

NEET Biology

Tamil Lecture Series

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Academician and Researcher



Human Reproduction

஡னித இனப்பெருக்கம்



Female Reproductive System

பெண் இனப்பெருக்க மண்டலம்



Female Reproductive System

பெண் இனப்பெருக்க மண்டலம்

- The female reproductive system is far **more complex than the male**
- In addition to gamete formation, it has to nurture the developing foetus.

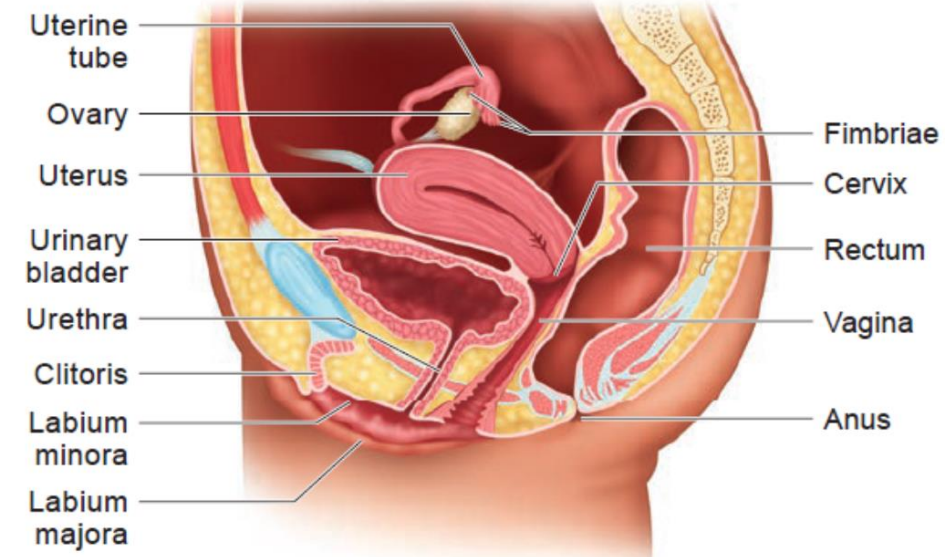
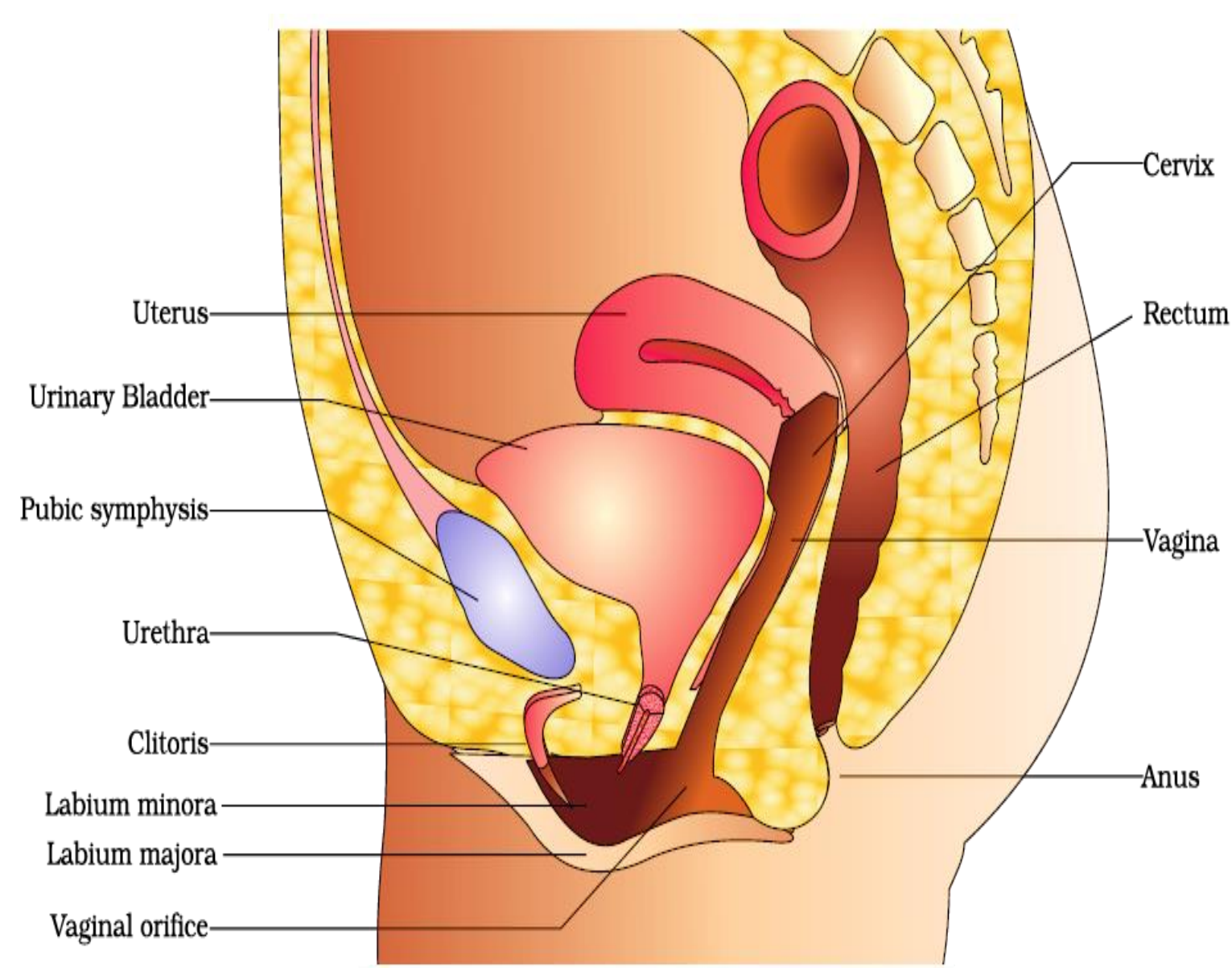


