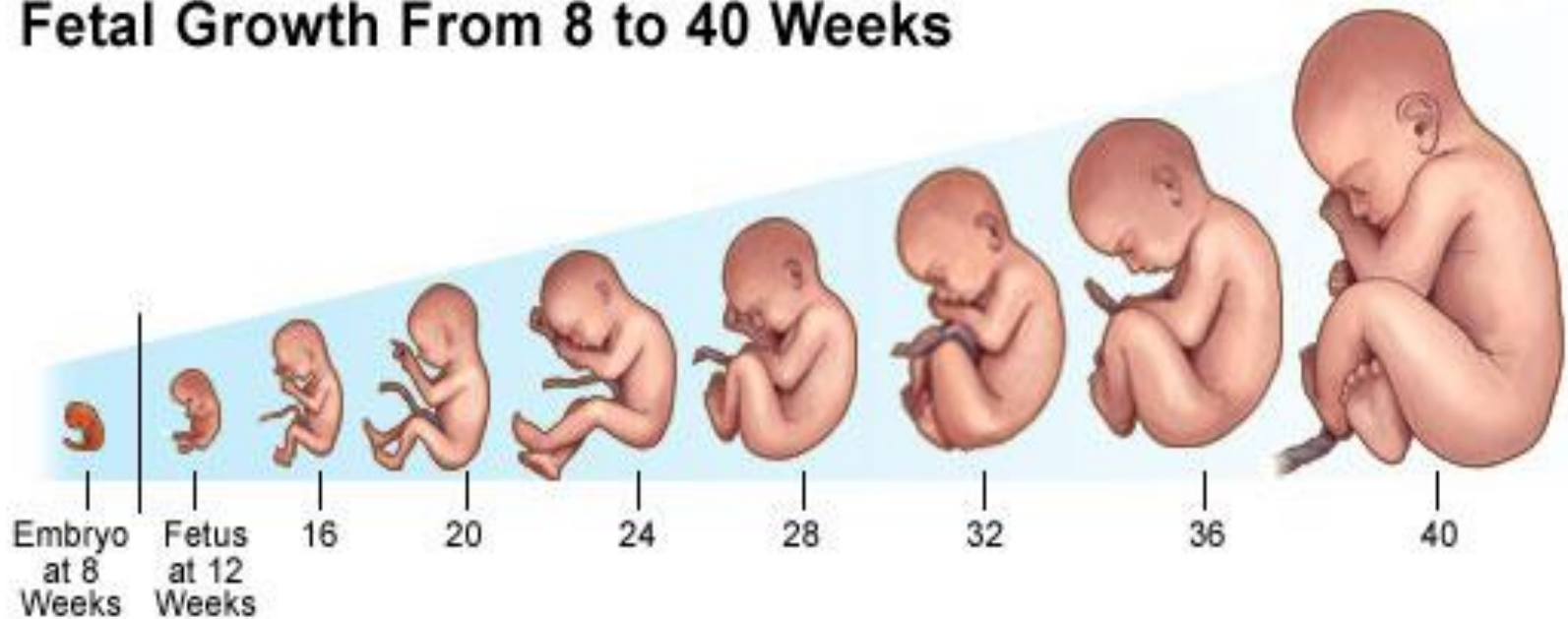
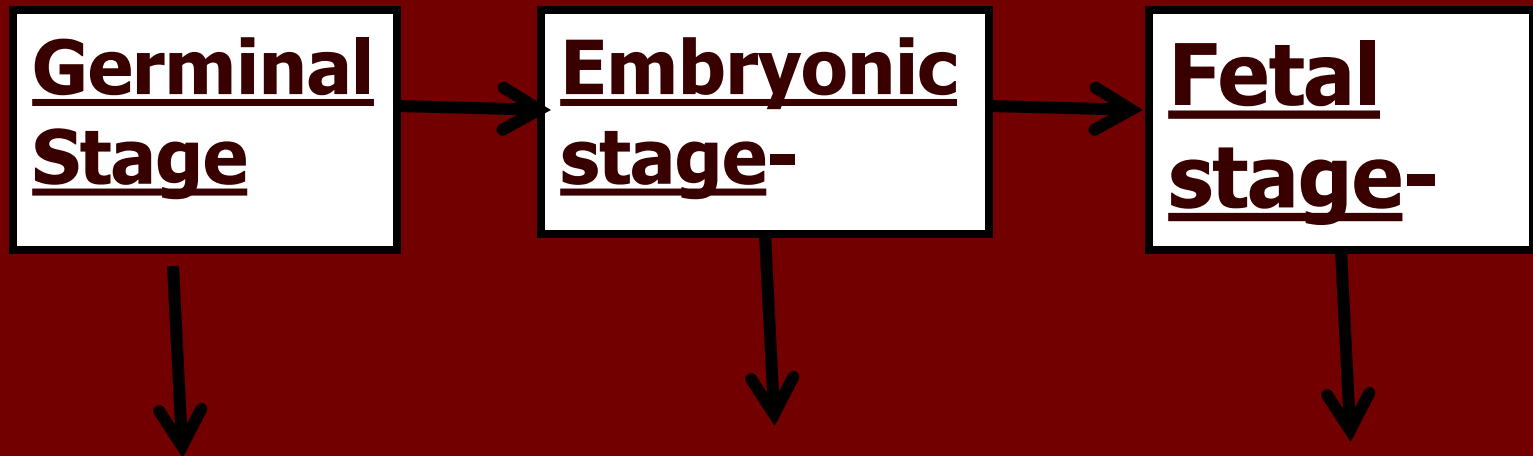


# Month-wise development of fetus

**Fetal Growth From 8 to 40 Weeks**



# 3 stages of prenatal development



## **a. Germinal period:-**

It extends from 1<sup>st</sup> to 3<sup>rd</sup> week of development and begins at fertilization. This period includes cleavage and formation of morula, blastocyst and its implantation, differentiation of trophoblast and chorion appearance of bilaminar and trilaminar germ disc.

