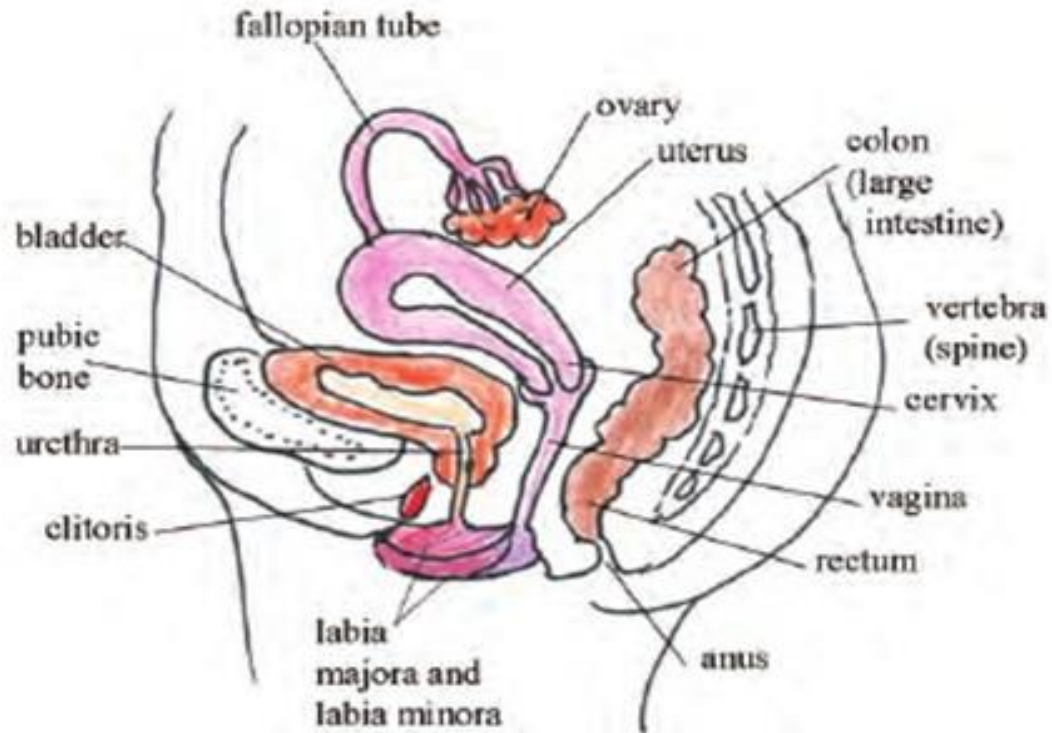


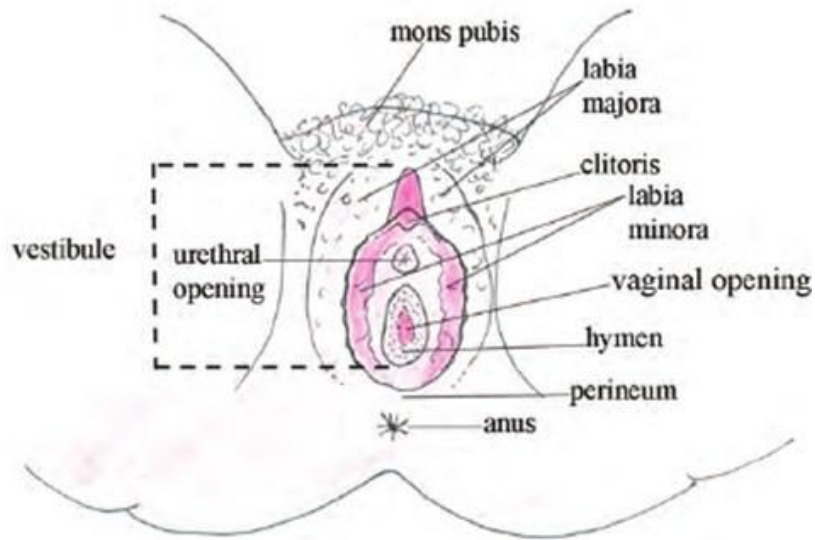
Basic Anatomy&physioloypg

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Anatomy of Reproductive Organs

