

CHAPTER 06

Reproduction

Human Embryo:

The fertilized ovum undergoes mitotic divisions, while it moves down the oviduct and finally attaches to the soft tissues of the uterus.

- Once attached, the embryo sinks into the soft inner uterine wall.

This is called as implantation of embryo.

- Then certain cells of the embryo develop into membranous structures that help to nourish, protect, and support the developing embryo. They are chorion, amnion, allantois, yolk sac.

Chorion:

- During the development of the embryo, tiny finger like projections grow from the surface of the outer membrane called chorion into the soft tissues of the uterus.
- Gradually, small pools of rapidly moving blood around these finger like projections in the uterine wall.
- These tissues of the chorion and the adjacent part of the uterine tissue make up the placenta.

Placenta:

- It is a tissue formed by the cells from the embryo and the mother.
- It is formed at around 12 weeks of pregnancy and becomes an important structure for nourishment of the embryo.
- Under normal conditions, there is no direct flow of blood from mother to the young.

- The blood systems of the two are separated by thin membranes made up of cells that allow an exchange mainly by diffusion, of oxygen, carbon dioxide, nutrients and waste materials.
- Another embryonic membrane, the amnion grows around the embryo itself. The cavity within the amnion becomes filled with fluid called amniotic fluid.
- The embryo develops in this fluid-filled cavity, which keeps it moist and protects it from minor mechanical injury.

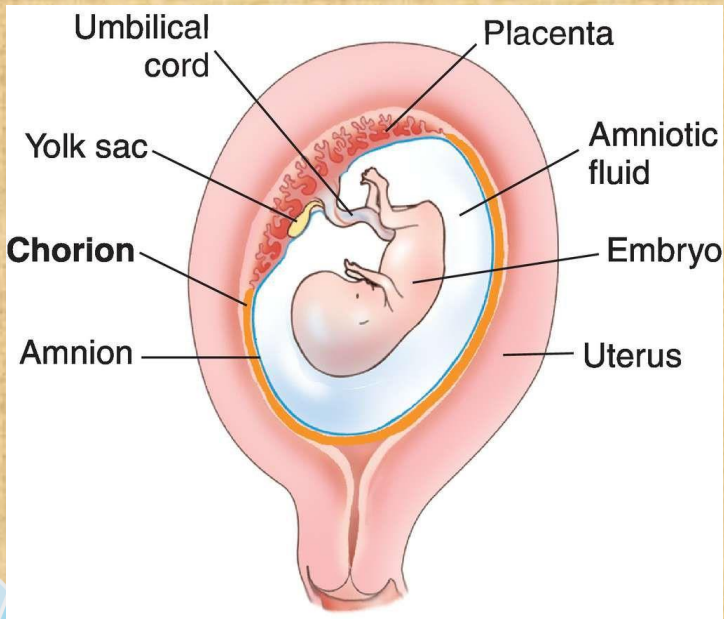
Allantois:

- Another membrane of the embryo called allantois.
- This long tubular structure called umbilical cord.
- It contains the very important blood vessels that connect the embryo with the placenta.
- It plays an important role in supplying the food materials from mother to child.

Yolk Sac: In placental mammals.

- Thus, the embryo develops until it is ready to be born. From the third month of pregnancy, the embryo is called foetus.

- Pregnancy lasts, on an average, 9 months, or 280 days. This period is called gestation period.



Childbirth:

- As pregnancy progresses, the foetus (of an embryo) with additional certain characters grow and the uterus increases in diameter.
- Usually at about the ninth month the head of the foetus is turned down towards the vagina. Sometimes the feet come first; this makes the delivery more difficult.
- Childbirth begins when the muscle layers of the uterus starts to contract and relax rhythmically these actions are felt as labour pains.
- At first, muscular activity of the uterus is just strong enough to move the baby slowly toward the vagina, the outer canal of the female reproductive tract.

- Generally, at this stage, the sac (amnion) around the baby breaks, and its fluid contents are released. This is a good sign that labour is well on its way. Then the contractions of the muscles become stronger and more entered the body.)
- After the birth of the baby, the muscular contractions of the uterus continue until they push out the tissues of the placenta, which are commonly called the “afterbirth.”
- During the end of pregnancy, a watery yellowish lymph like fluid called ‘colostrum’ accumulates in the mammary glands, which have gradually been enlarging and undergo transformation. For the first few days after the baby is born, the mammary glands secrete only colostrum.
- It is very important to feed this to the new born baby. It helps in developing the immune system of the child. After this milk will be secreted.

