

The female reproductive system

Functions:

- ***secretion of sex hormones*** (ovary)
- ***production of ova*** (ovary)
- ***gestation and delivery of the fetus***
(uterus, vagina)

Structure of Female reproductive system:

- *Female internal genitalia*
- *Female external genitalia* = vulva

Female Reproductive Organs (1)

Uterine tube _____

Ovary _____

Uterus _____

Urinary bladder _____

Symphysis pubic _____

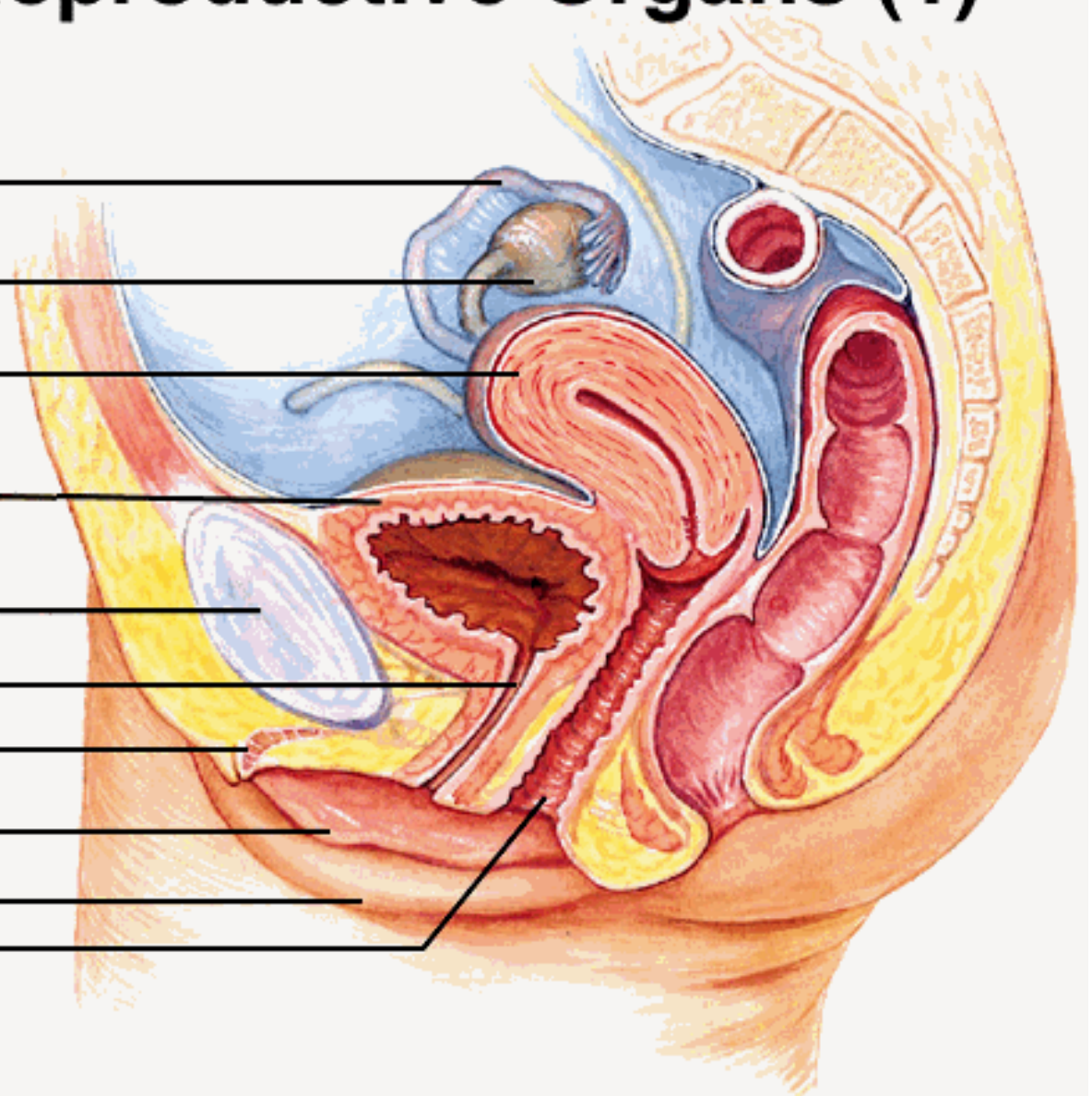
Urethra _____

Clitoris _____

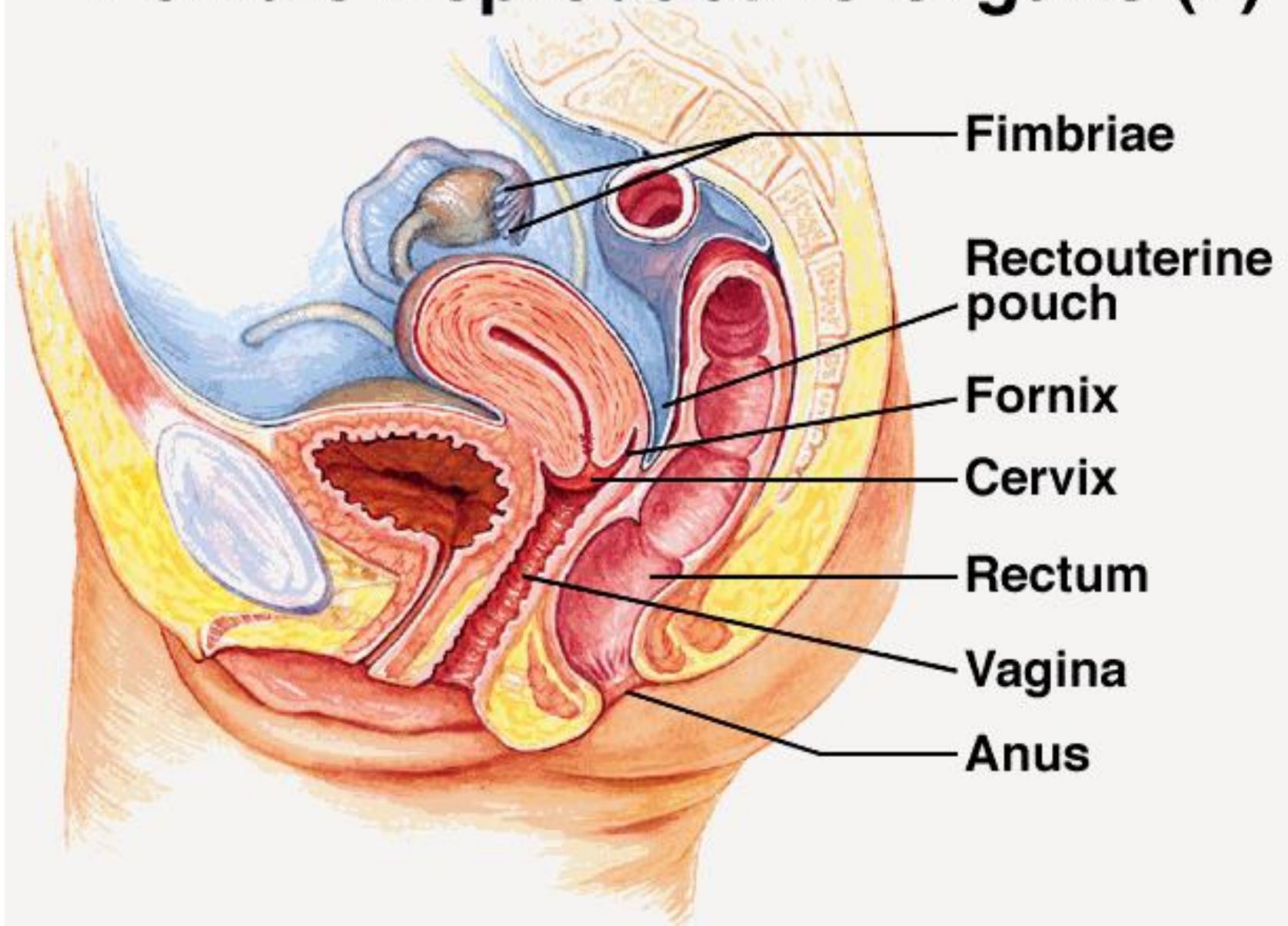
Labium minus _____

Labium majus _____

Vaginal orifice _____

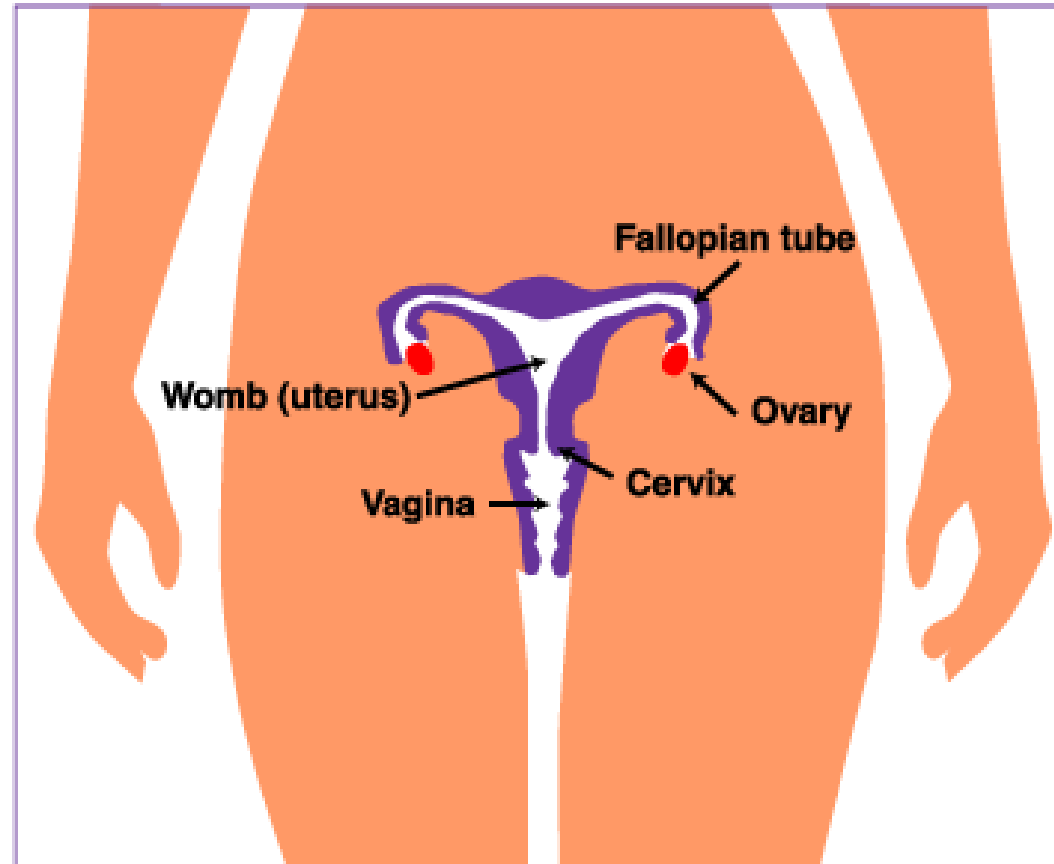


Female Reproductive Organs (2)