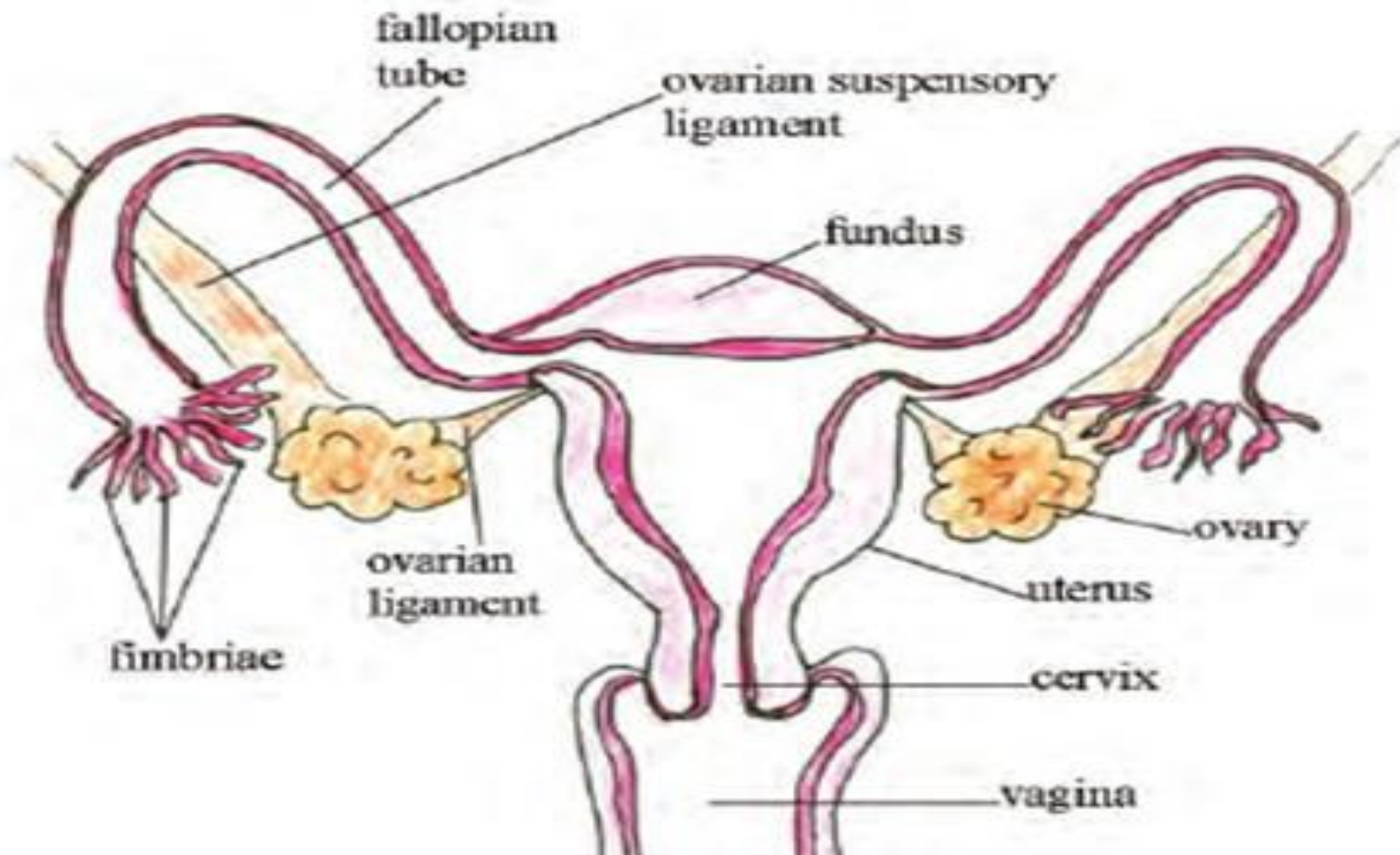


External genitalia

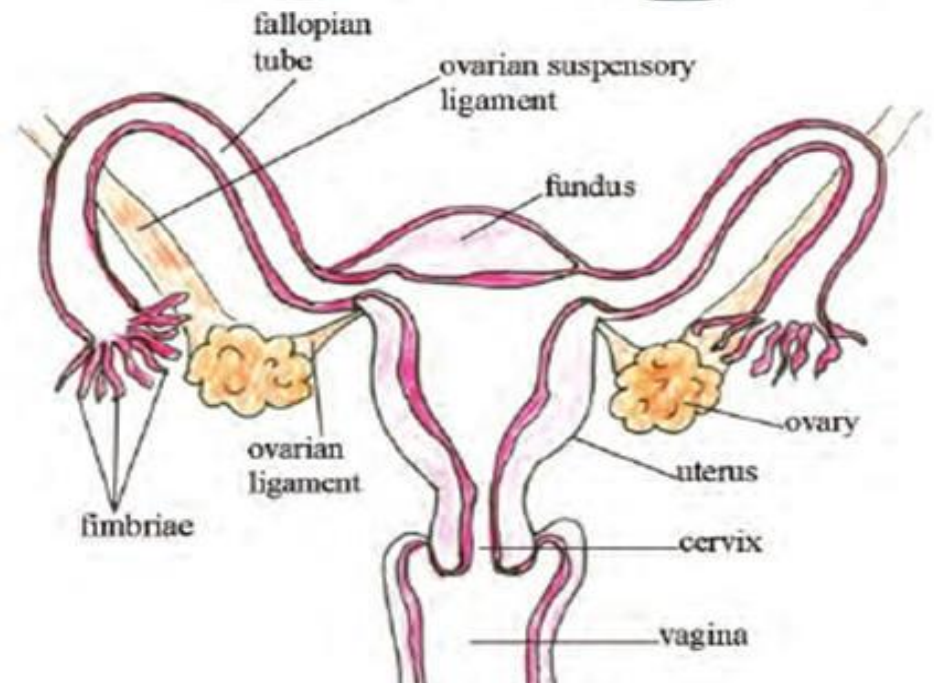