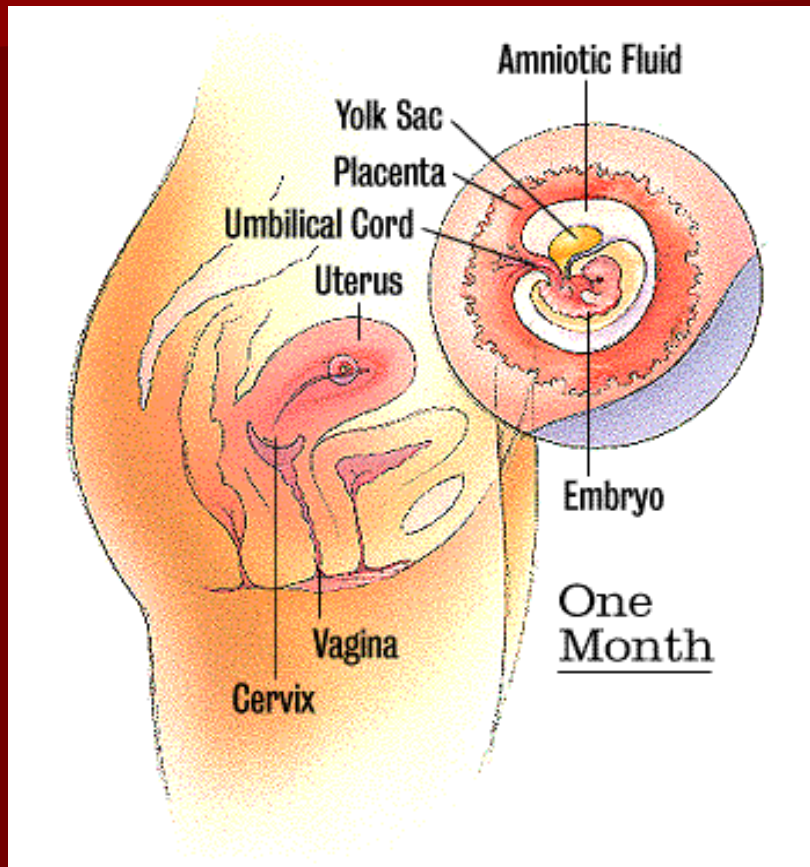
## **b. Embryonic period:-**

This period extends from 4<sup>th</sup> to 8<sup>th</sup> week and is characterised by the changes of shape and external appearance of the embryo. Each of the three germ layers undergoes individual differentiation and most of the tissues and organs of the body are formed.

### **c. Fetal period:-**

It extends from the 3<sup>rd</sup> month up to termination of pregnancy. This period is characterised by rapid growth of the fetus without much tissue differentiation and complete development of placenta.

# First Month



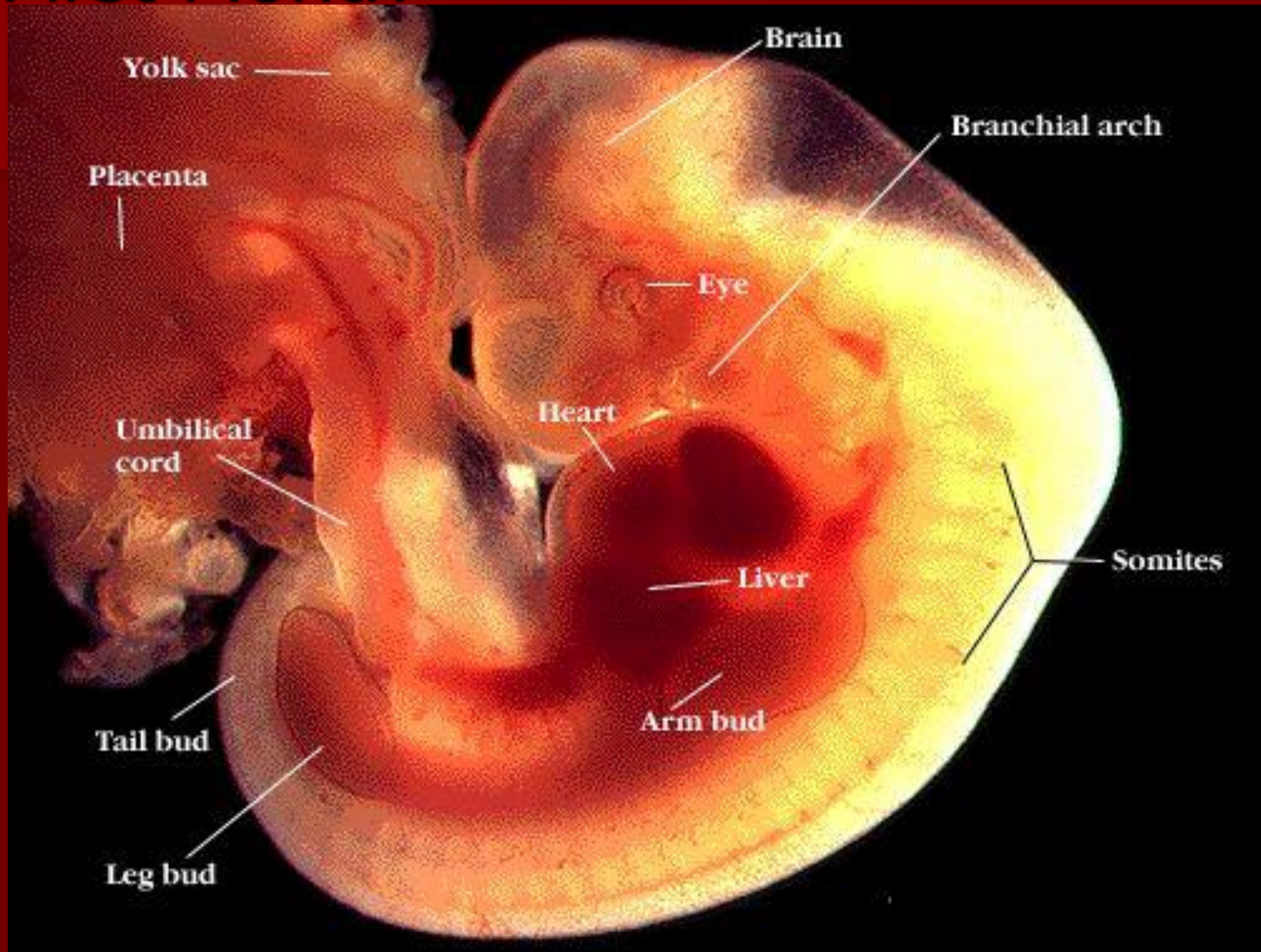
- Cell multiplication begins.
- The fertilized egg attached itself to the lining of the uterus (“implantation”)
- Three germ layer form