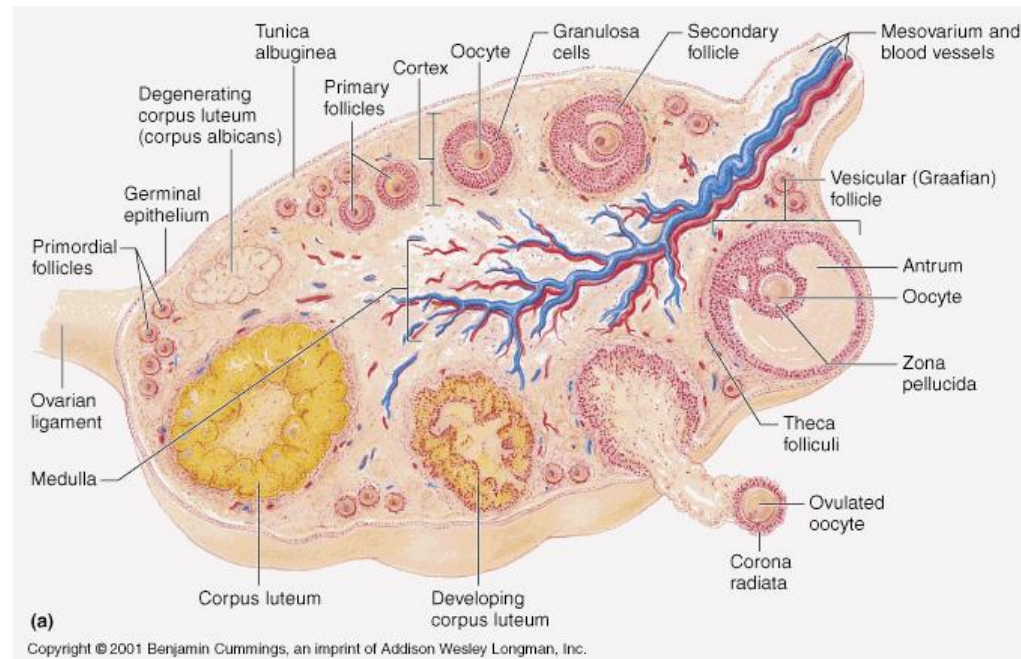
Female internal genitalia

- **2 ovaries**
- **uterine (Fallopian) tubes**
- **Uterus**
- **Vagina**



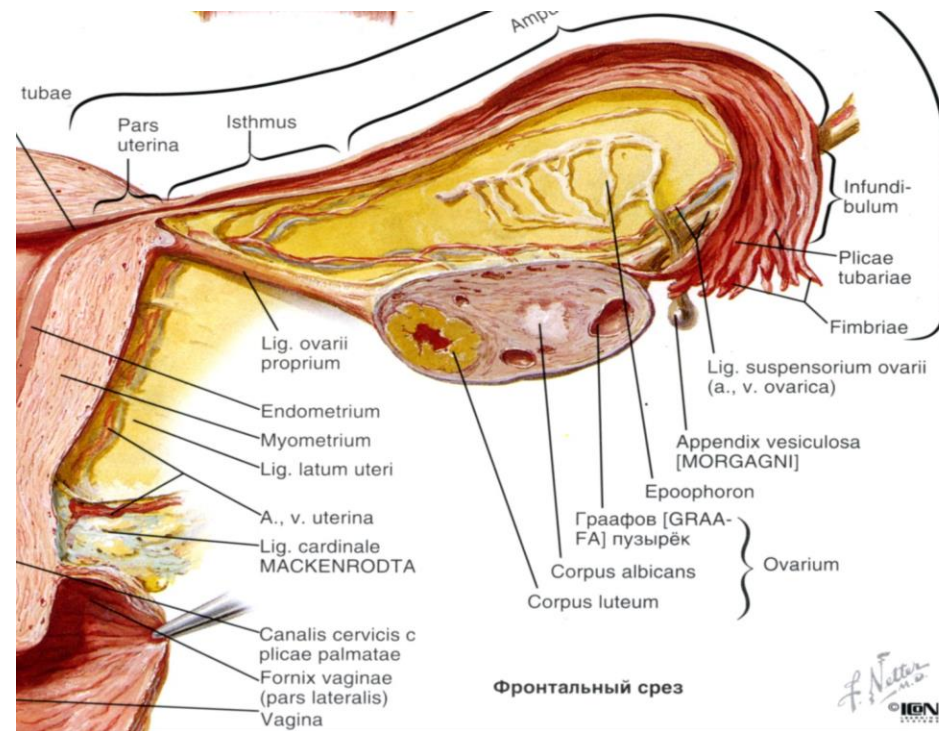
2 ovaries

- **2 ovaries**- oval bodies located in the pelvic region close to the funnel like openings of the Fallopian tubes ;
- ***the production of germ cells***
- ***the production of hormones***

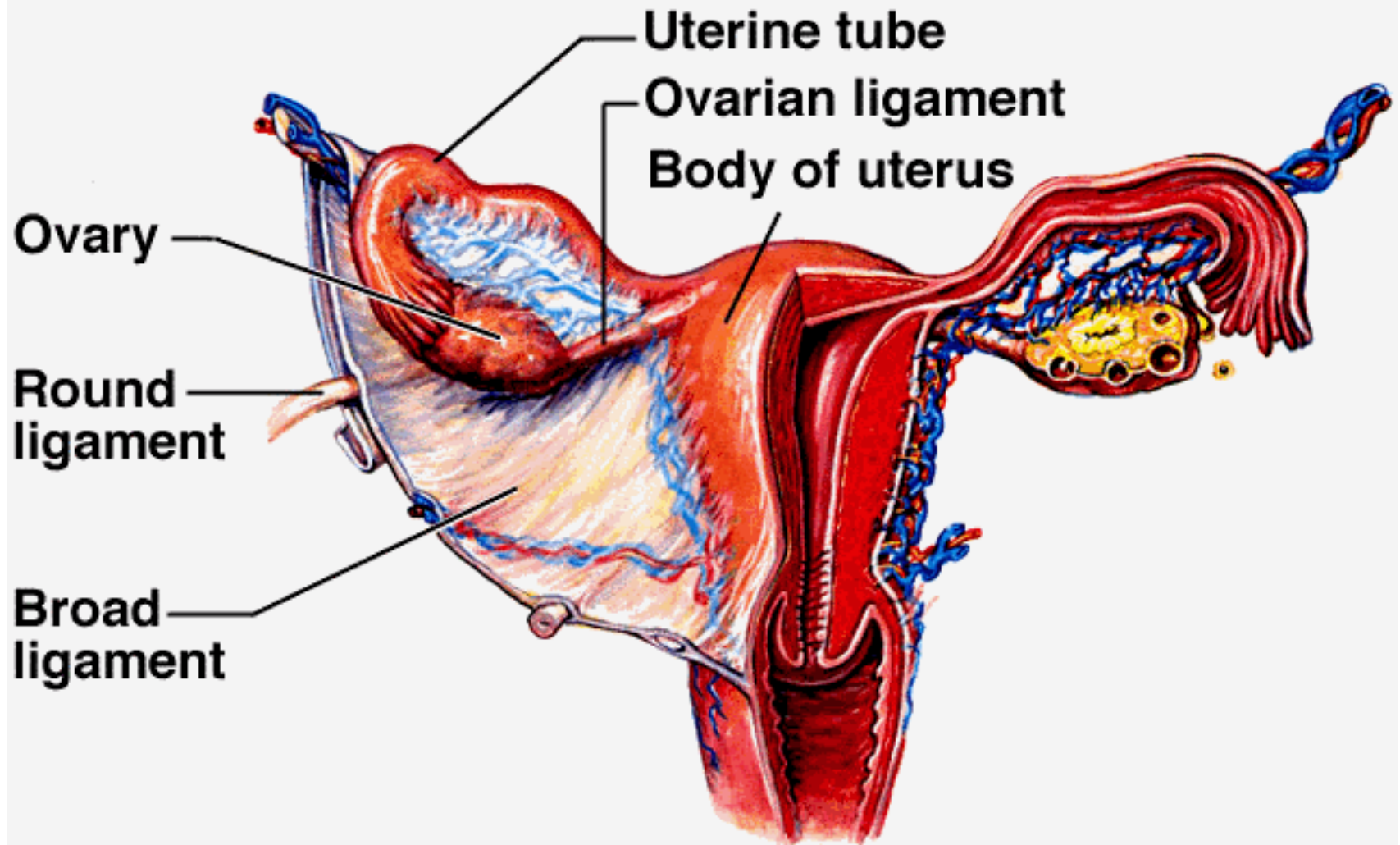


uterine (Fallopian) tubes

- **uterine (Fallopian) tubes** - 2 ducts with a trumpet shaped mouth and fringed rim, which receives the ovum, allows fertilization and then passes this to the uterus;