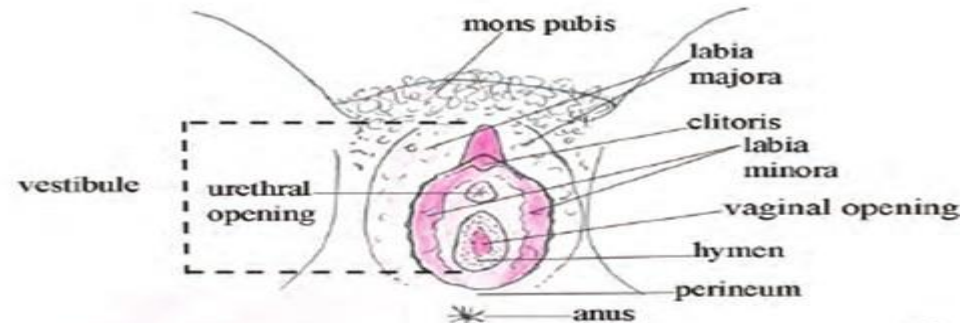
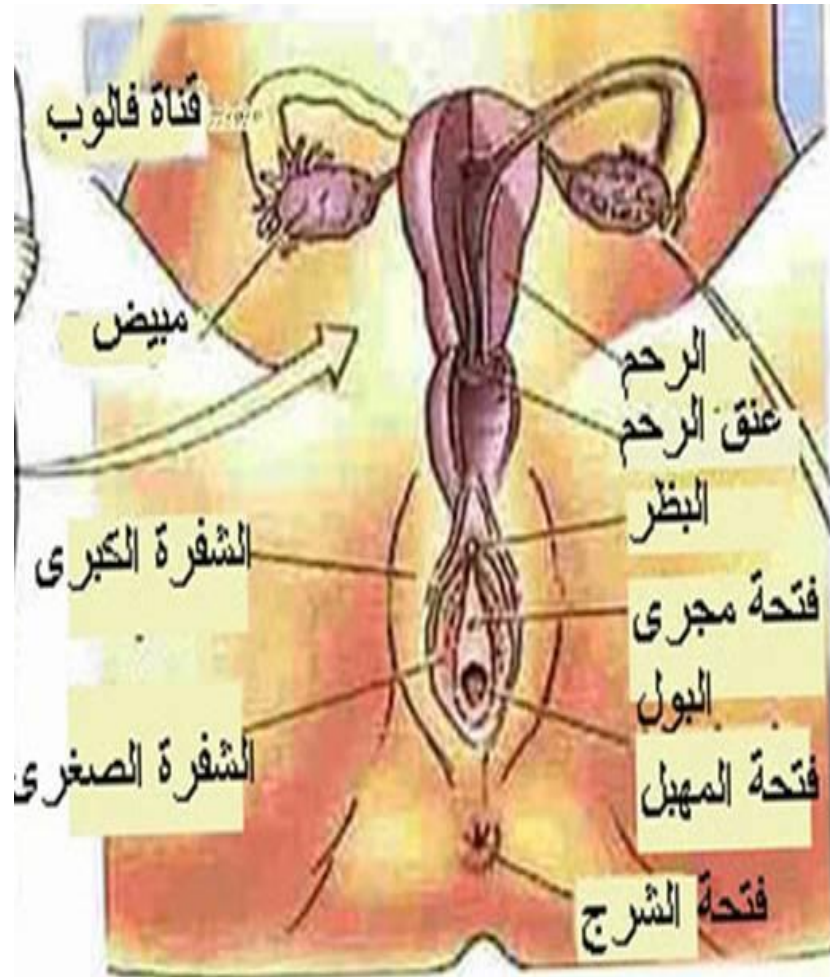