# Cont....

- Yolk Sac- Provides nutrients
- Small limb buds show the beginning of arms and legs
- Internal organs, circulatory and nervous systems are beginning to form
- Somite formation

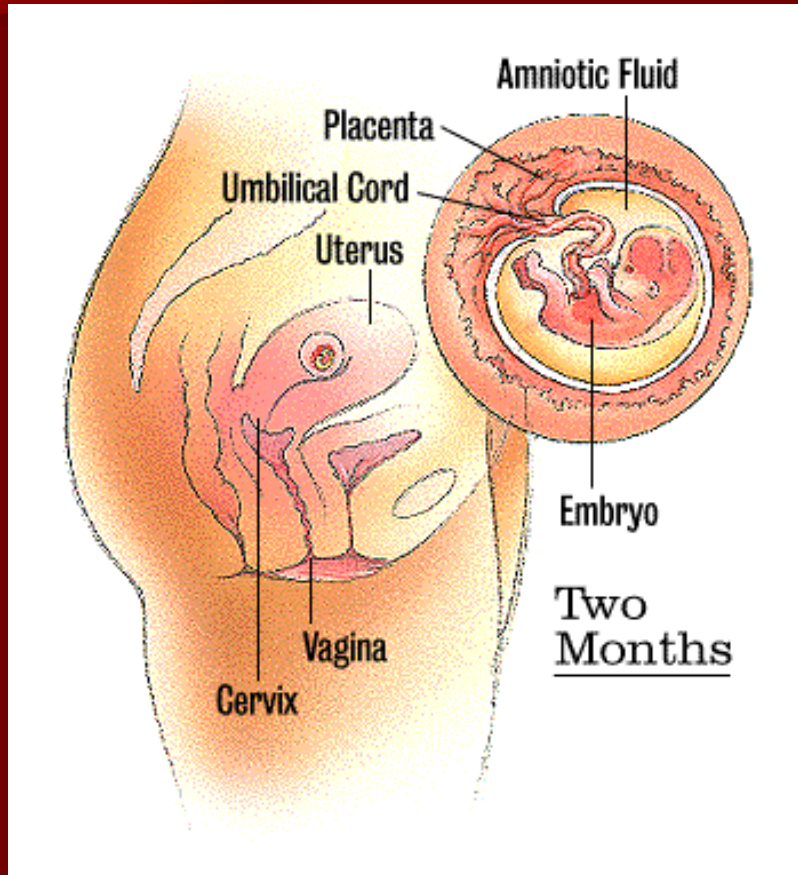


# First Month





# Two Months

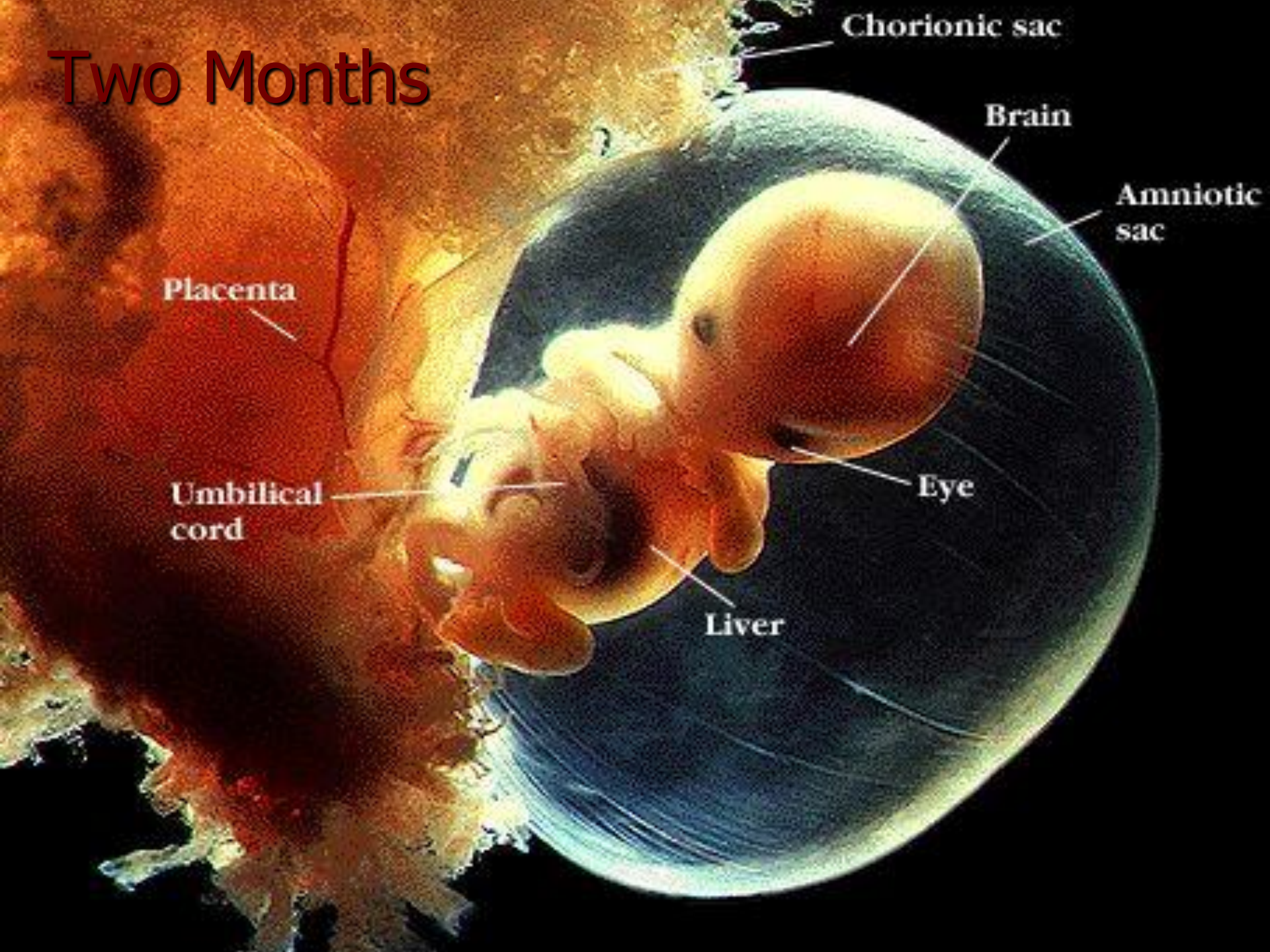


- The embryo is about **1 inch long**.
- Facial features begin to take shape.
- Bones begin to form.
- Internal organs begin to develop.