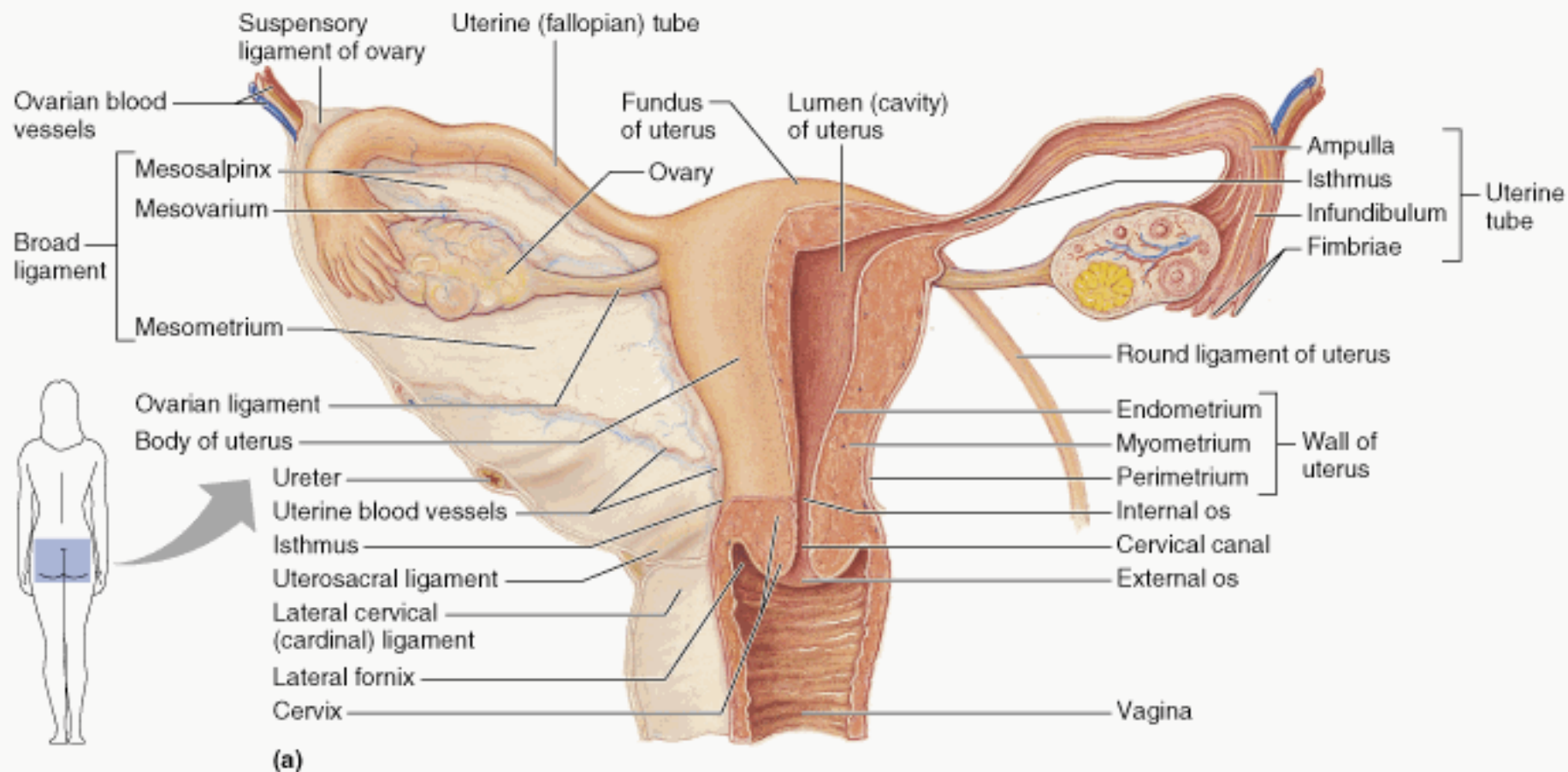


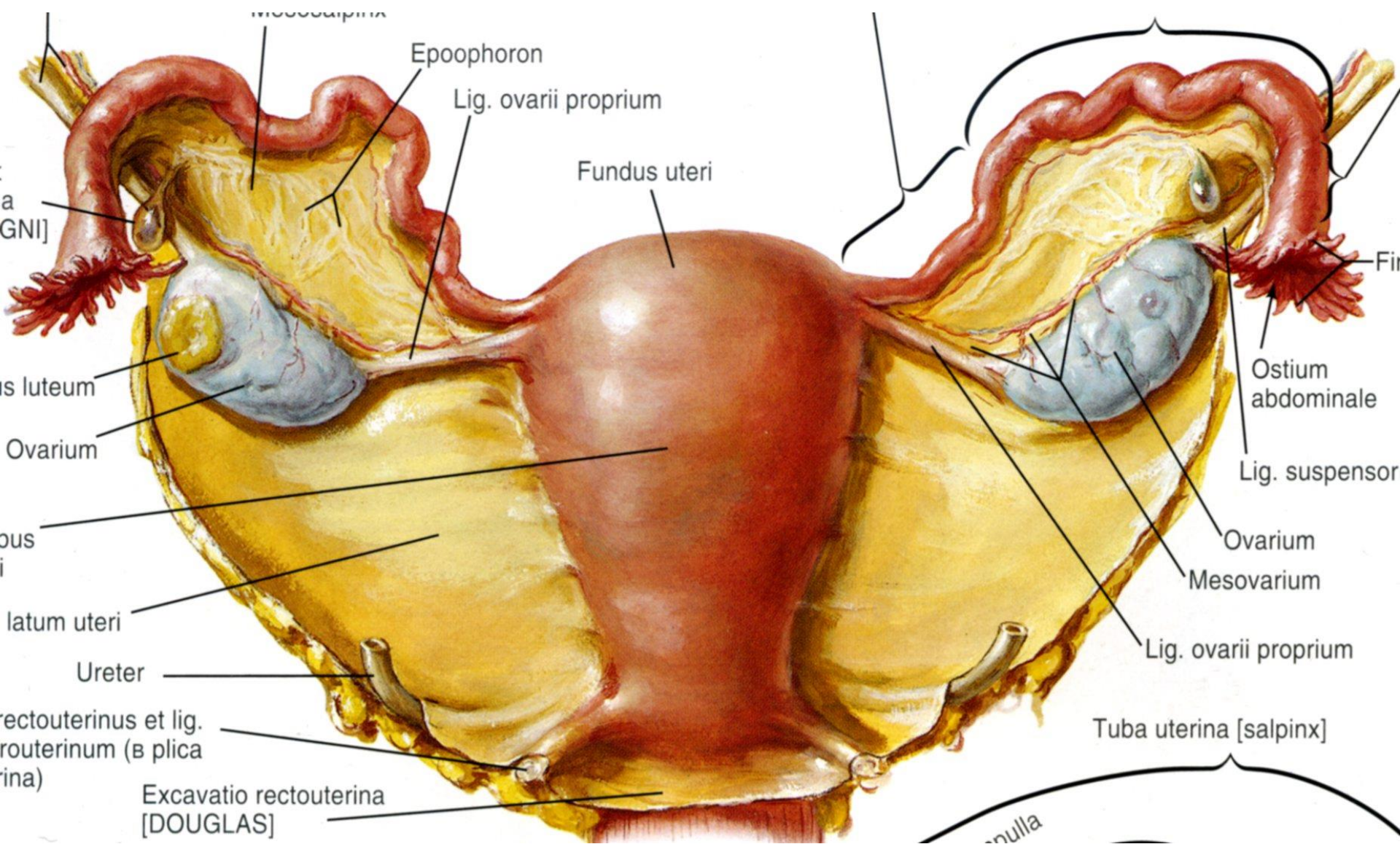
Female Internal Reproductive Organs (1)

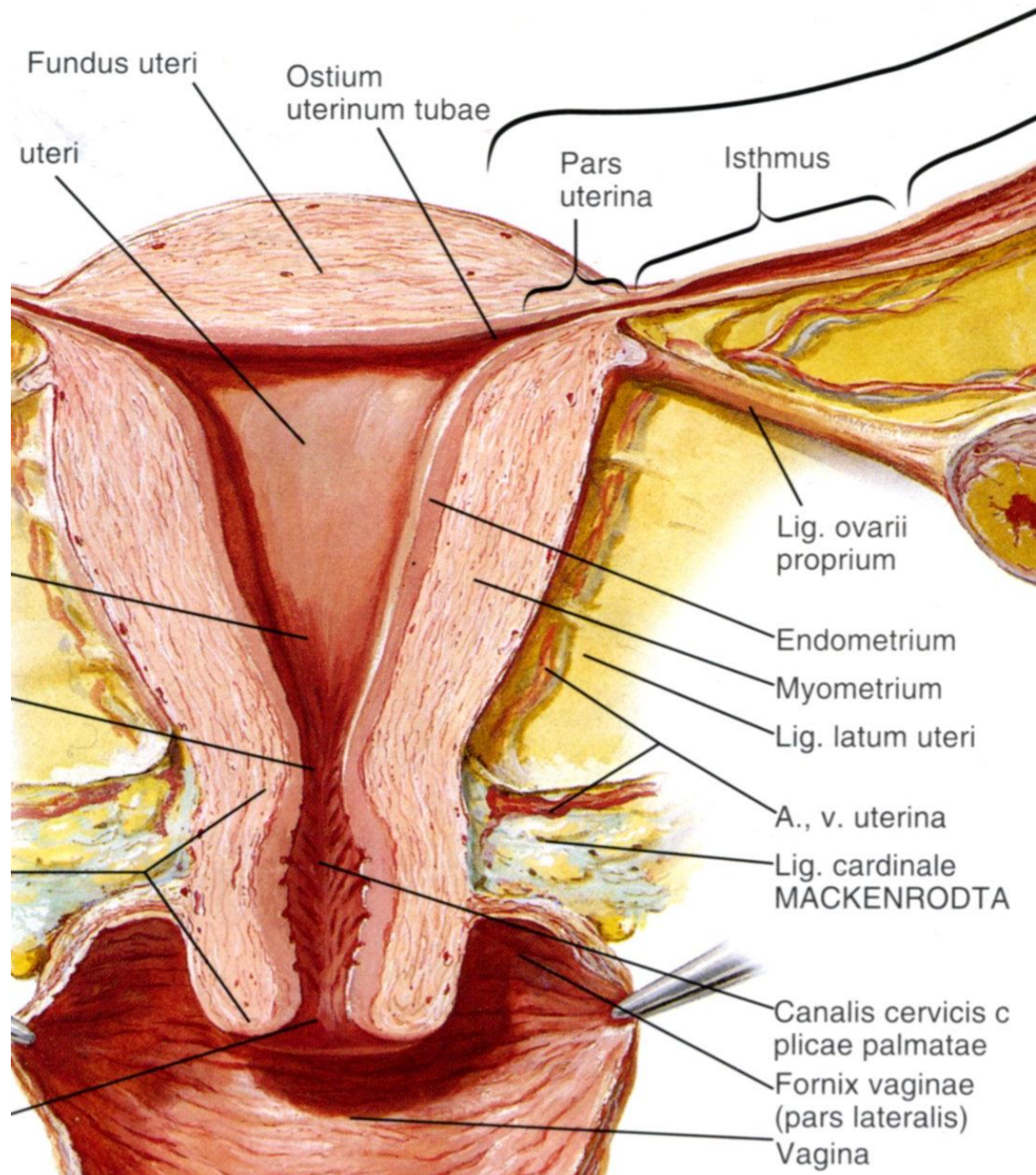


Uterus

- **Uterus**- pear shaped , 7.5cm long with a triangular lumen, consists mainly of smooth muscle (**myometrium**) and is lined by a mucous membrane (**Endometrium**), upper part opens to fallopian tubes while lower part is continuous with **neck of cervix** which opens into the vagina;
- The term **cervix** applies to the portion of the uterus that extends into vagina.

