Female Reproduction

The reproductive organs of the human female generate eggs and sexual activity may lead to fertilization and pregnancy.

Puberty is the time of life when male and female sex organs become mature.

- At puberty, a woman begins to ovulate.

Female Reproductive System

- Ovulation is the release of a mature egg from the ovary for possible fertilization.
- Ovulation occurs about two weeks into the cycle around the 14th day of a woman’s menstrual cycle.

Ovulation takes place in the ovaries.

- The ovaries are about the size of a large olive.

Each ovary produces eggs, also called oocytes.

- A woman has an estimated 300 to 400 thousand eggs contained within her ovaries at the time of puberty.
The ovaries also make the sex hormones estrogen and progesterone.
• The sex hormones regulate the release of eggs and direct the development of female traits.

An egg matures in a structure of the ovary called a follicle.
• During ovulation, a mature follicle ruptures through the ovary wall.

Once released, the egg travels down one of the fallopian tubes that lead to the uterus.
• The uterus is the organ where a baby can grow and develop.

The vagina is the passageway that receives sperm during sexual intercourse.

Fertilization
• If the female, at or around the time of ovulation, engages in sexual activity that results in sperm being deposited in or near the vagina, a sperm cell can travel through the vagina to the uterus or Fallopian tubes and fertilize the egg.

Fertilized Egg
• A fertilized egg begins a 5 day journey down the fallopian tube toward the uterus.
• During the journey, the zygote undergoes many mitotic divisions.
• By the time it reaches the uterus, it is an embryo that looks like a tiny ball of cells.
Implantation

- In implantation, the tiny embryo becomes embedded in the lining of the mother’s uterus.
- Once the embryo is implanted, pregnancy begins.

Menstruation

- Each month, starting at puberty, the tissue lining the uterus thickens to prepare for pregnancy.
- If the fertilized egg fails to implant and begin development, or if the egg is not fertilized, it will be sloughed off along with several layers of cells lining the uterus and leave the female’s vagina during menstruation.

- If fertilization does not occur, the egg deteriorates; and the tissue layer, along with the deteriorated egg, is discharged through the vagina.
- Menstruation lasts about five days after which the tissue lining the uterus again thickens.
- The entire process is called the menstrual cycle: repeating each month from puberty until late middle age.

Pregnancy

- One of the first signs of pregnancy is that a woman’s regular menstrual cycle stops.
- A pregnant woman may give birth to a baby between 38 and 42 weeks later.

Development and Birth

- At the eighth week, the embryo has developed enough to be called a fetus.
- A human fetus develops from the end of the eighth week of pregnancy (when the major structures have formed), until birth.

Development and Birth

- After 38 to 42 weeks, the fetus is ready to live outside of the mother.
- The mother goes through a series of contractions called labor.
- The fetus is pushed, headfirst, through her vagina.
The female reproductive system produces eggs, ensures development of fertilized eggs, and gives birth.