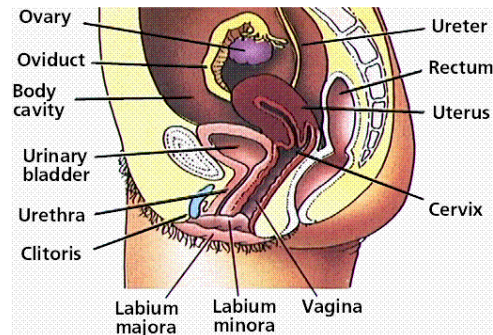
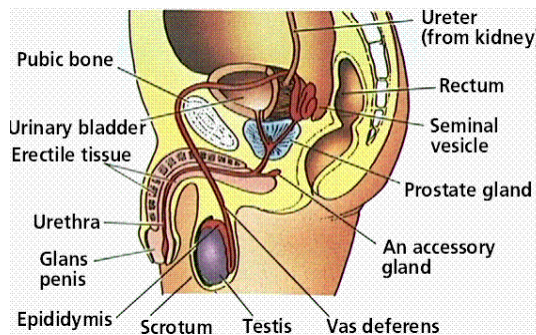


1. **Male reproductive system**

- Scrotum -to regulate temperature of the testes
- Testes -to Produces sperm cells (with Haploid number of chromosome) & produces **Testosterone**
- Epididymis -to store inactive sperm cells
- Sperm duct -to transfer sperm cells to urethra
- **Prostate** gland, **Cowper's** gland and **Seminal vesicle** – to produce fluids that contains nutrients and enzymes to active the sperm cells, protect sperms and lubricate the vagina
- Urethra –the passage for **urine** and **semen** to pass through.
- Sperm cell consists of– (a) Head with Acrosome with enzyme to breakdown egg's cells membrane, (b) Middle piece with many mitochondria to produce energy for the sperm, (c) Tail to allow sperm to swim

2. **Female reproductive system**

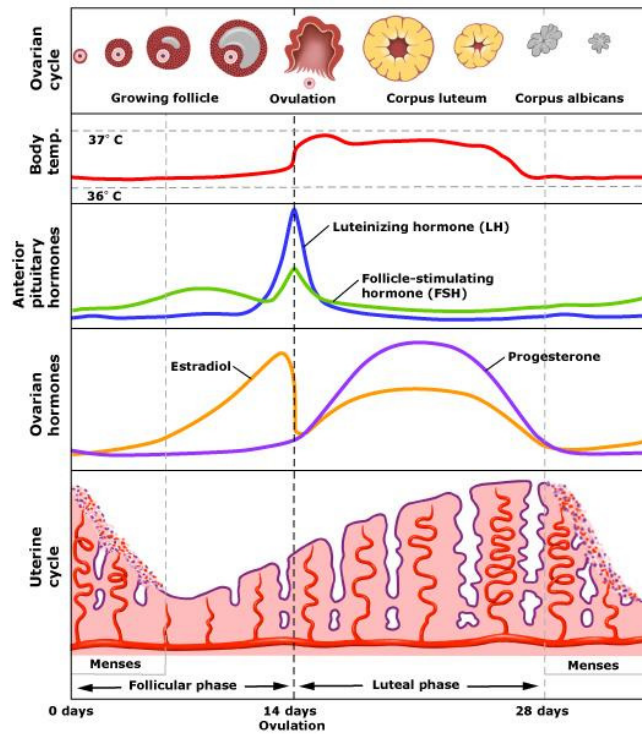
- Vagina -the passage for semen deposition during sexual intercourse
- Cervix -the entrance to the uterus
- Ovary -to produce eggs and **Oestrogen & Progesterone**
- Oviduct -where fertilization of egg by sperm cell take place
- Uterus – where the fetus develop during pregnancy
- Uterine lining – the inner lining of uterus for embryo implantation
- Ovum consists of : (a)Outer membrane with follicle cells, (b) cell surface membrane (c) Large cytoplasm with (d) Haploid nucleus



3. **Mensuration cycle**

- Day 1-5:
 - **Breakdown** of uterine lining and start of menses
 - **FSH** produced by pituitary gland to stimulate growth of follicles in the ovary
- Day 6 -13:
 - Growth of follicles to form Graafian follicle and secretion of **Oestrogen**.
 - Oestrogen causes repair and growth of uterine lining.

- Oestrogen in turn inhibit the FSH production to prevent ripening and growth of more follicles.
- Oestrogen stimulates pituitary gland to secrete **Luteinizing hormone (LH)**



- Day 14:
 - Highest level of LH & FSH causing ovulation
 - Remainder of graafian follicle form into **Corpus luteum**
 - Corpus luteum secretes **Oestrogen & Progesterone**.
- Day 15-28
 - Progesterone maintains the uterine lining and causes it to thicken further preparing it for the implantation of fertilized egg.
 - Progesterone inhibit further Ovulation
 - Progesterone inhibit FSH production to prevent growth of follicles
- After 28 days:
 - If no fertilized egg implanted by 28th day, the high level of progesterone causes drop in LH thus breakdown of Corpus luteum
 - The uterine lining will breakdown and start of new menstruation cycle
 - If fertilized egg exists and develops into zygote and then embryo, it will embed into the uterine lining and produces a hormone which prevents the corpus luteum from breaking down until...
 - The embryo develops a structure called placenta to take over the production of Oestrogen and Progesterone.

4. Fertilization

- Egg can survive **1-2 days**; Sperm can survive **2-3 days** in the woman reproductive system.

- Fertilization period is from **11 -16th day** whereby fertilization of egg is possible. The rest of the days make up infertile period.
- **Stress, tiredness, illness and malnutrition** are factors that affect the menstruation cycle.
- Sperms meet the egg in the Oviduct; the sperm release enzymes to disperse the follicle cells surrounding the egg and breakdown part of the egg membranes in order to enter.
- The Haploid sperm fuses with the egg Haploid nucleus to form diploid zygote.

5. Embryo Development

- The zygote was sweep by the cilia lining of Oviduct into the uterus.
- The zygote develops into embryo along the way and takes about **5 days** to reach the uterus.
- The embryo floats around for **2 days** and then implant into the uterine lining.
- Implantation occurs **7 days** after fertilization.
- Embryo to baby about **9 months**

6. Sexually Transmitted Disease (STD) & prevention

- a. Sexual intercourse with infected person >> Keep to 1 sex partner or no sex, use condom
- b. Share hypodermic needle >> Do not share instrument that are likely to break the skin
- c. Contaminated Blood fusion >>Go to reliable hospitals or surgeon
- d. Infected mother pass down to fetus >>Screen for HIV positive before plan to have baby

HIV Transmission



Sharing Needles with Infected Person



Infection from blood Products



Unprotected sex with An infected partner



Transmission from Infected Mother to Fetus

- In utero
- During delivery
- Breastmilk

7. Acquired Immune Deficiency Syndrome (AIDS) caused by HIV

- Persistent fever
- Severe diarrhea for months
- Blood vessel cancer
- Brain infection
- Widespread tuberculosis
- Swollen glands