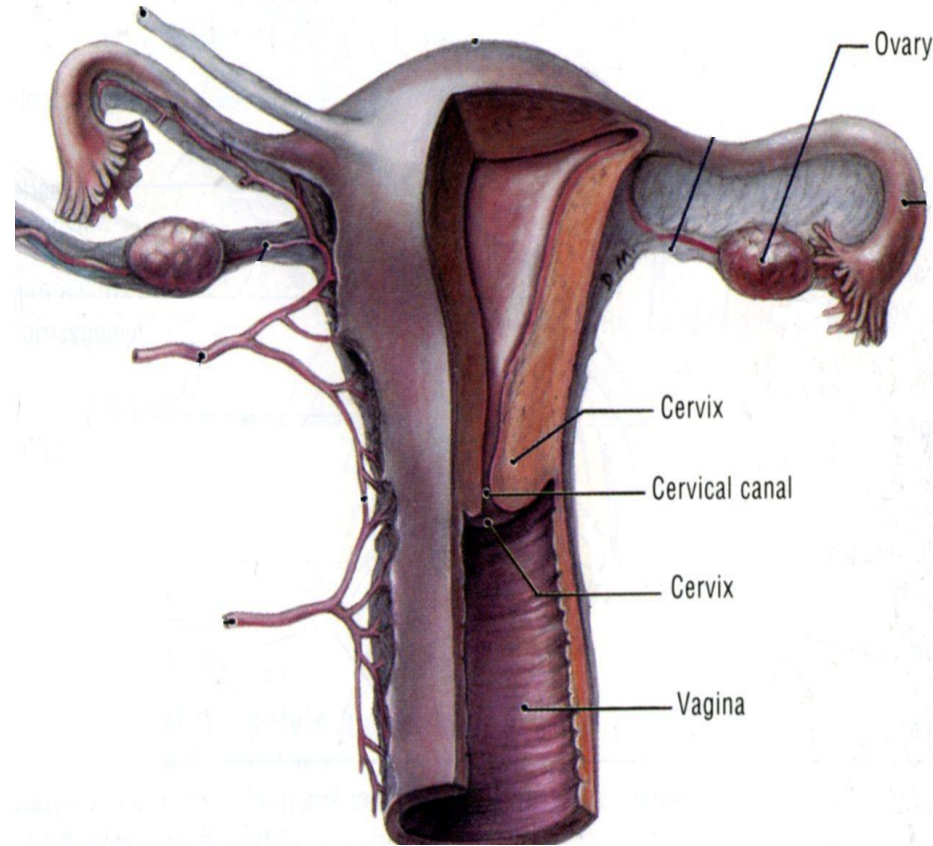






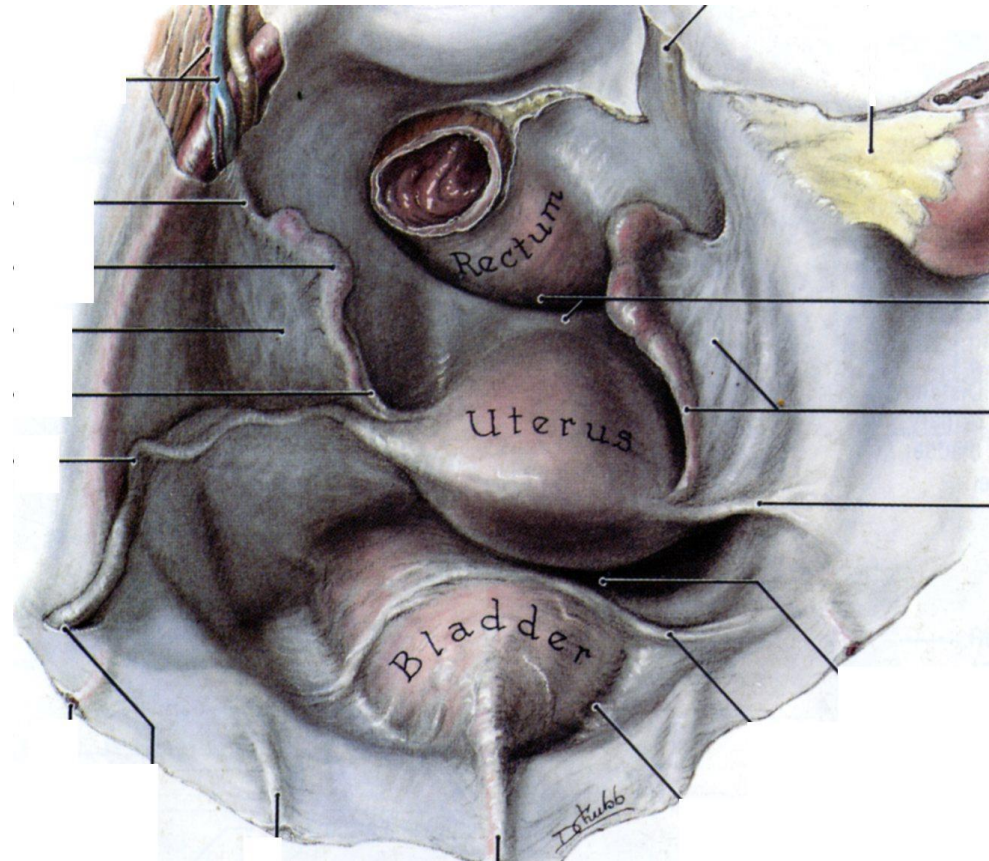
Vagina

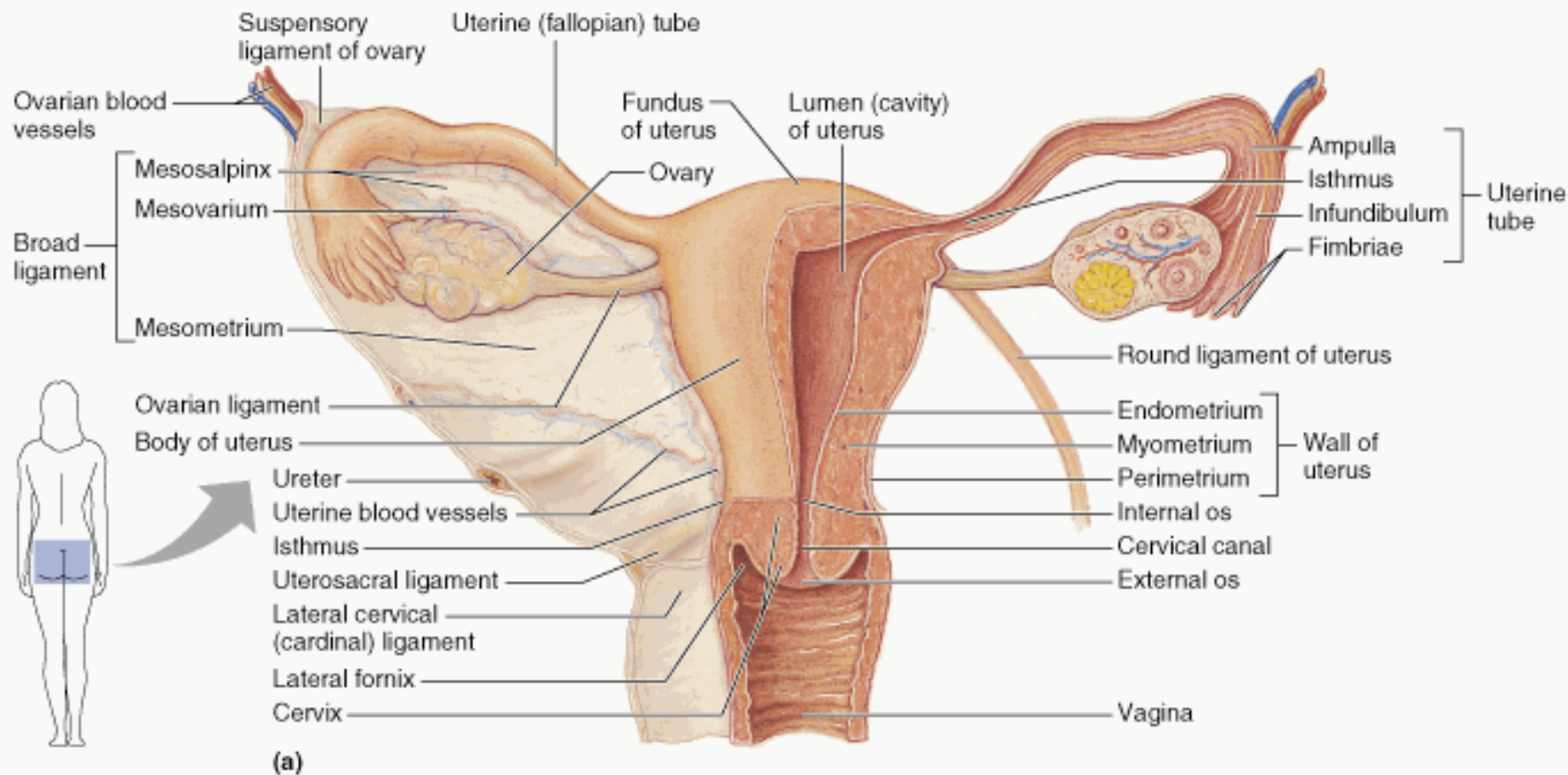
- **Vagina**- a canal of smooth muscle and mucous membrane, 7-11cm long, that extends from the uterus to the external opening in the vulva



The mesometrium (broad ligament) *is the mesentery of the uterus*

- This mesentery connects lateral margins of the uterus with the side wall of the pelvis
- The peritoneum is reflected of the walls of the pelvic cavity to course over the uterus and uterine tubes

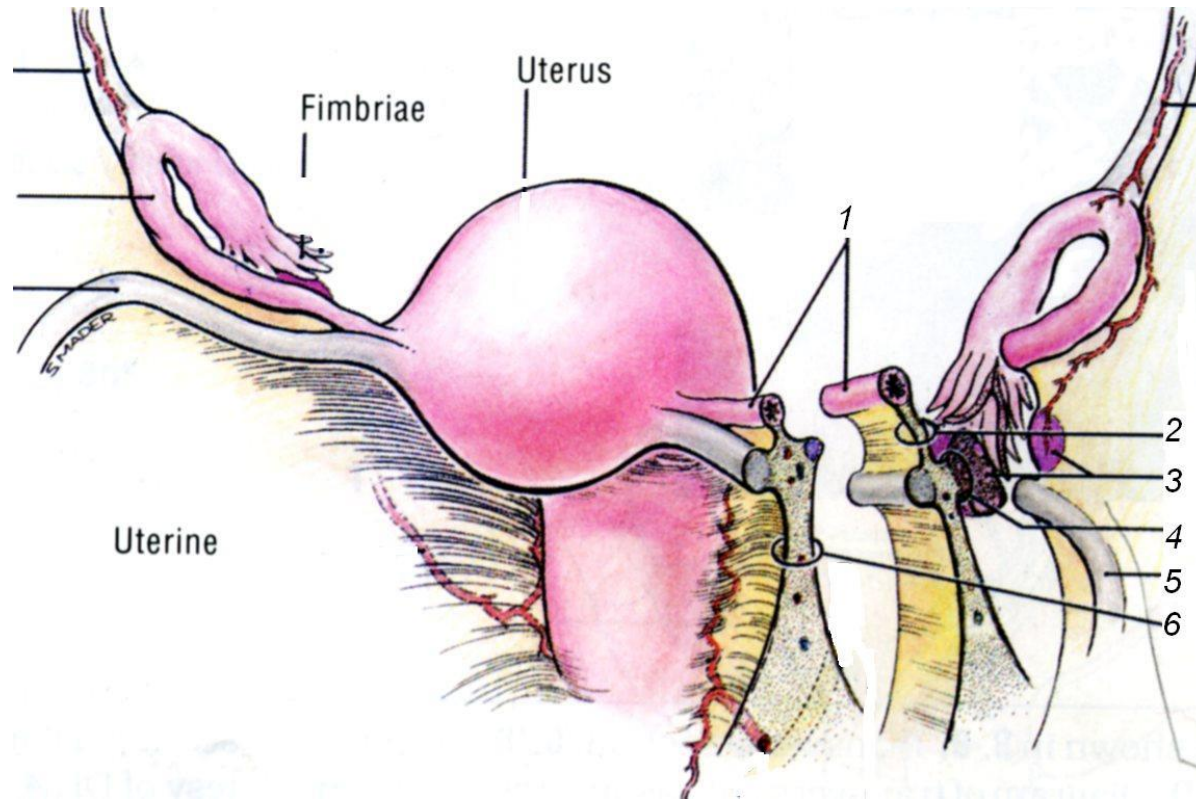




Contents and divisions of the broad ligament:

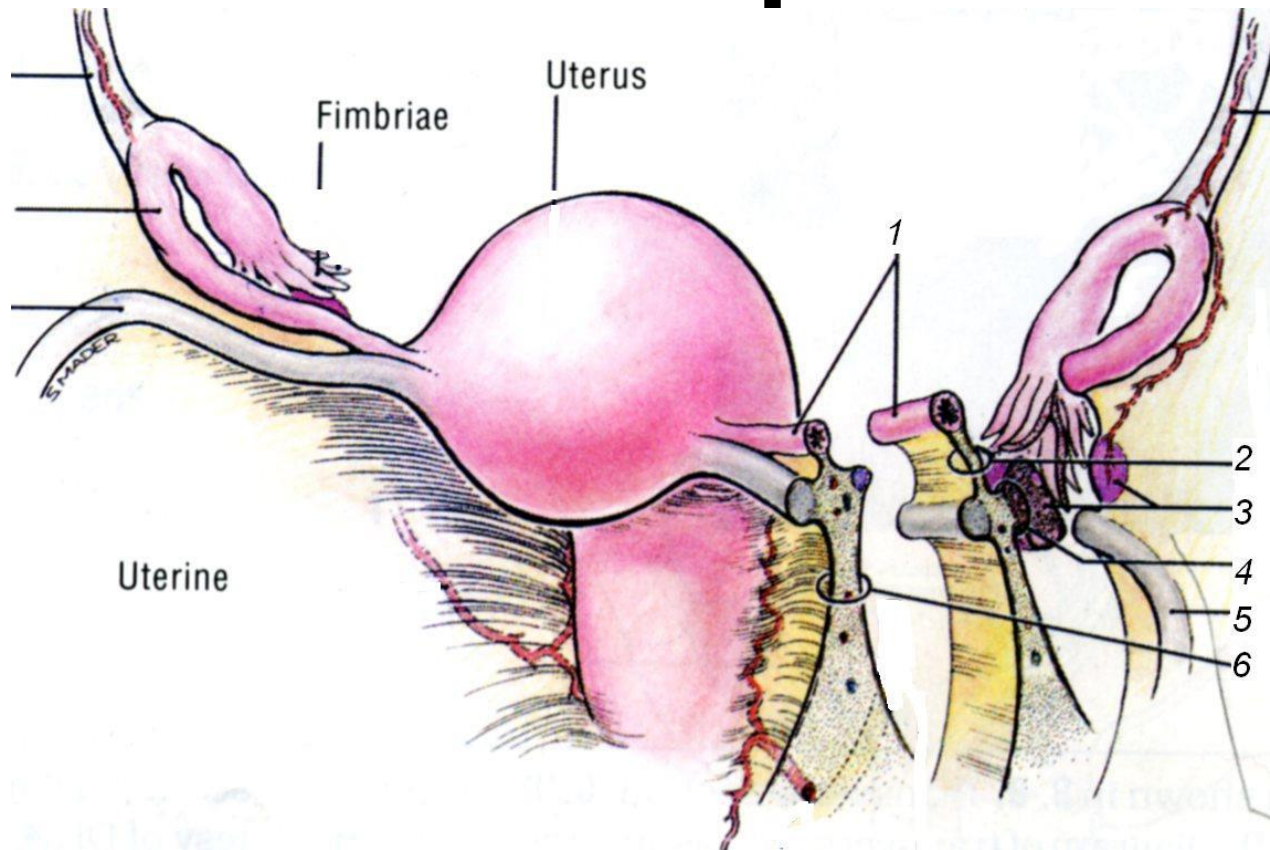
- **Mesovarium (4)**
- **Mesosalpinx (2)**
- **Proper ligament of the ovary**
- **Round ligament of the uterus (5)**

