


## Fetal Development

A female's egg is fertilized by a male's sperm in the fallopian tube. After fertilization, the egg divides and multiplies to form the embryo. During the next few days, the embryo moves through the fallopian tube to the lining of the uterus. There it implants and starts to grow.

During pregnancy, the lining of the female's uterus thickens and its blood vessels enlarge to nourish the fetus. As pregnancy progresses, the uterus expands to make room for the growing embryo/fetus. The following pictures and drawings illustrate fetal development from 8 to 40 weeks.



### 8 WEEKS


1 1/2 inches — 1/2 ounce

The beginnings of all key body parts are present, although they are not completely positioned in their final locations.

Structures that will form eyes, ears, arms and legs are identifiable.

Muscles and skeleton are developing and the nervous system becomes more responsive.

The heart has four chambers and began pumping blood four weeks ago.





## 10 WEEKS

2 1/2 inches — 1.5 ounces

Fingers and toes are distinct and have nails.

The fetus begins small, random movements, too slight to be felt.

The fetal heartbeat can be detected with a heart monitor.

All major external body features have appeared.

Muscles continue to develop.



## 12 WEEKS

3.5 inches — 2 ounces

The fetus begins to swallow, the kidneys make urine, and blood begins to form in the bone marrow.

Joints and muscles allow full body movement.

There are eyelids and the nose is developing a bridge.

External genitals have been developing so that the sex can be identified.





## 14 WEEKS

5 inches — 4 ounces

The head is erect and the arms and legs are developed.

The skin appears transparent.

A fine layer of hair has begun to grow on the head.

Limb movements become more coordinated.

## 16 WEEKS

5.5 inches — 8 ounces

The skin is pink and transparent and the ears are clearly visible.

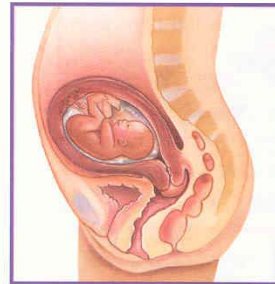
All the body and facial features are now recognizable.



The fetus can now blink, grasp, move its mouth.

Hair and nails begin to grow.

The fetus has begun to kick, although movement may not be felt by the woman.





## 18 WEEKS

6 1/4 inches — 12 ounces

All organs and structures have been formed, and a period of simple growth begins.

The skin is covered with vernix - a greasy material that protects the skin.

Respiratory movements occur, but the lungs have not developed enough to permit survival outside the uterus.

## 20 WEEKS

7.5 inches — 1 pound

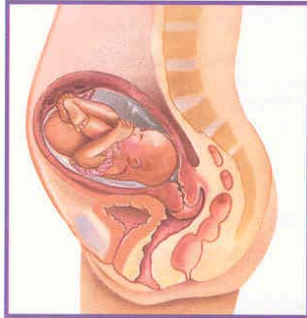
Time of extremely rapid brain growth.

Fetal heartbeat can be heard with a stethoscope.

The kidneys are starting to work.

Fetus may suck thumb and is more active.





## 22 WEEKS

8 1/4 inches — 1 1/4 pound

Bones of the ears harden making sound conduction possible.

Hears mother's sounds such as breathing, heartbeat and voice.

The first layers of fat are beginning to form. This is the beginning of substantial weight gain for the fetus.

21% chance of survival with appropriate high risk newborn care.

## 24 WEEKS

9 inches — 2 pounds

The fetus can respond to sound from both inside and outside the uterus.

Reflex movements improve and body movements are stronger.

Lungs continue to develop.

The fetus now wakes and sleeps.

The skin has turned red and wrinkled and is covered with fine hair.

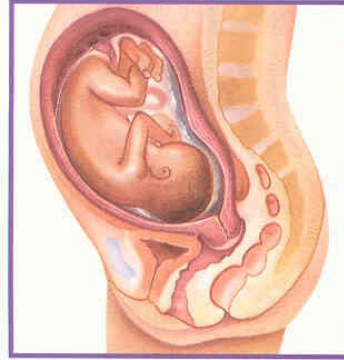


35% chance of survival outside of the womb with appropriate high risk newborn care.

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## 26 WEEKS

10 inches — 2.5 pounds

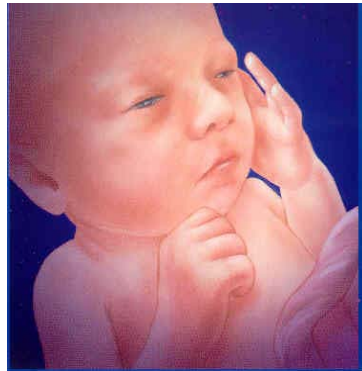


Mouth and lips show more sensitivity.

The eyes are partially open and can perceive light.

Brain wave patterns resemble those of a full term baby at birth.

50% chance of survival with appropriate high risk newborn care.



## 28 WEEKS

10.5 inches — under 3 pounds

The fetus has lungs that are capable of breathing air, although medical help may be needed.

The fetus can open and close its eyes, suck its thumb, cry and respond to sound.

88% chance of survival with appropriate high risk newborn care.

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### 30 WEEKS

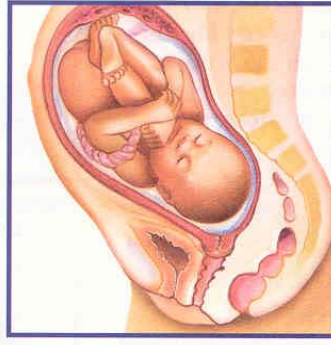
11 inches — over 3 pounds

Skin is thicker and more pink.

There is an increase in the connections between the nerve cells in the brain.

From this stage on, fetal development centers mostly around growth.

95% chance of survival with appropriate high risk newborn care.



### 32 WEEKS

12 inches — 4.5 pounds

Eyes open during alert times and close during sleep.

The skin is now pink and smooth.

Almost all babies born now will survive (some will need intensive care services).

95% chance of survival with appropriate high risk newborn care.

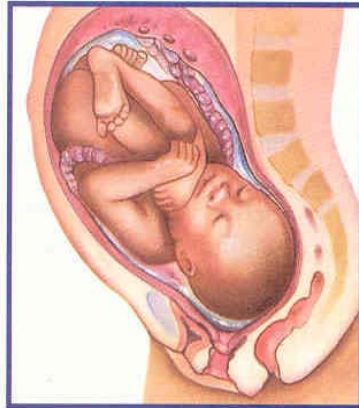
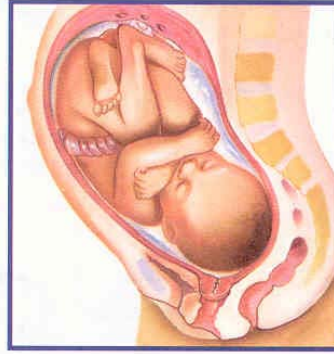
### 34 WEEKS

12 1/2 inches — 5.5 pounds

Scalp hair is silky and lays against the head.

Muscle tone has now developed and the fetus can turn and lift its head.

95% chance of survival with appropriate high risk newborn care.



### 36 to 40 WEEKS

13.5 inches and may reach over 20 inches overall, may weigh 6.5 to 10 pounds

Lungs are usually mature.

The fetus can grasp firmly.

Fetus turns toward light sources.

99% chance of survival with appropriate high risk newborn care.