- Notice that the urethral opening, the vaginal opening and the anus are all close together in the vulva.
- What do you think is the clinical importance of this close relationship for the pregnant woman?
- As you know, the area around the anus is contaminated with bacteria from waste matter emerging from the gastrointestinal tract. So, direct bacterial contamination of the urethral and vaginal openings easily occurs.
- Advice women to clean from superior to inferior parts

Internal Genitalia



External-internal genitalia

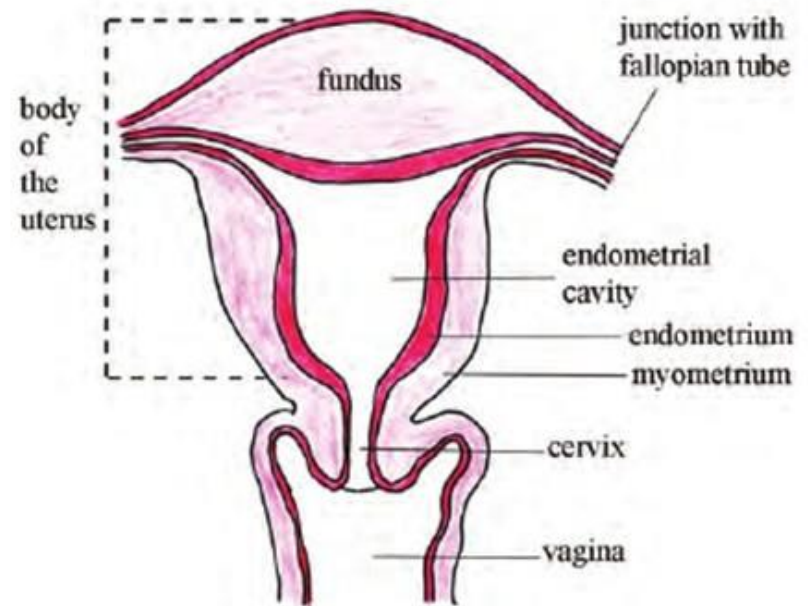


Uterus

- The uterus is a hollow, muscular organ in which a fertilized ovum becomes embedded and develops into a fetus. Its major function is protecting and nourishing the fetus until birth.
- The uterus has four major anatomical divisions:

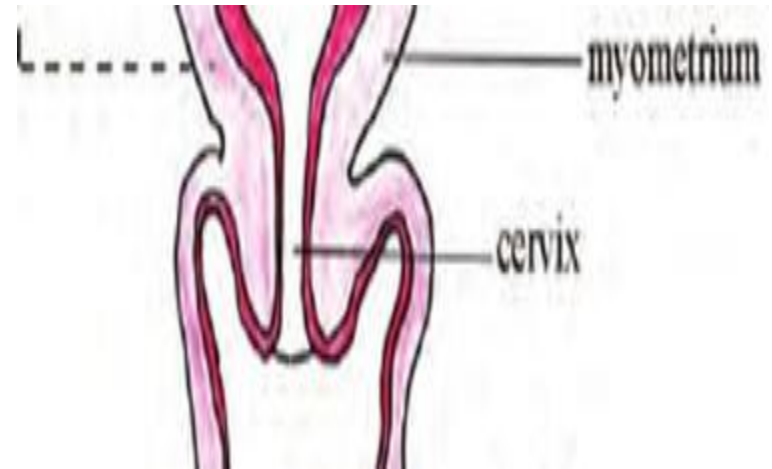
• **Body:** the major portion, which is the upper two-thirds of the uterus.