Mesovarium



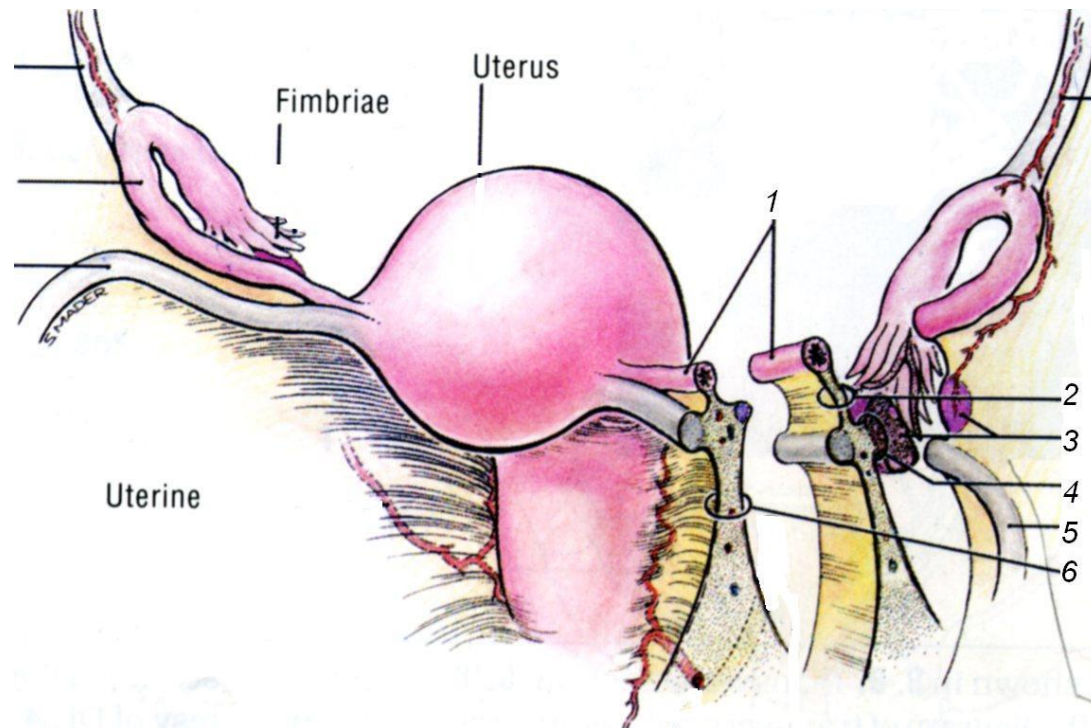
- **Mesovarium** = posterior extension of the broad ligament

Mesosalpinx



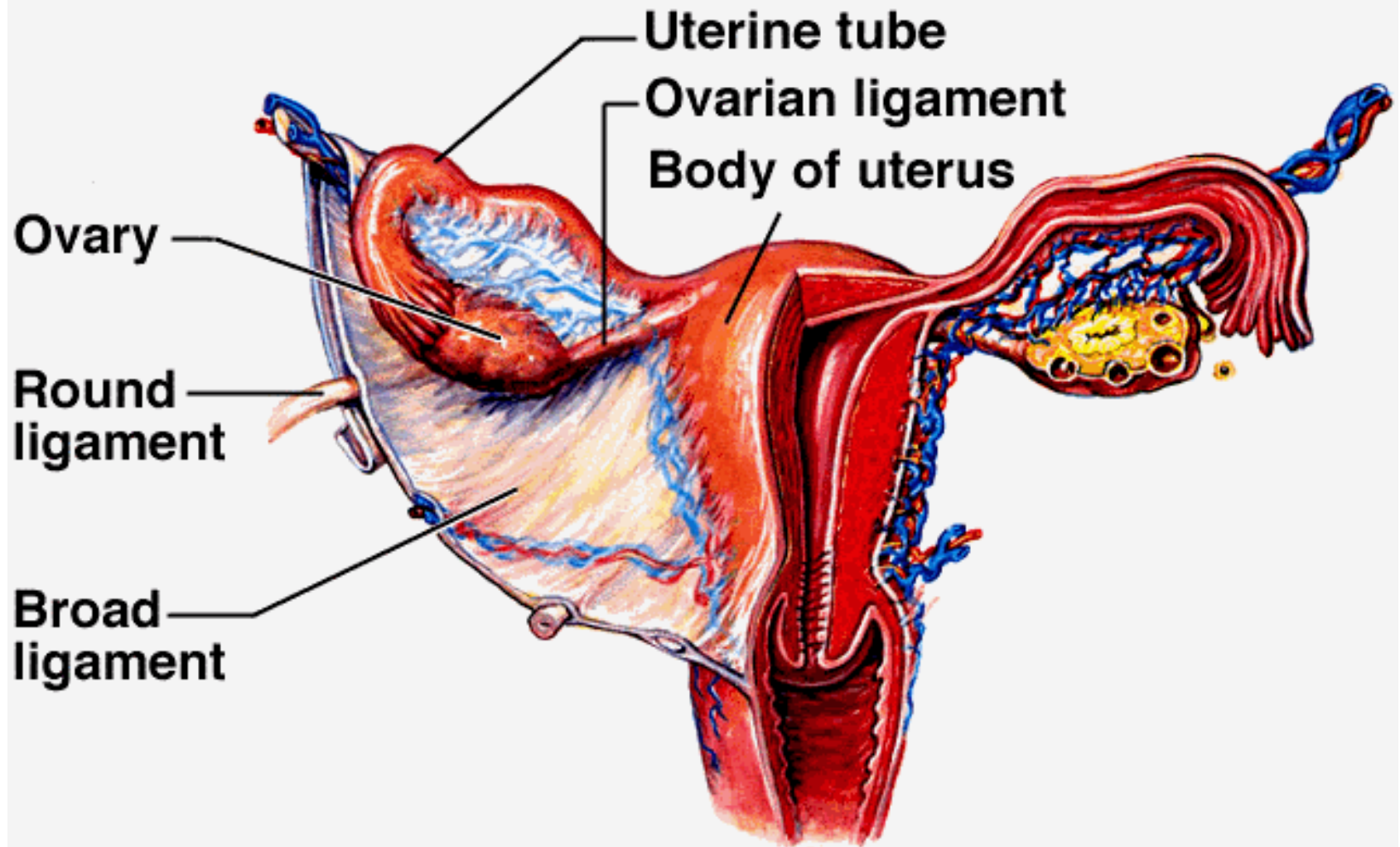
- **Mesosalpinx** = superior limit of the broad ligament

Proper ligament of the ovary

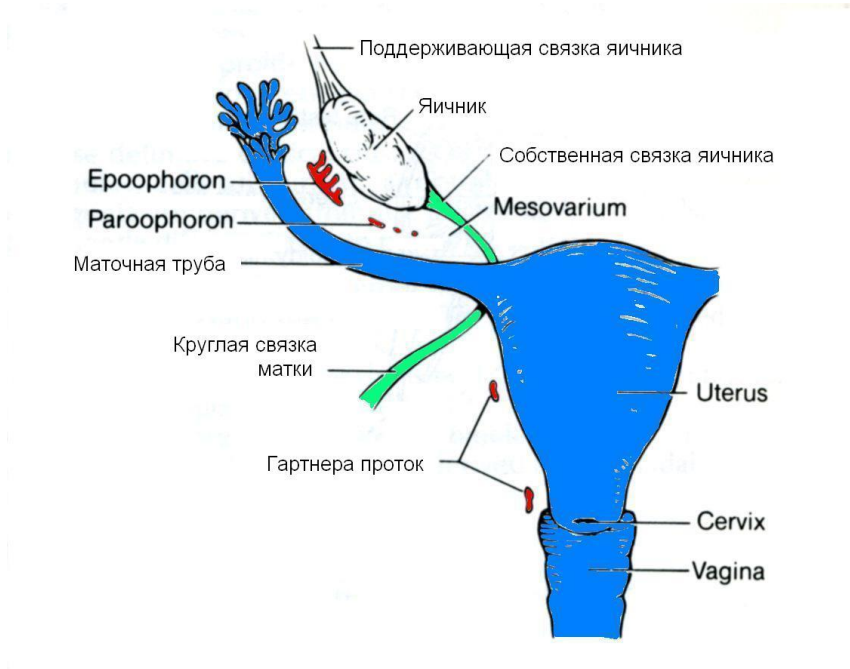


- **Proper ligament of the ovary** runs between the medial pole of the ovary and the uterine cornu

Female Internal Reproductive Organs (1)