## Cont...

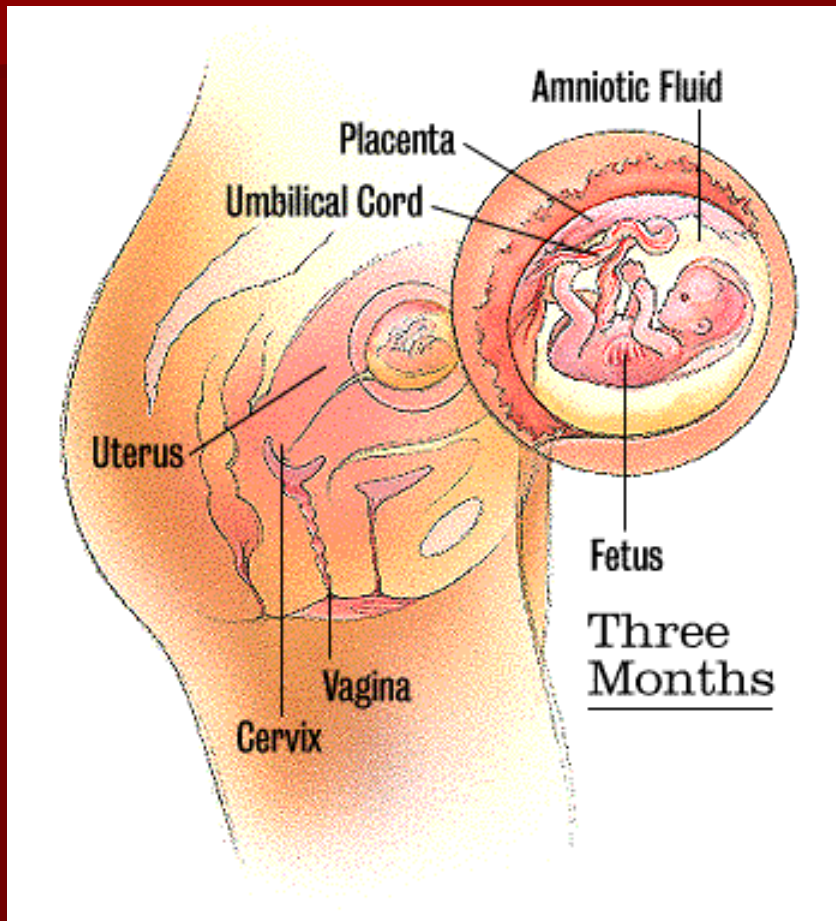
- Amniotic sac- The fluid-filled sac that surrounds and protects the unborn baby.
- Placenta- an organ with blood vessels that nourishes the baby in the uterus.

# Two Months





# Three Months

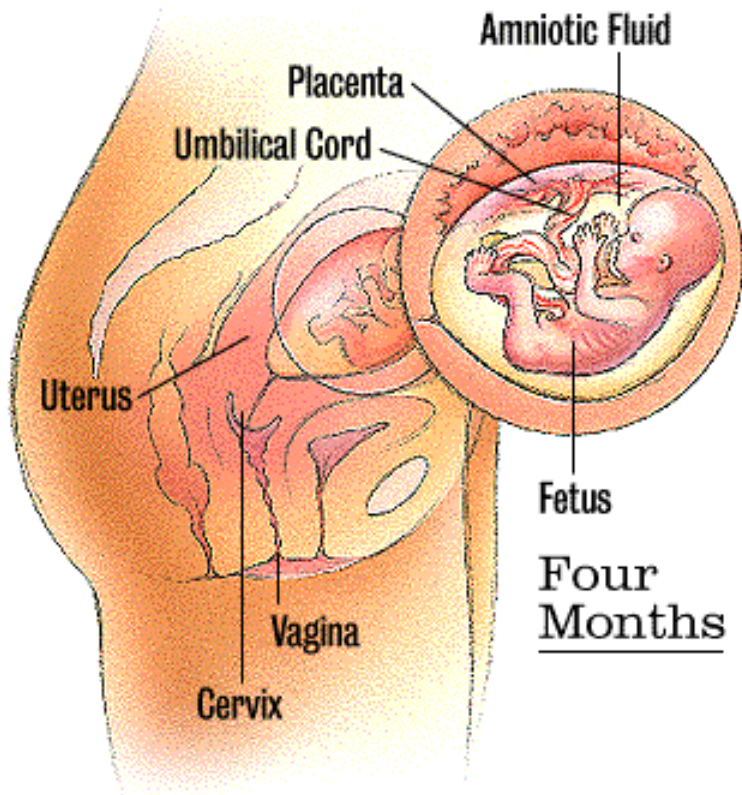


- By now the fetus is **2 1/2 to 3 inches long** and is fully formed.
- All **organs** and **muscles** have formed and are beginning to function.

