and sticking together when they deflate.
- By now the fetus might be 9 inches long from crown to rump and weigh nearly 2 pounds.

	<p><b>27 Weeks</b></p> <ul style="list-style-type: none"> <li>• This week marks the end of the second trimester.</li> <li>• At 27 weeks the nervous system is continuing to mature.</li> <li>• The fetus is also gaining fat, which will help the skin look smoother.</li> </ul>
Third Trimester	Week 28 to Week 40
	<p><b>28 Weeks</b></p> <ul style="list-style-type: none"> <li>• The eyelids can now partially open and eyelashes have formed.</li> <li>• The central nervous system can direct rhythmic breathing movements and control body temperature.</li> <li>• By now the fetus might be nearly 10 inches long from crown to rump and weigh nearly 2 1/4 pounds.</li> </ul>
	<p><b>29 Weeks</b></p> <ul style="list-style-type: none"> <li>• The fetus can now kick, stretch, and make grasping movements.</li> </ul>
	<p><b>30 Weeks</b></p> <ul style="list-style-type: none"> <li>• The eyes can now open wide.</li> <li>• The fetus might have a good head of hair by this week.</li> <li>• Red blood cells are forming in the bone marrow.</li> <li>• By now the fetus might be more than 10 1/2 inches long from crown to rump and weigh nearly 3 pounds.</li> </ul>
	<p><b>31 Weeks</b></p> <ul style="list-style-type: none"> <li>• The fetus has now finished most of the major development.</li> <li>• Now it's time to gain weight — quickly.</li> </ul>
	<p><b>32 Weeks</b></p> <ul style="list-style-type: none"> <li>• The fetus is now practicing breathing.</li> <li>• Toenails are visible.</li> <li>• The layer of soft, downy hair that has covered the skin for the past few months (called lanugo) starts to fall off this week.</li> <li>• By now the fetus might be 11 inches long from crown to rump and weigh 3 3/4 pounds.</li> </ul>



### 33 Weeks

- The pupils can now change size in response to a stimulus caused by light.
- The bones are hardening, however the skull remains soft and flexible.



### 34 Weeks

- The fingernails have now reached the fingertips.
- By now the fetus might be nearly 12 inches long from crown to rump and weigh more than 4 1/2 pounds.



### 35 Weeks

- The skin is becoming smooth.
- The limbs now have a chubby appearance.



### 36 Weeks

- The conditions inside your uterus might make it harder for the fetus to give you a punch, however you'll probably still feel lots of stretches, rolls, and wiggles.



### 37 Weeks

- The fetus now has a firm grasp with the hands and fingers.
- To prepare for birth, the head might start descending into your pelvis.
- If not head down yet, your health care provider will talk to you about ways to deal with this issue.



### 38 Weeks

- The circumference of the head and abdomen are now about the same.
- The toenails have reached the tips of the toes.
- The lanugo hair on the body is mostly gone now.
- By now the fetus might weigh about 6 1/2 pounds.



### 39 Weeks

- The chest is becoming more prominent.
- For boys, the testes continue to descend into the scrotum.
- Fat is being added all over the body to keep the fetus warm after birth.



### 40 Weeks

- The fetus might have a crown-to-rump length of around 14 inches and weigh 7 1/2 pounds. Remember, however, that healthy pregnancies come in different sizes.
- Don't be alarmed if your due date comes and goes with no signs of labor starting. Your due date is simply a calculated estimate of when your pregnancy will be 40 weeks. It's normal to give birth before or after your due date.