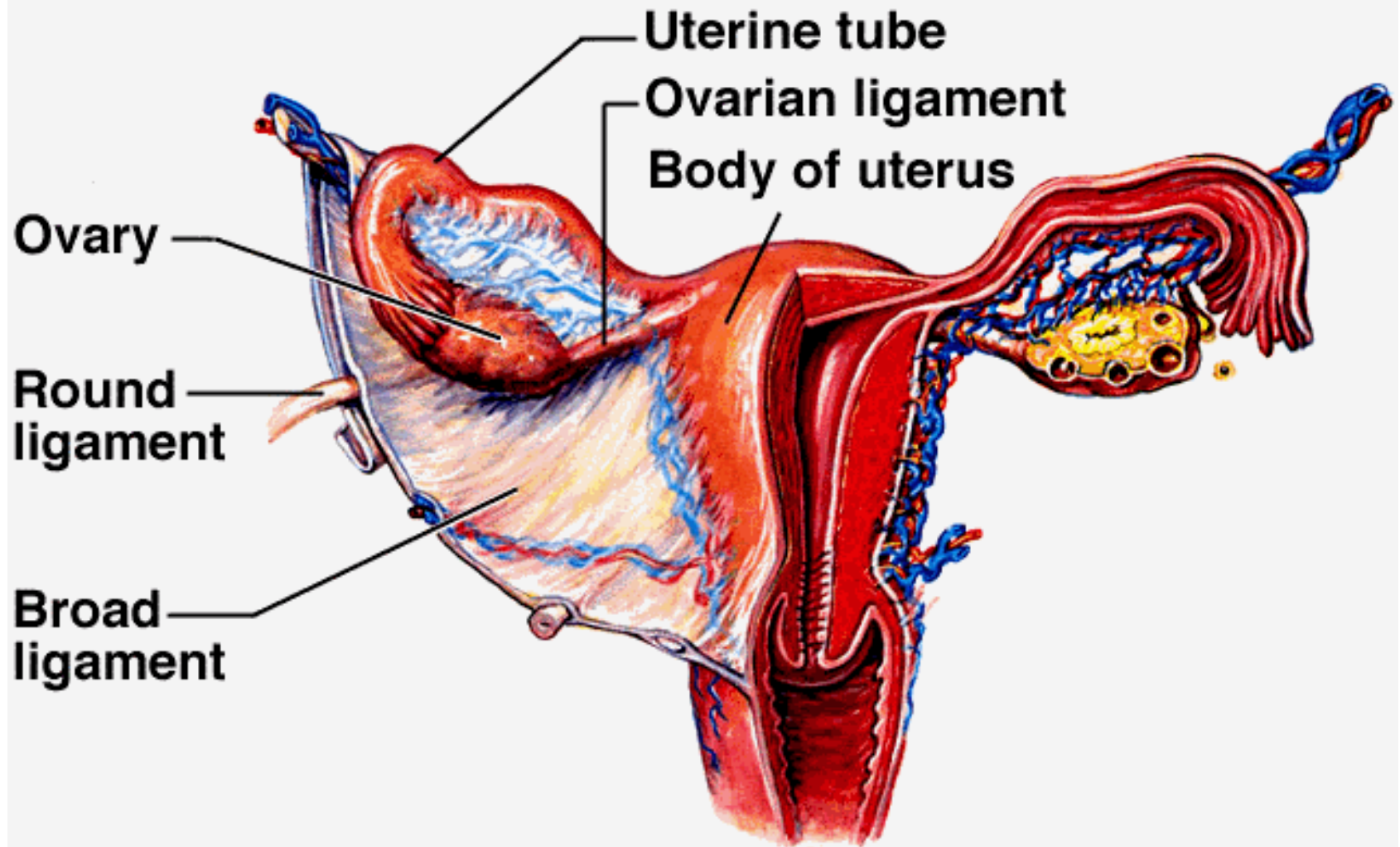


Round ligament of the uterus



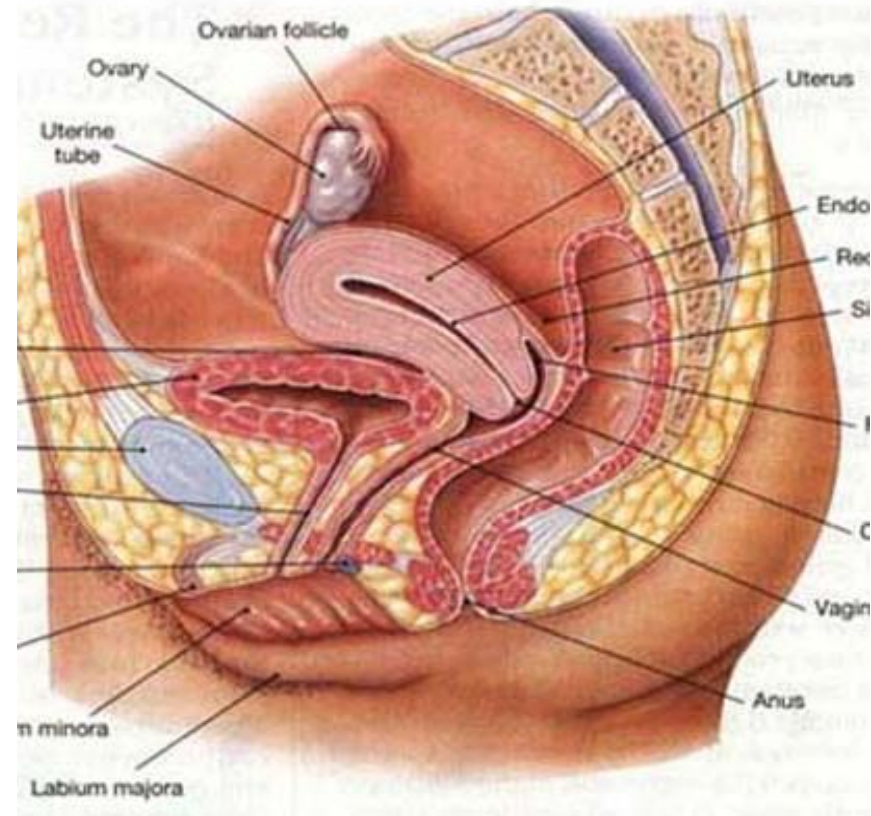
- **Round ligament of the uterus** from the lateral uterine border between the anterior and posterior leaflets of the broad ligament and through the inguinal canal to fuse with the dermis of the labium major

Female Internal Reproductive Organs (1)



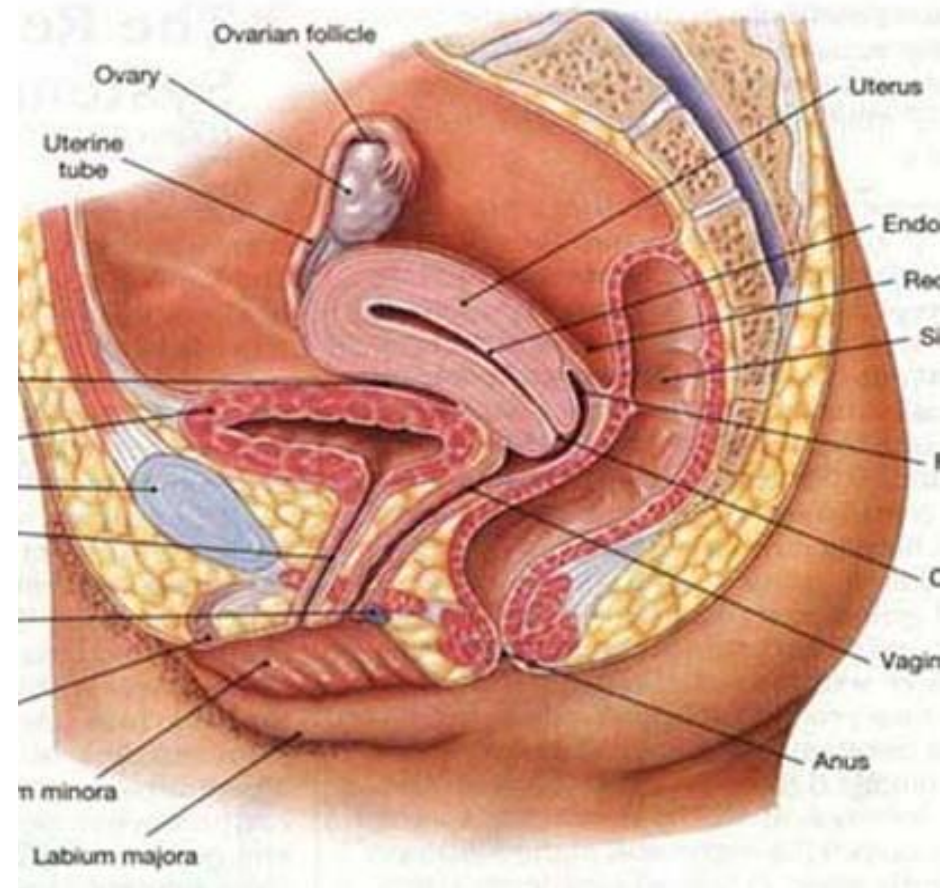
The uterovesical pouch

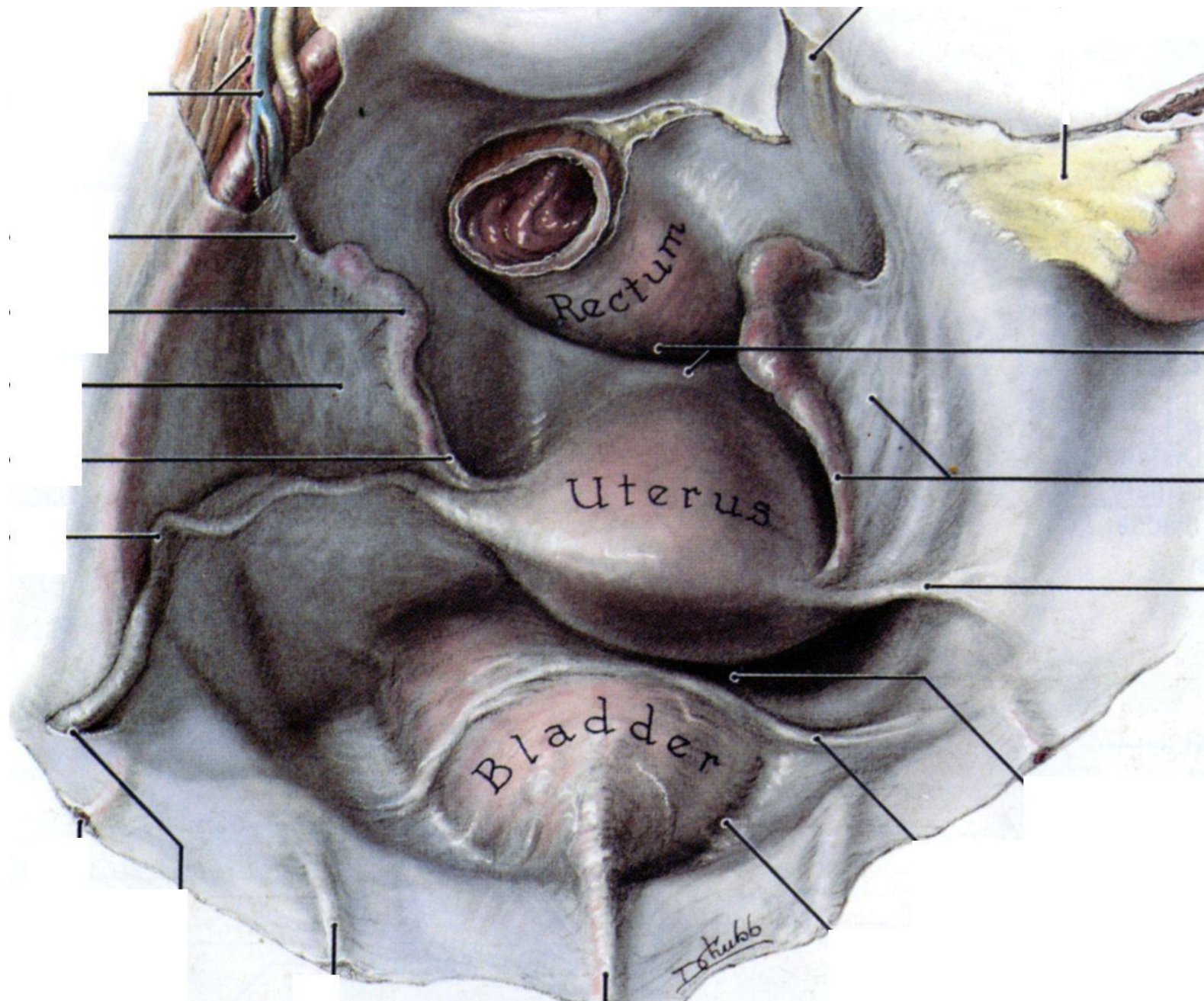
- The **uterovesical pouch** is an extension of the pelvic peritoneal cavity between the uterus & the urinary bladder



The rectouterine pouch (of *Douglas*)

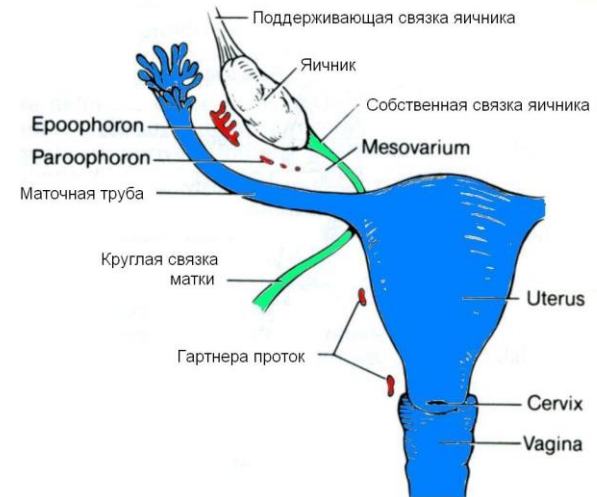
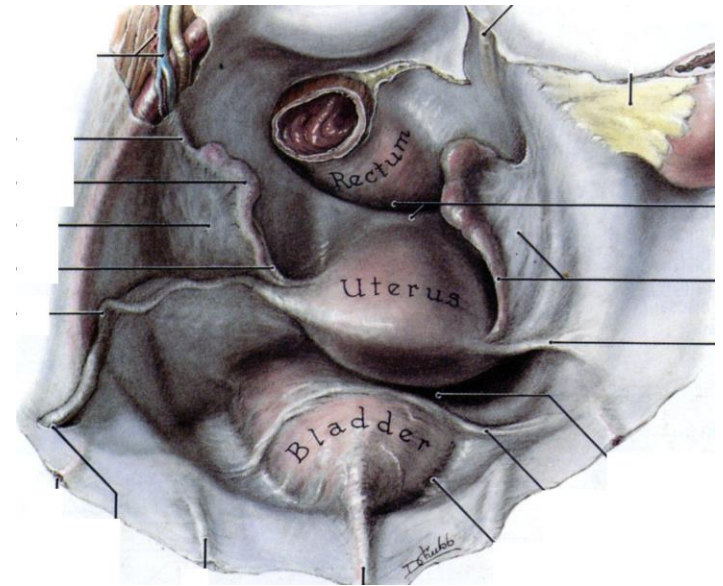
- The **rectouterine pouch (of *Douglas*)** is an extension of the pelvic peritoneal cavity between the uterus & the rectum