## Cont...

- external genitalia of males and females appear
- Urine formation begins
- Umbilical cord- the cord that connects the baby to the placenta. It's the beginning of navel.
- liver and spleen are the major site of erythropoiesis (formation of red blood cells)

# Four Months

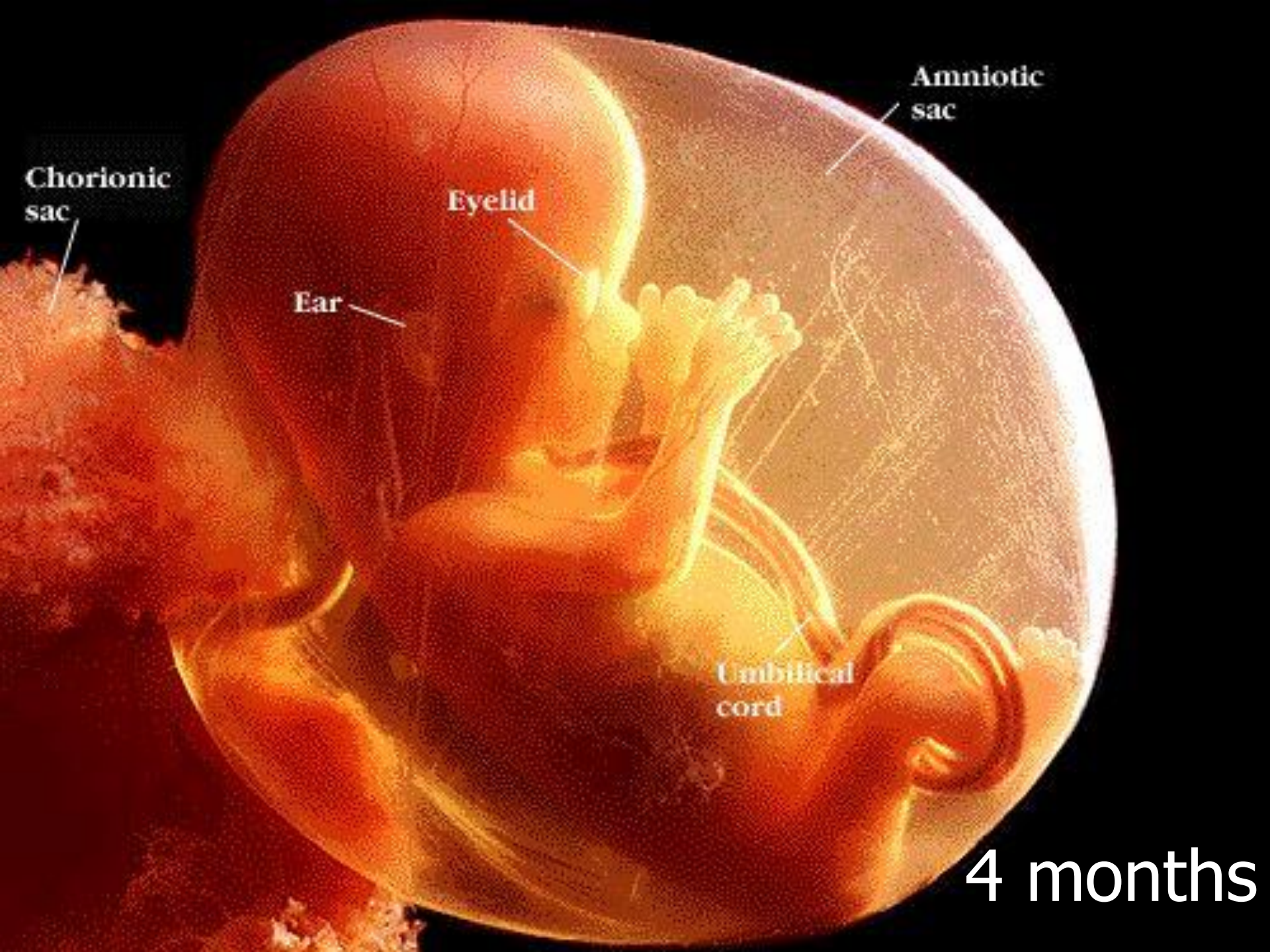


- ovaries are differentiated and contain primordial ovarian follicles that contain oogonia.
- His heartbeat can be heard clearly.
- At this time we feel baby's first **kick**. This is called quickening.



# Cont..

- genitalia of the fetuses can be recognized



Chorionic  
sac

Eyelid

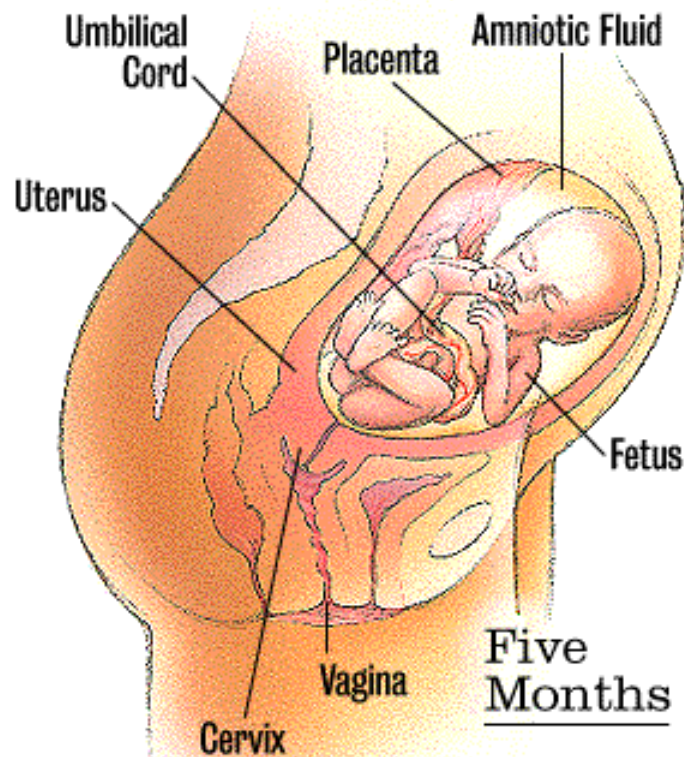
Ear

Amniotic  
sac

Umbilical  
cord

4 months

# Five Months



- A protective coating called **vernix caseosa** begins to form on baby's skin.
- Brown fat forms during this period and is the site of heat production

- The fetuses are usually completely covered with fine downy hair- lanugo – that helps to hold the vernix caseosa on the skin.
- By the end of this month, baby will be nearly 8 inches long.