- **Fundus:** the domed area at the top of the uterus, between the junctions with the two fallopian tubes.
- **Endometrial cavity:** the triangular space between the walls of the uterus.
- **Cervix:** the narrow neck at the upper end of the vagina.



Cervix

- The cervix is the lower, narrow neck of the uterus, forming a tubular canal, which leads into the top of the vagina . It is usually about 3-4 cm long.
- A mucus plug forms during pregnancy and close the cervical canal and help prevent up spread of infection to the fetus



Vagina

- The vagina is a muscular passage, 8-10 cm in length, between the cervix and the external genitalia.
- The secretions that lubricate the vagina come from glands in the cervix.



- The vagina has three functions:
 - Outflow of menstrual blood
 - Intercourse
 - Passage of fetus during labor
-
- Help patient to stretch vagina:
 - Prevent leaking of urine
 - Prevent the vagina and perineum from tearing when they are stretched during childbirth
 - Speed healing after birth
 - Increase sexual pleasure.

Hormonal Regulation Of Menstrual cycle

Things to know:

- Describe the physiological processes and changes during the menstrual cycle.
- Describe the hormonal regulation of the female reproductive system

Hormonal Regulation Of Menstrual cycle

- **Gonadotropin-releasing hormone (GnRH)** is produced by a part of the brain called the hypothalamus.
 - When it circulates in the blood, it causes the release of two important hormones from the pituitary gland in another specialized part of the brain.
- **Follicle-stimulating hormone (FSH)** is produced by the pituitary gland during the first half of the menstrual cycle.
 - It stimulates development of the maturing ovarian follicle and controls ovum production in the female, and sperm production in the male.
- **Luteinizing hormone (LH)** is also produced by the pituitary gland in the brain.
 - It stimulates the ovaries to produce estrogen and progesterone.
 - It triggers ovulation (the release of a mature ovum from the ovary), and it promotes the development of the corpus luteum.

What is the corpus luteum?

- The name means 'yellow body', and after ovulation it develops in
- the ovary from the enlarged ovarian follicle that released the ovum.