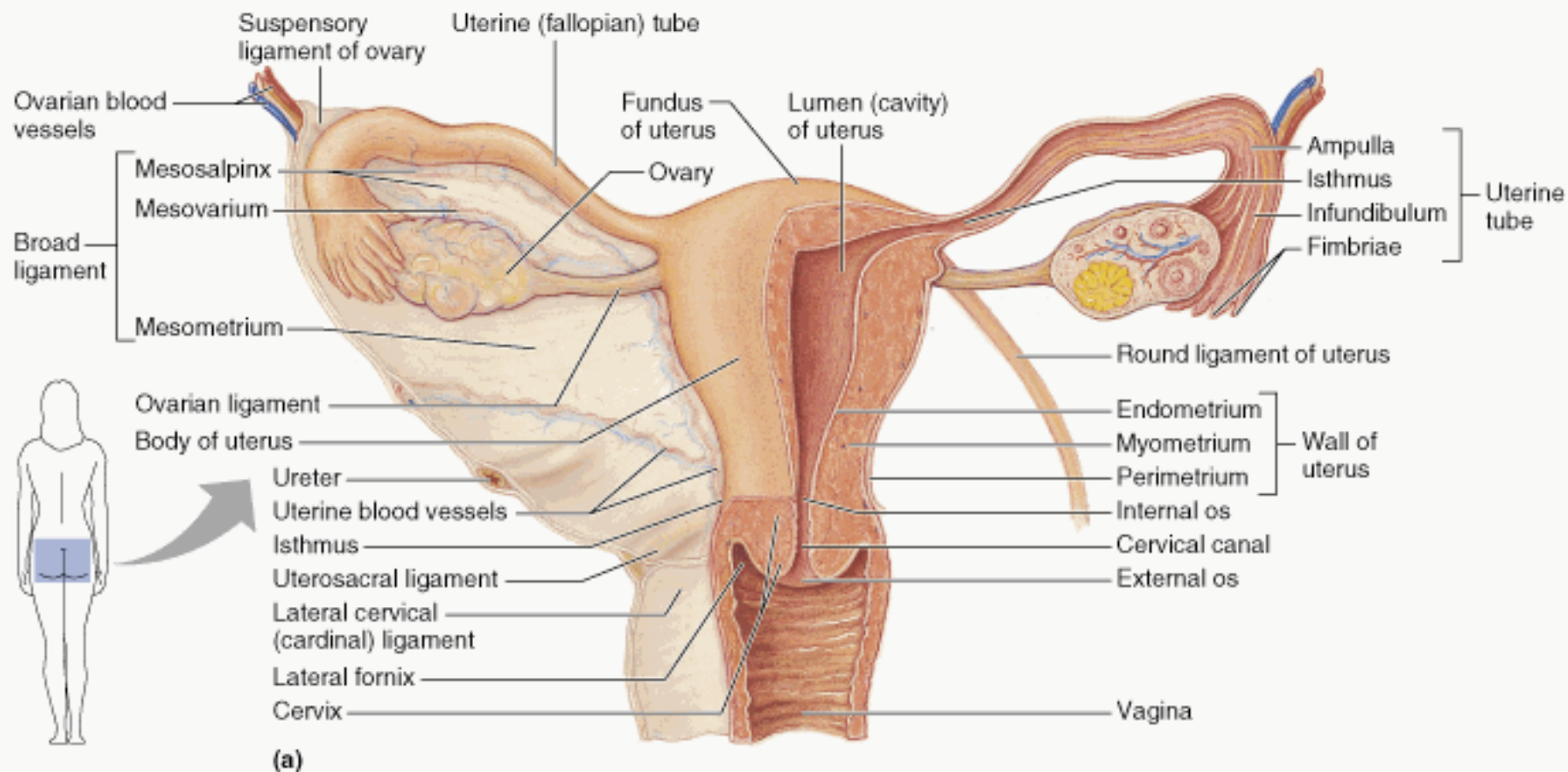




suspensory ligament of the ovary

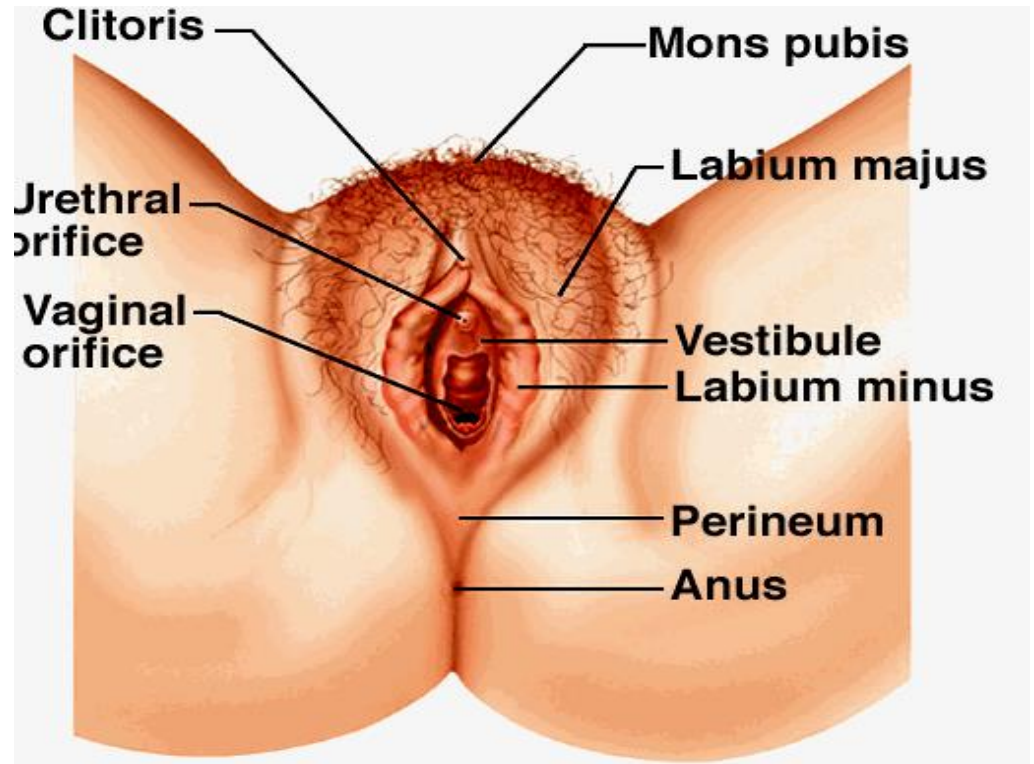
- **suspensory ligament of the ovary** is an elevation of peritoneum between the pelvic brim and mesovarium. Contain ovarian artery & vein.





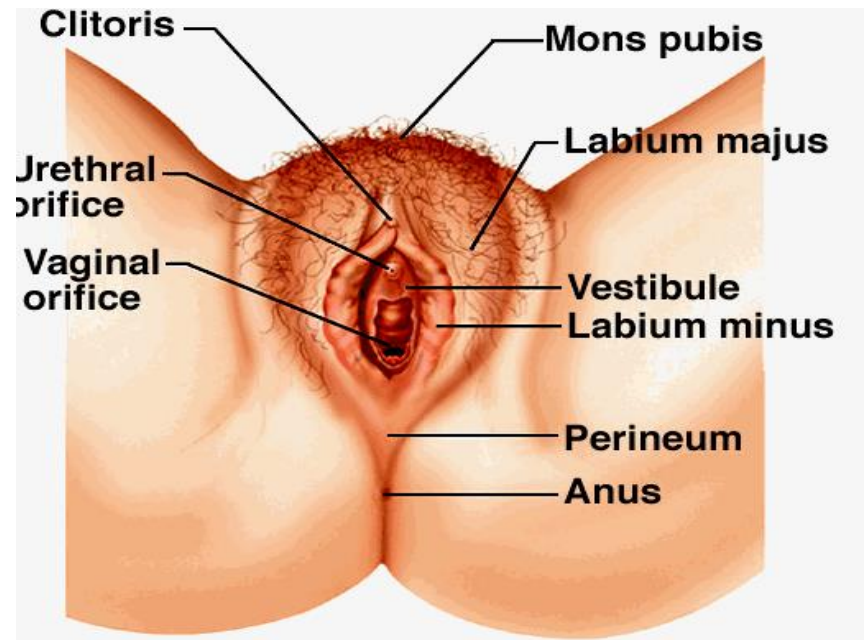
Female external genitalia = vulva

- **Labia Majora**
- **Labia Minora**
- **Clitoris.**



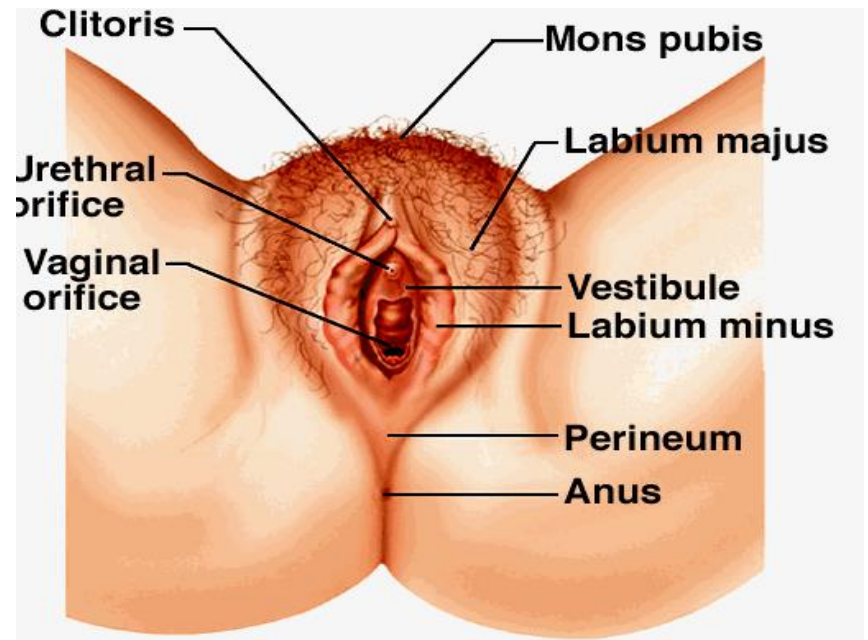
Labia Majora

- **Labia Majora** = folds of skin that cover fat and smooth muscle. Protect the urinary opening and the entrans to the vagina



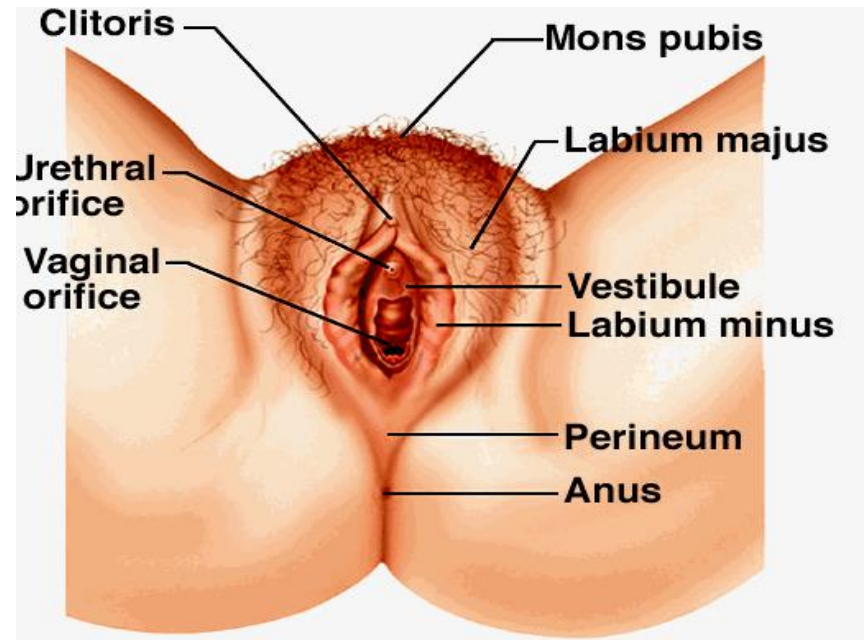
Labia Minora

- **Labia Minora** = folds of skin, rich in small blood vessels, that meet above the clitoris and provide mechanical protection for the clitoris



Clitoris.

- The visible part = **glans clitoris**. The penis and the clitoris are derived embryologically from the same tissue. Contains a dense supply of nerve endings, which make it highly sensitive to touch, pressure and temperature.