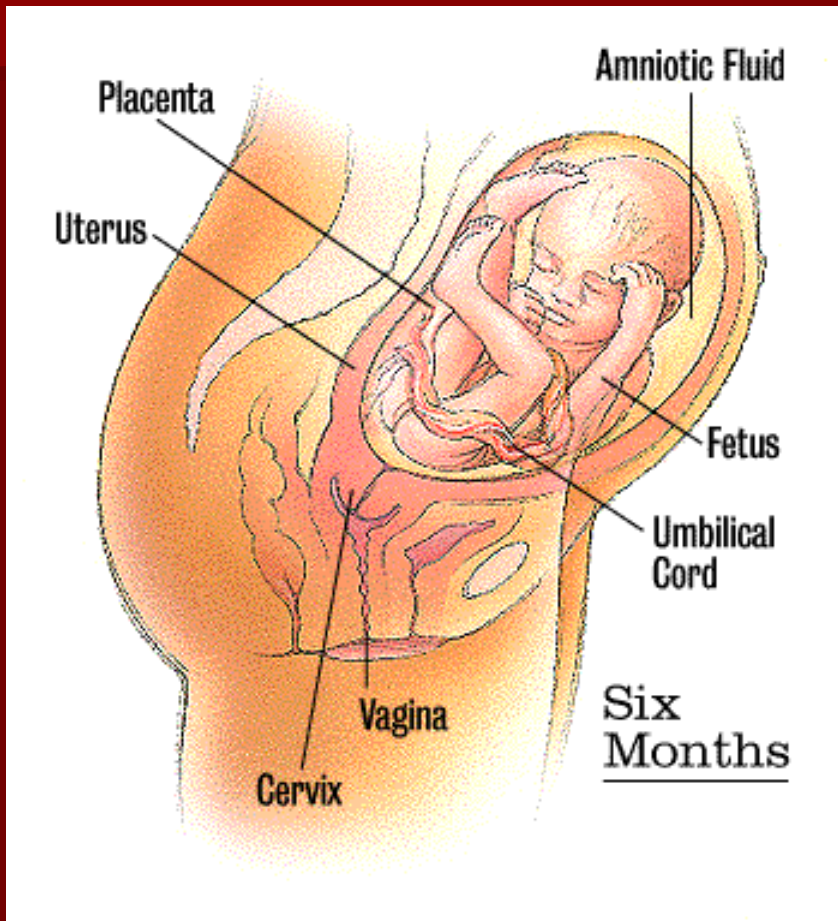


Lanugo (downy hair)

Vernix

5 Months

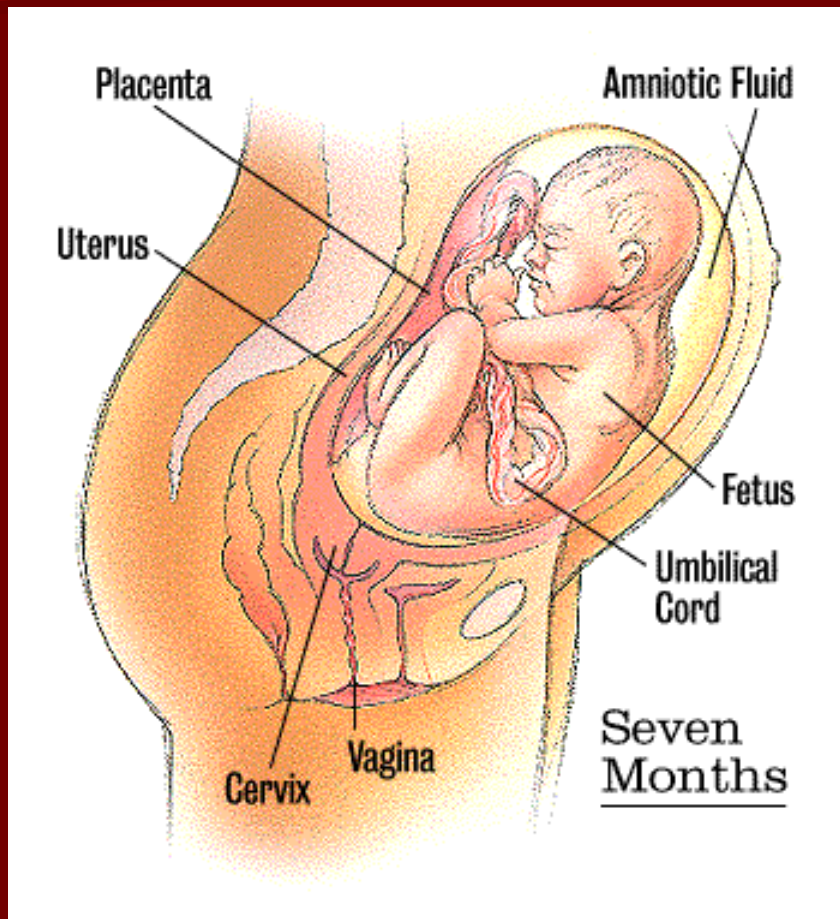
# Six Months



- The skin is pink to red because blood is visible in the capillaries.
- baby's lungs are filled with **amniotic fluid**, and he has started breathing motions.
- If you **talk** or **sing**, he can hear you.