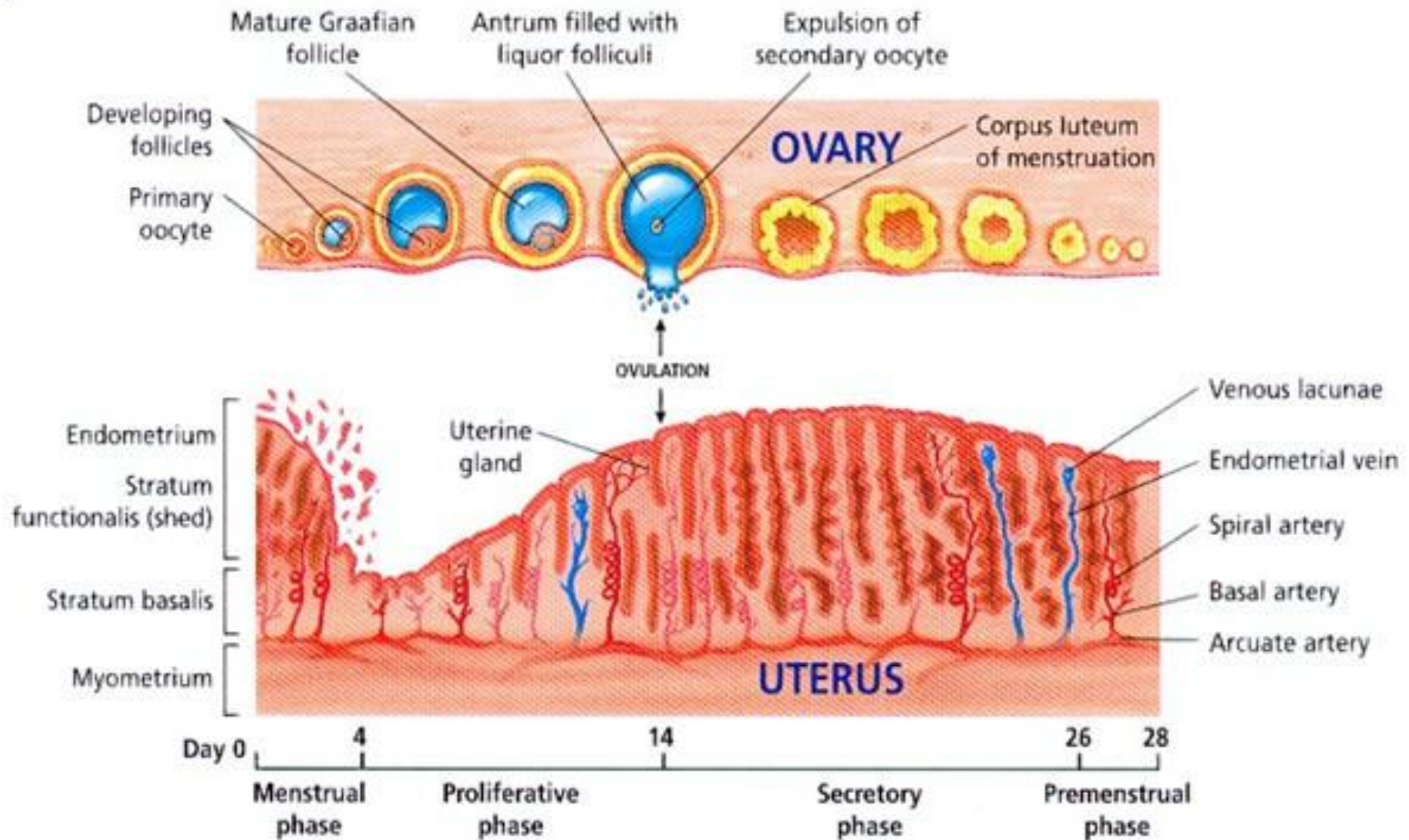
Hormonal Regulation Of Menstrual cycle

- **Estrogen** is a female reproductive hormone, produced primarily by the ovaries in the non-pregnant woman.
 - It promotes the maturation and release of an ovum in every menstrual cycle.
 - It is also produced by the placenta during pregnancy.
- **Progesterone** is produced by the corpus luteum in the ovary;
 - its function is to prepare the endometrium (lining of the uterus) for the reception and development of the fertilized ovum.
 - It also suppresses the production of Estrogen after ovulation has occurred.
 - It also released by placenta and causes relaxation of the uterus