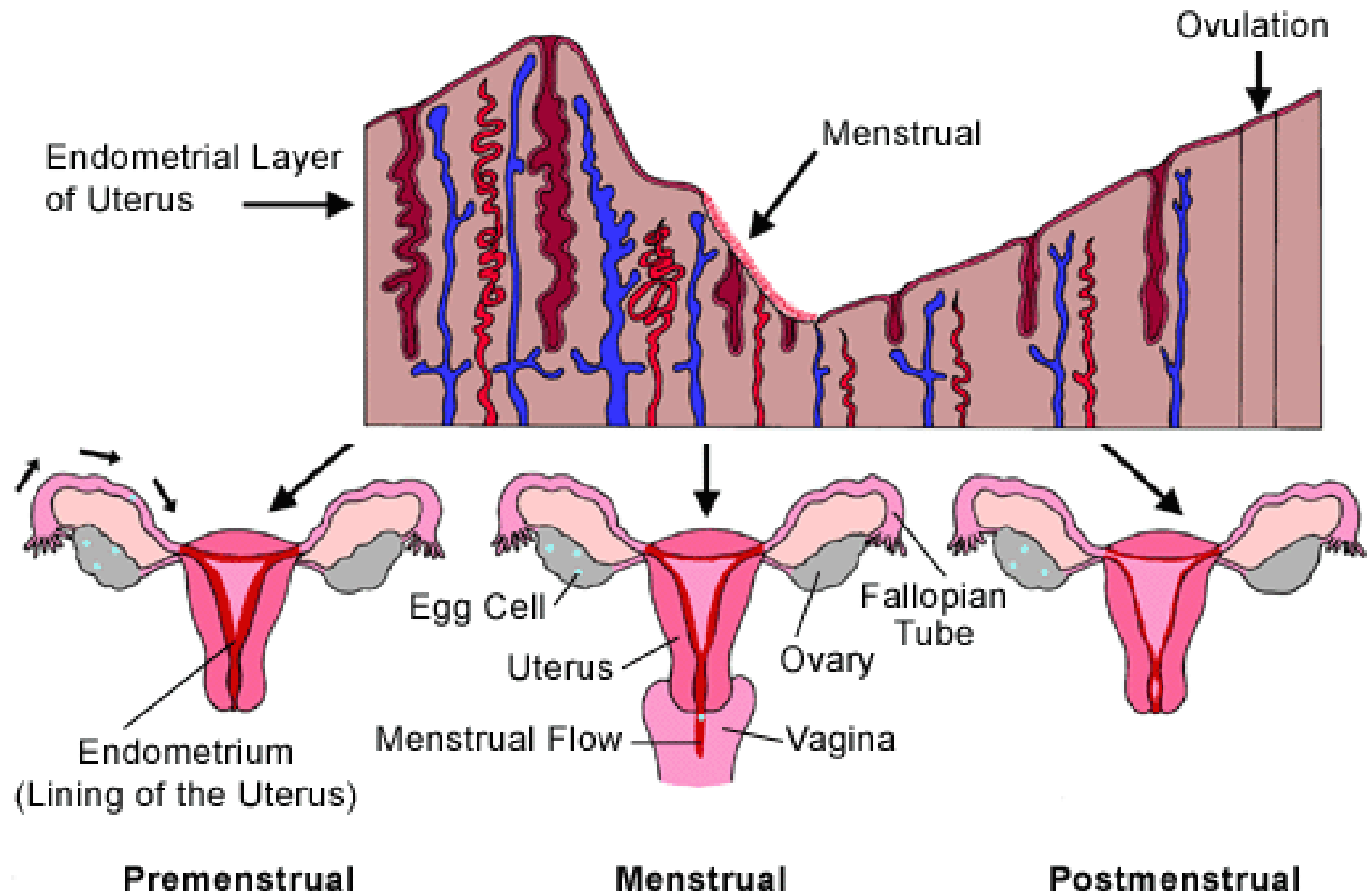


Female Reproductive Life:

- There are 2 reproductive cycles taking place simultaneously:
- **Menstrual Cycle in Uterus**
- **Ovulatory Cycle in Ovary**

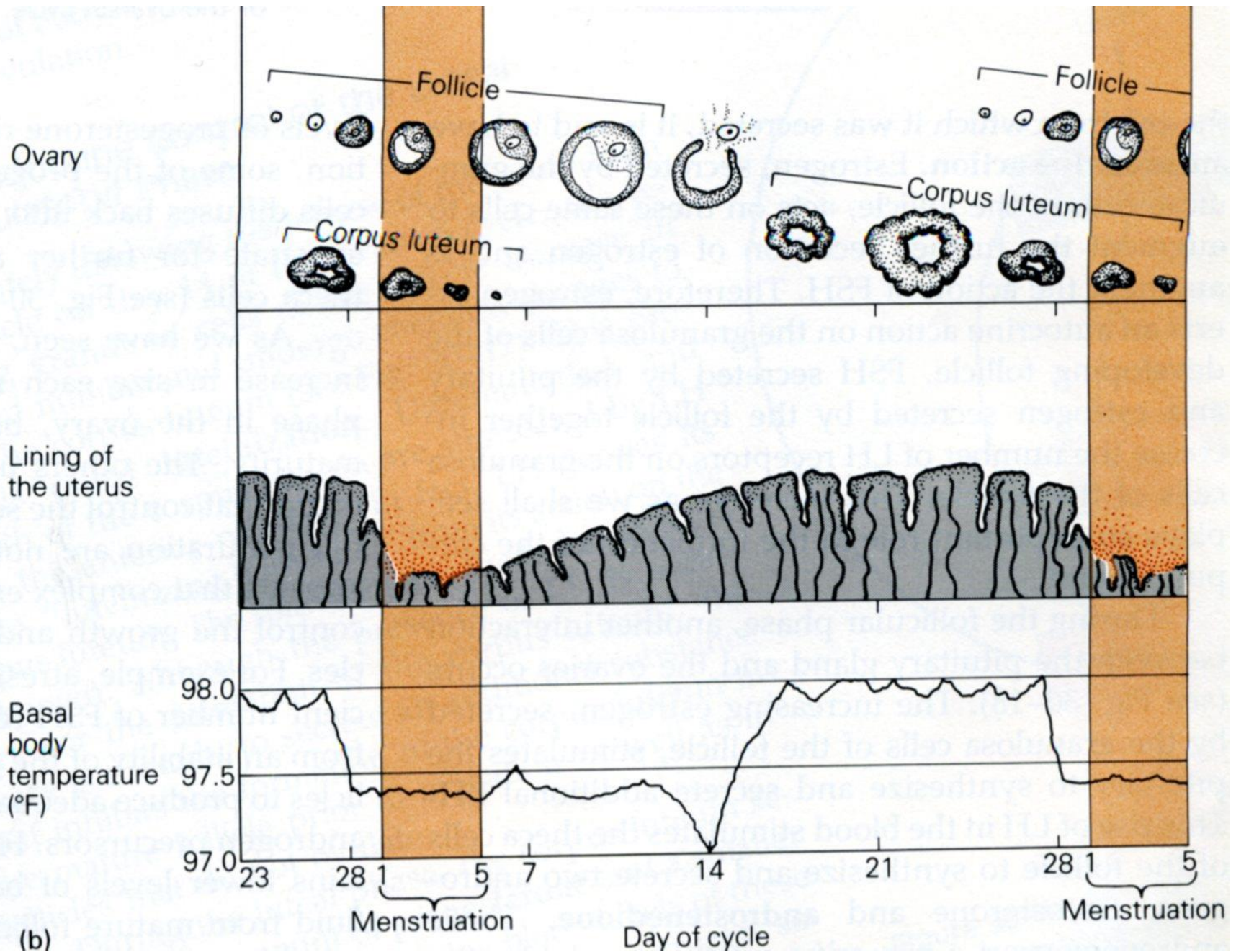
- **Menstrual Cycle in Uterus-** growth of the uterine endometrium to maintain a fertilized ovum and shedding of endometrium if fertilisation does not occur
- The endometrium undergoes cyclic changes controlled by the ovarian hormones **estrogen** and **progesterone**
- Ovarian hormone production is in turn controlled by the pituitary hormones **FSH & LH** and is related to follicle growth, to ovulation, and to the formation and degeneration corpus luteum.

Menstrual Cycle



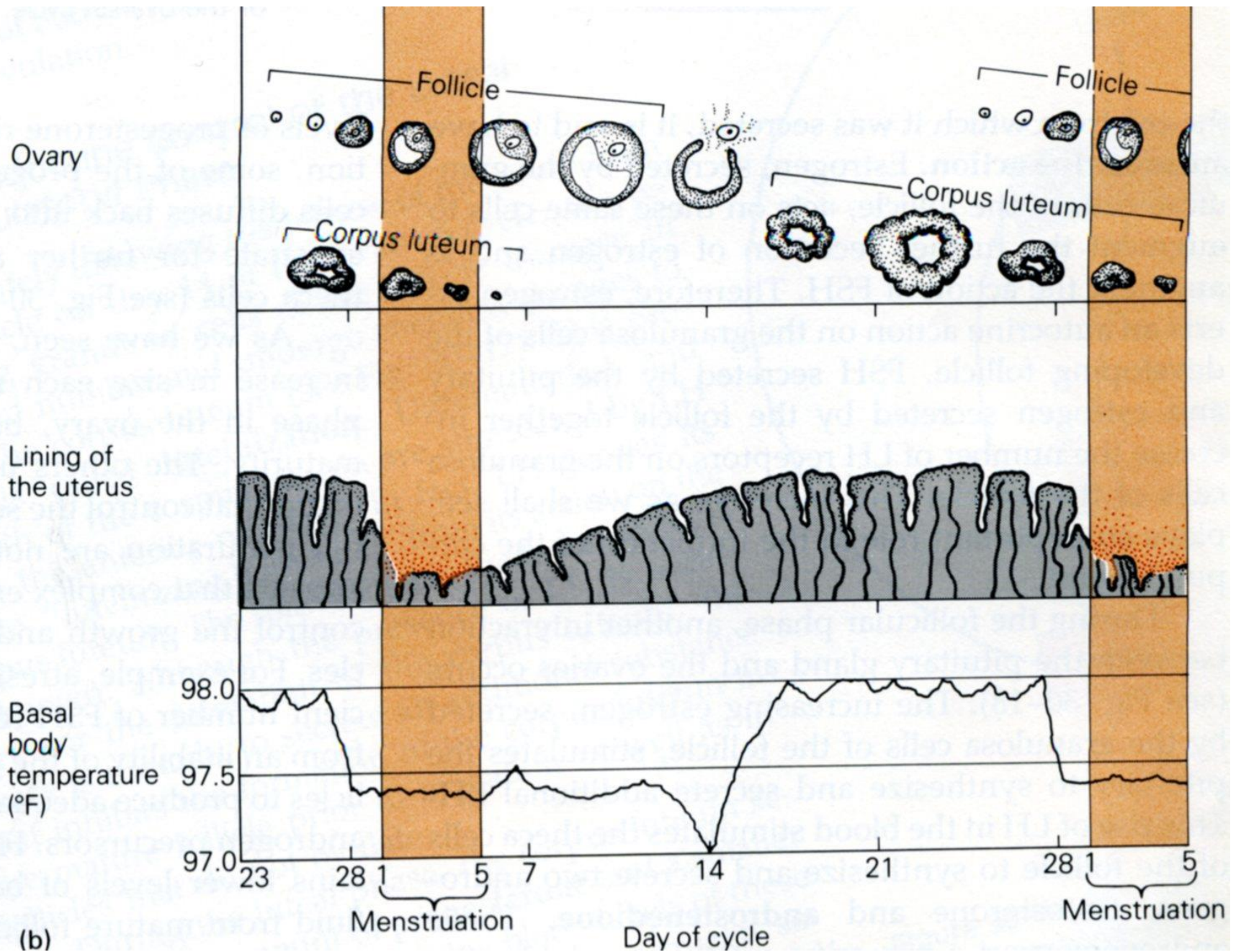
The menstrual cycle is divided into 3 phases:

- **Menstrual phase** (bleeding) 1-5th days of the cycle
- **Proliferative phase** (follicular phase - estrogen↑) Days 4-6 to day 14 of the cycle
- **Secretory phase** (luteal phase – progesterone ↑) Days 14 –28 of the cycle



Ovulatory Cycle in Ovary

- **Ovulatory Cycle in Ovary-** development of the Graafian follicle, ovulation and formation of the Corpus Luteum



PREGNANCY:

- Involves
- the transport of the sperm and egg,
- fertilisation,
- development of the Zygote into a Blastocyst,
- implantation into endometrium,
- development of the placenta,
- development of the foetus,
- parturition or birth at the end of 9 months.

- 24-30 hours after fertilization: male and female genetic material combines to form a zygote