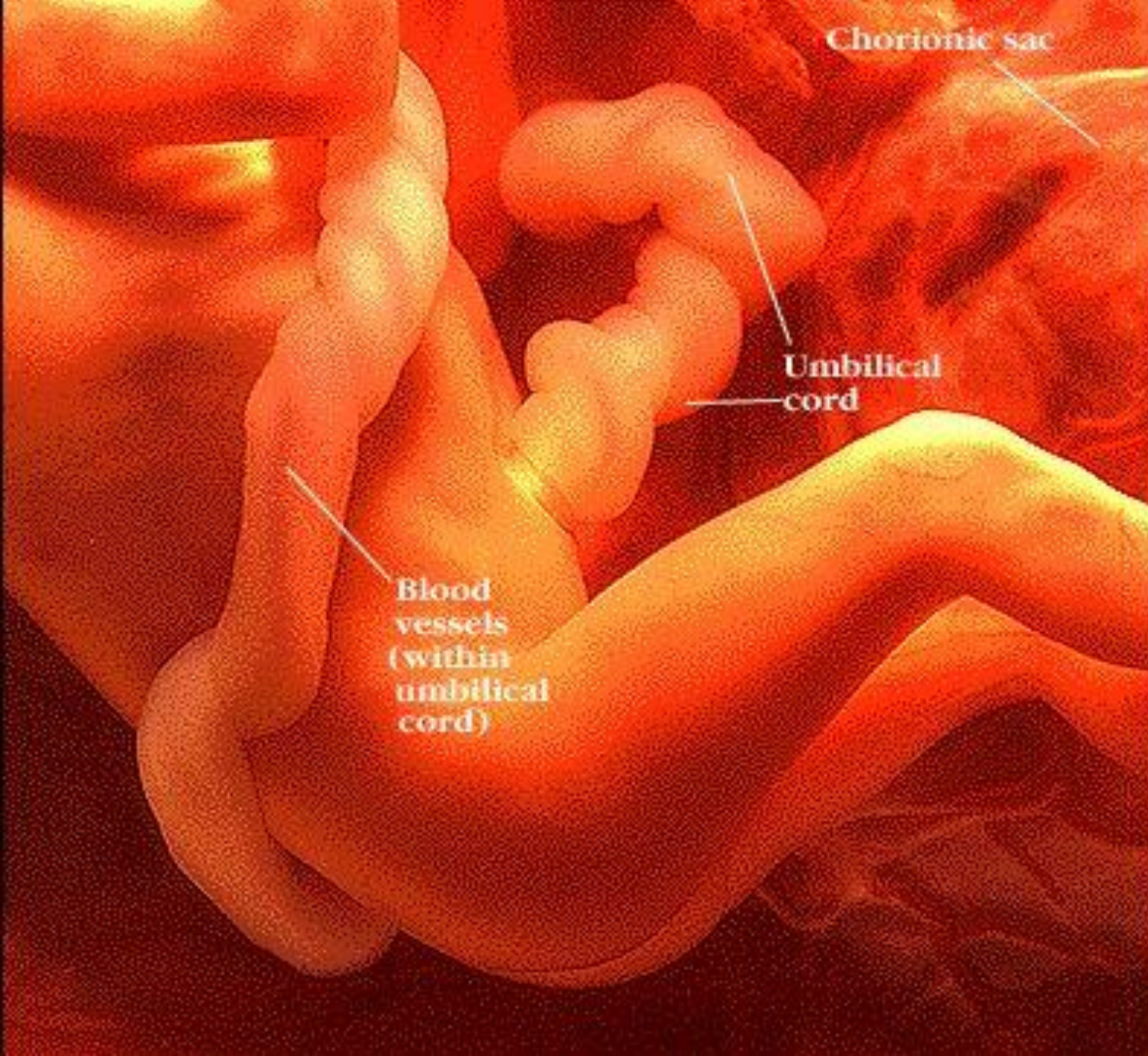
# Seven Months



- By the end of the seventh month, baby weighs about **1.5 kg** and is about **12 inches long**.
- His body is well-formed. **Fingernails** cover his fingertips.

- Blood formation is now shifting from spleen to bone marrow.
- If a fetus is born prematurely in the seventh month it may survive provided intensive care is taken





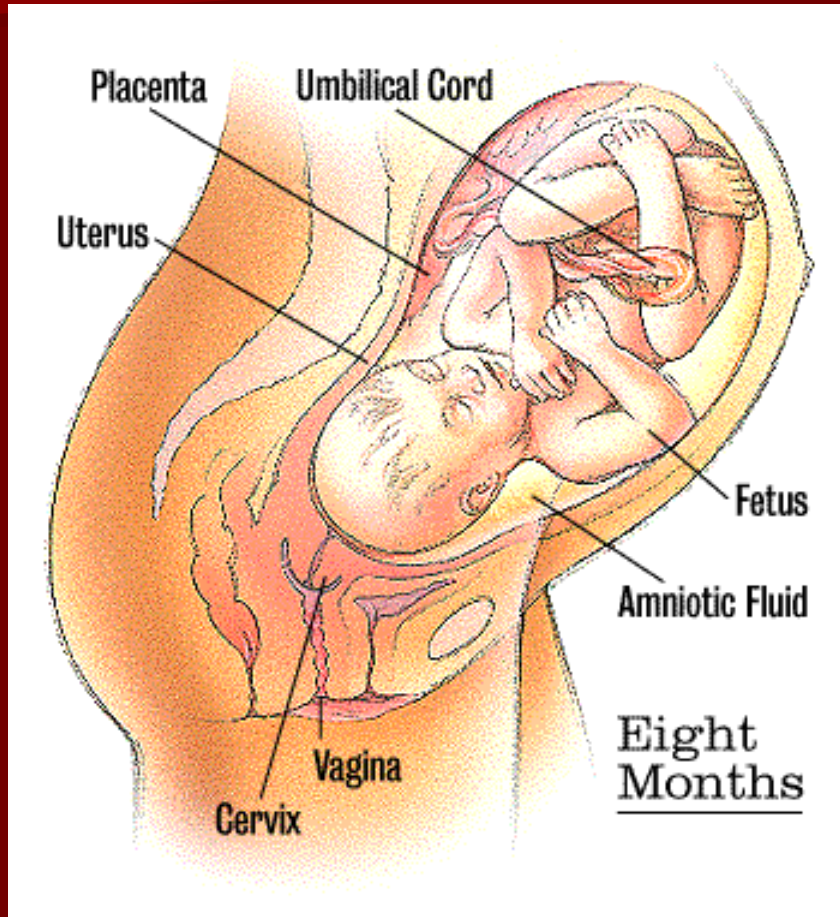
Chorionic sac

Umbilical  
cord

Blood  
vessels  
(within  
umbilical  
cord)