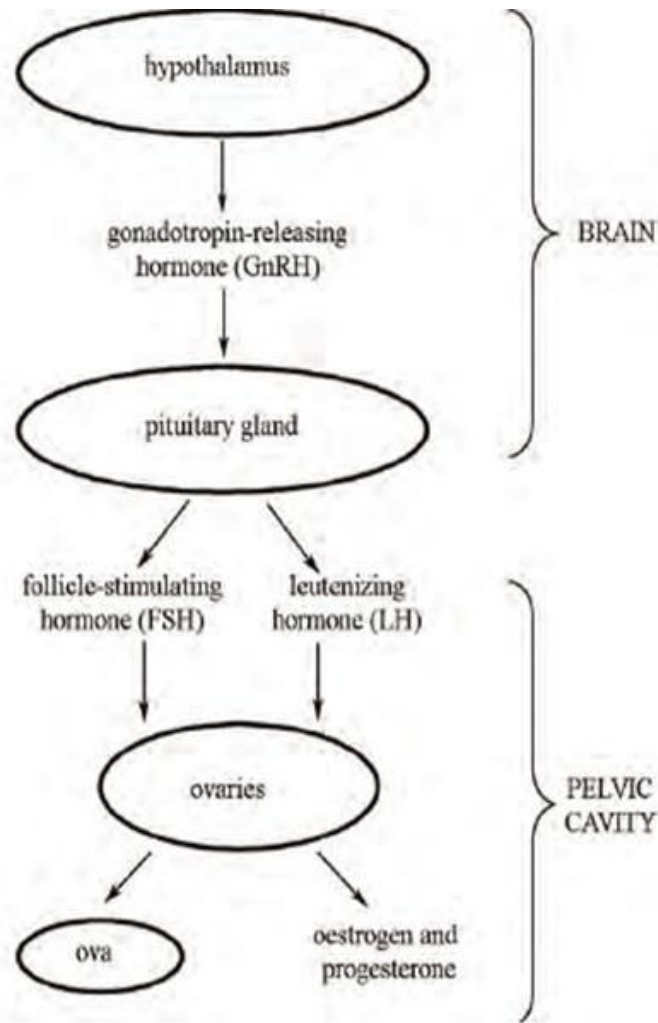
Menstrual Cycle

- The length of the menstrual cycle is typically 28 days, but it can be highly variable. In some women it may be as short as 21 days or as long as 39 days.
(Range 21-39 days, Average 28 days)
- The menstrual cycle is best understood if we focus first on events occurring in the ovaries, and then on events occurring in the uterus.
- **-Ovulatory cycle**
 - *Follicular Phase (variable length)
 - *Luteal phase (12-14days)
- **-Uterine cycle**
 - *Menstrual phase (days1-5)
 - *Proliferative phase (days6-15)
 - *Secretory phase (days 15-28)

Ovulatory and Uterine cycle



Hormonal Regulation Of Menstrual cycle



Fertilization

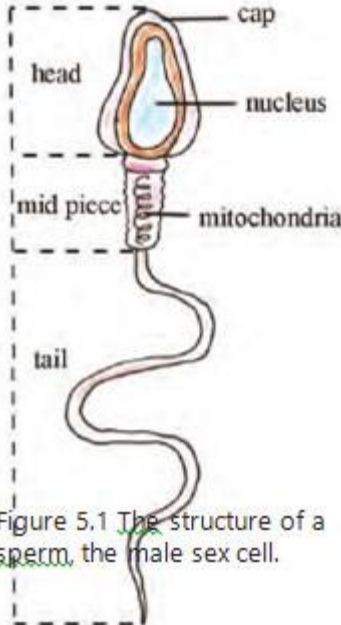
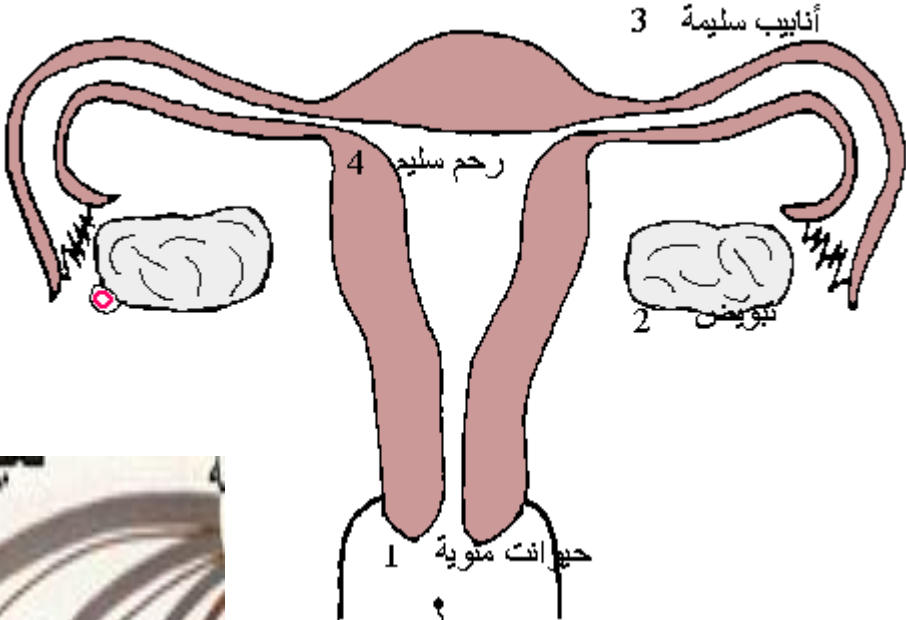
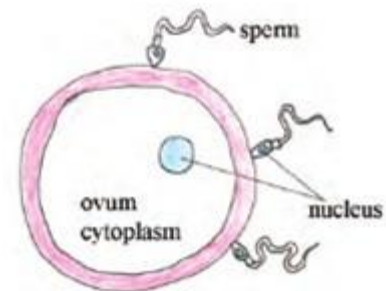
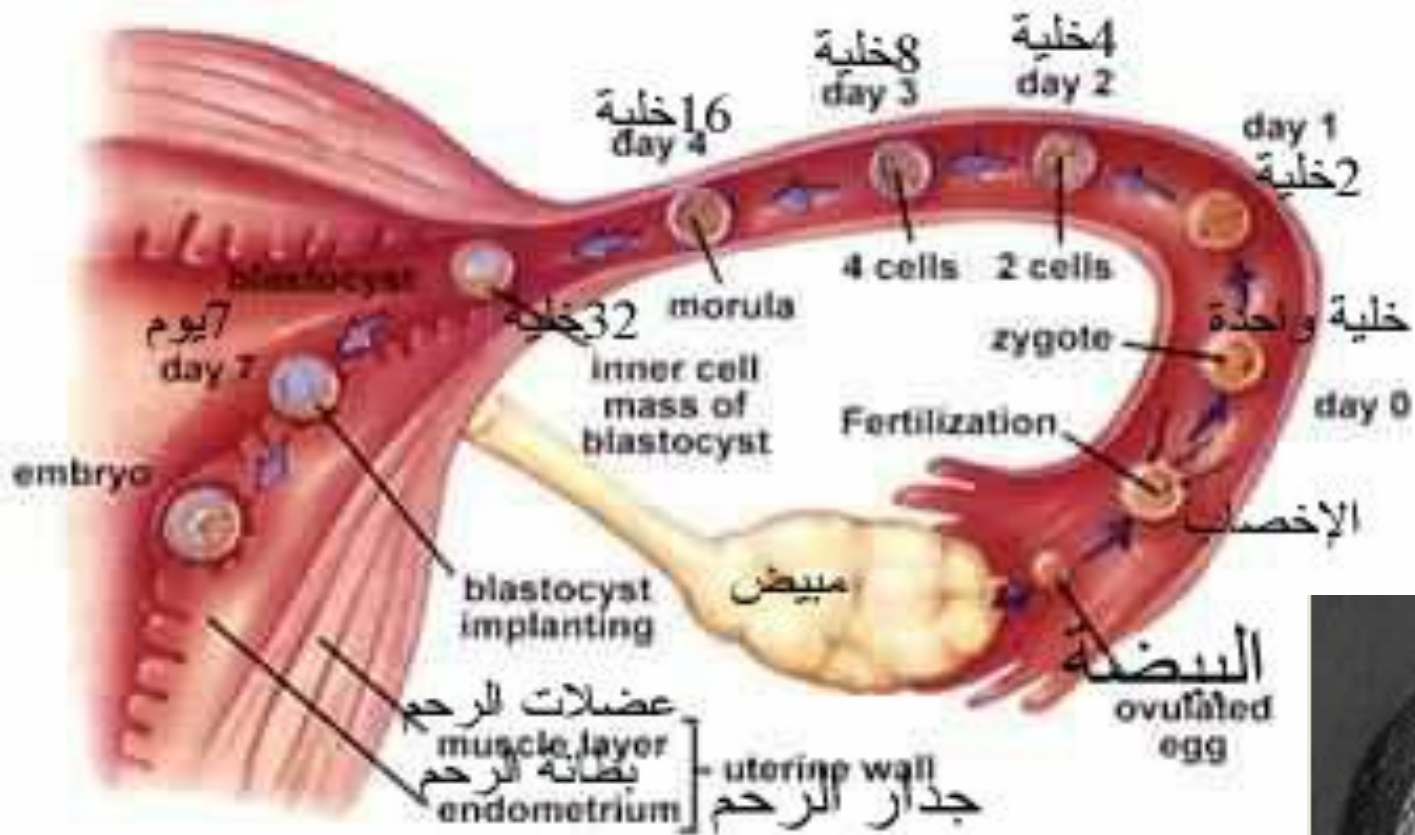


Figure 5.1 The structure of a sperm, the male sex cell.

fertilization



Human developmental stages after fertilization

- Fertilization: fusion of ovum and sperm on day one
- -
- Morula: solid ball of cells after three days
- -
- Blastocyst: hollow ball of cells after five days
- -
- Trophoblast: forms early embryo, fetal membranes and placenta after
- five to seven days
- -
- Embryo: the developing human from fertilization to the eighth week of pregnancy
- -
- Fetus: the developing human from nine weeks of pregnancy to birth at
- around 40 weeks
- -
- Neonate: newborn baby from birth to 28 days old
- -
- Infant: baby or young child aged less than one year.