7  
M  
o  
n  
t  
h  
s

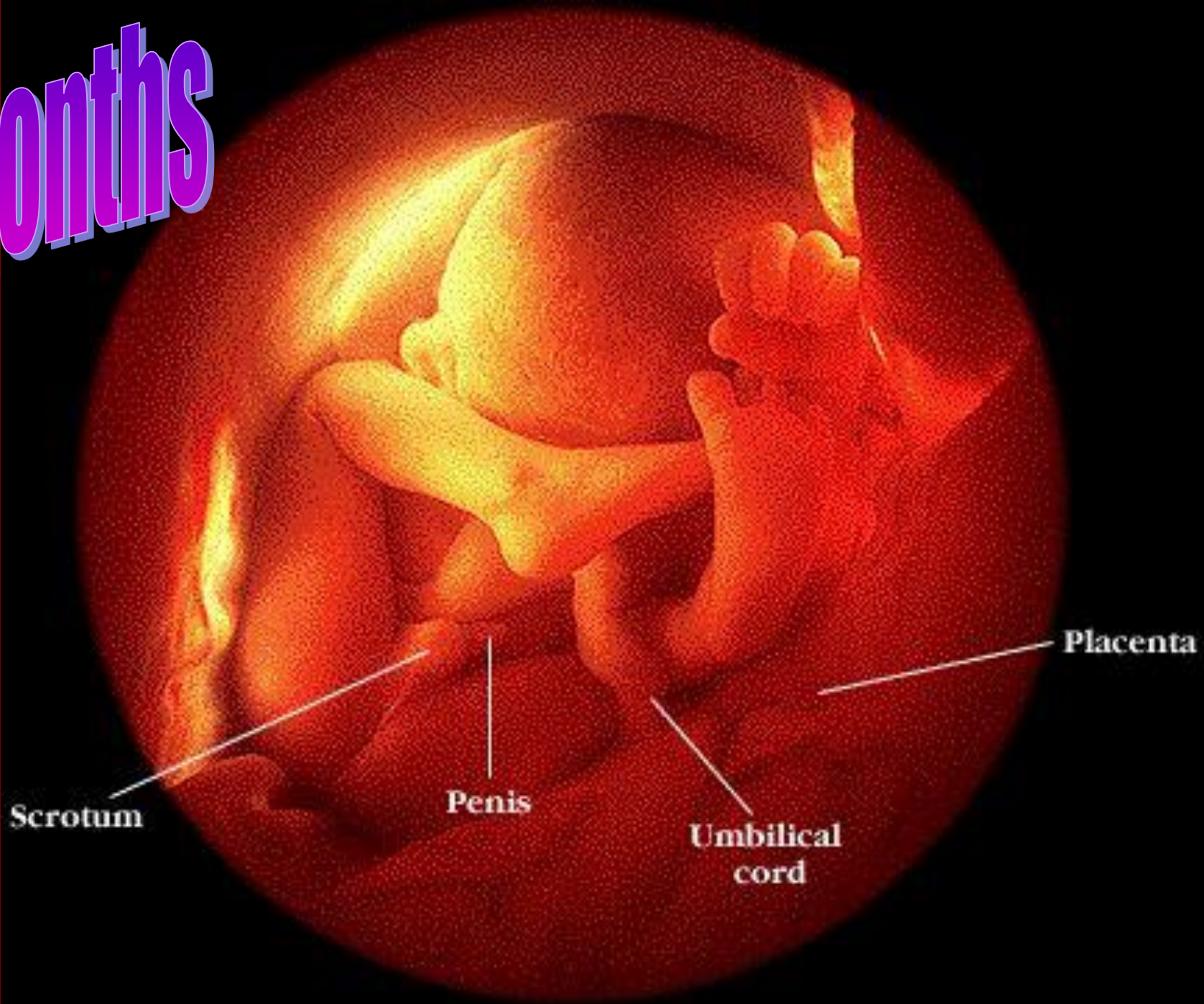
# Eight Months



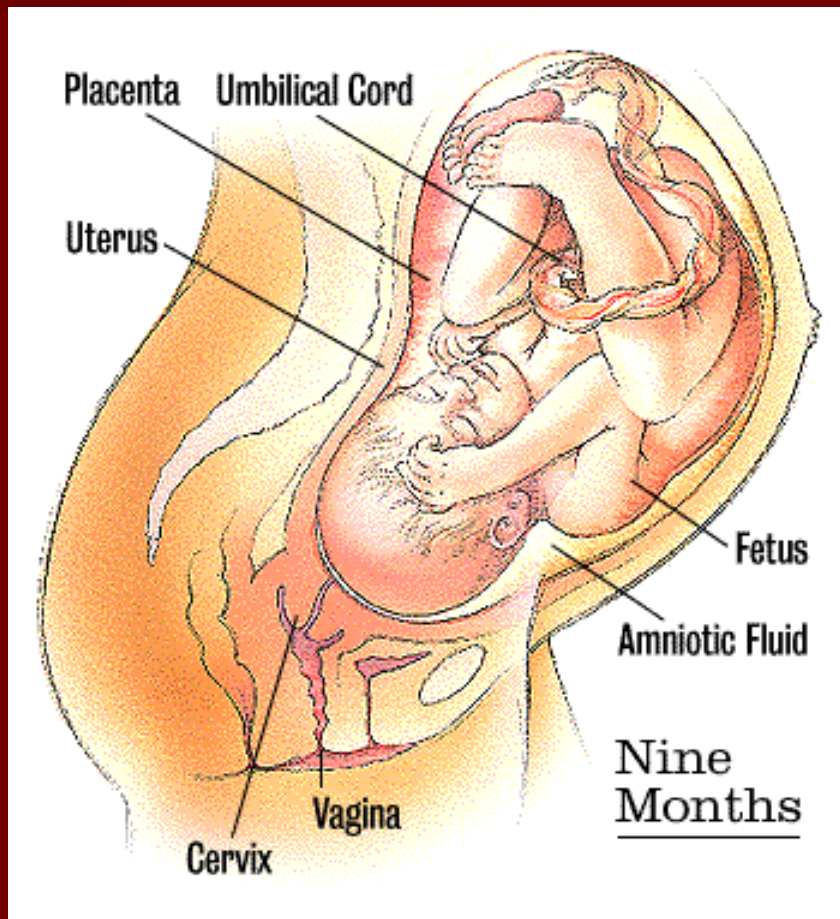
- He has probably turned head-down in preparation for birth.
- By the end of the eight month, baby weighs about **2 kg** and is about **12 inches long**.



8 months



# Nine Months



- baby is a heavy 2.5-3 kg and measures between 19 and 22 inches.
- The testes are usually lying in the scrotum in full-term male infants



- circumference of the abdomen may be greater than that of the head.
- The nervous system is sufficiently mature to carry out some integrative functions.

THANK YOU