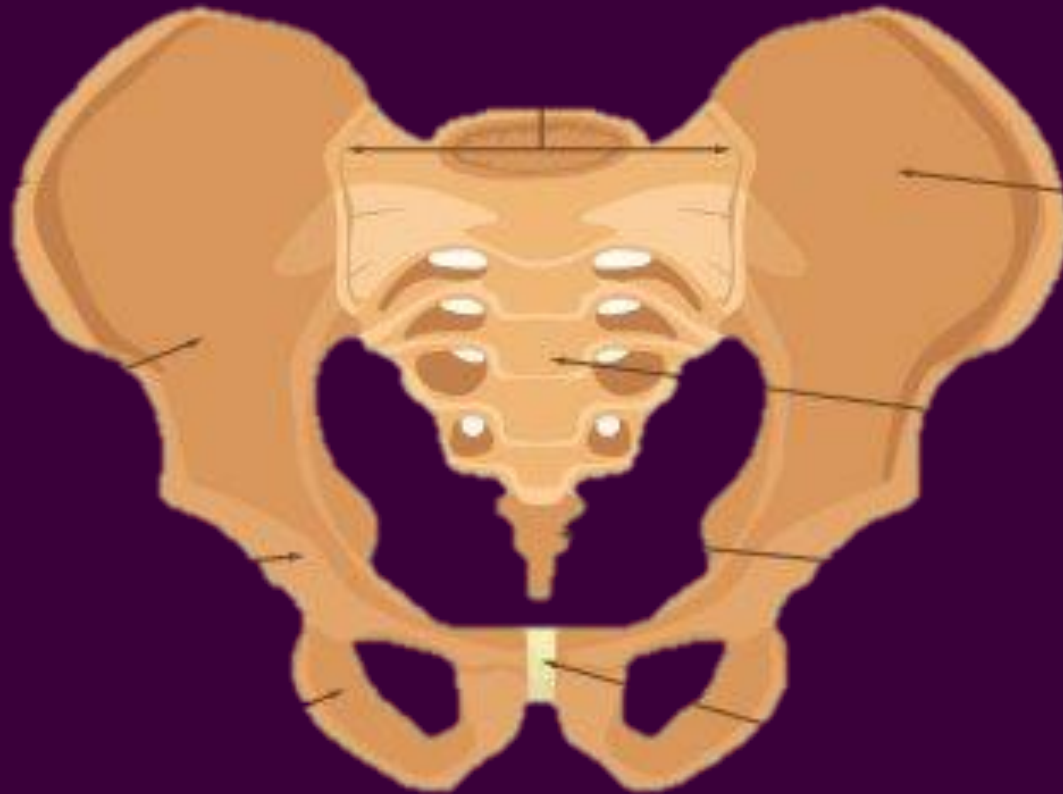
The female reproductive system consists of

- ✓ pair of ovaries (ஓரிணை அண்டகங்கள்)
- ✓ pair of oviducts/fallopian tubes (ஓரிணை அண்ட நாளங்கள்)
- ✓ Uterus (கருப்பை)
- ✓ vagina (கலவிக் கால்வாய்)
- ✓ cervix (கருப்பை வாய்)
- ✓ external genitalia (புற இனப்பெருக்க உறுப்புகள்)
- ✓ Pair of mammary glands (பால் சுரப்பிகள்) -
to support ovulation,
fertilisation, pregnancy, birth and child care.

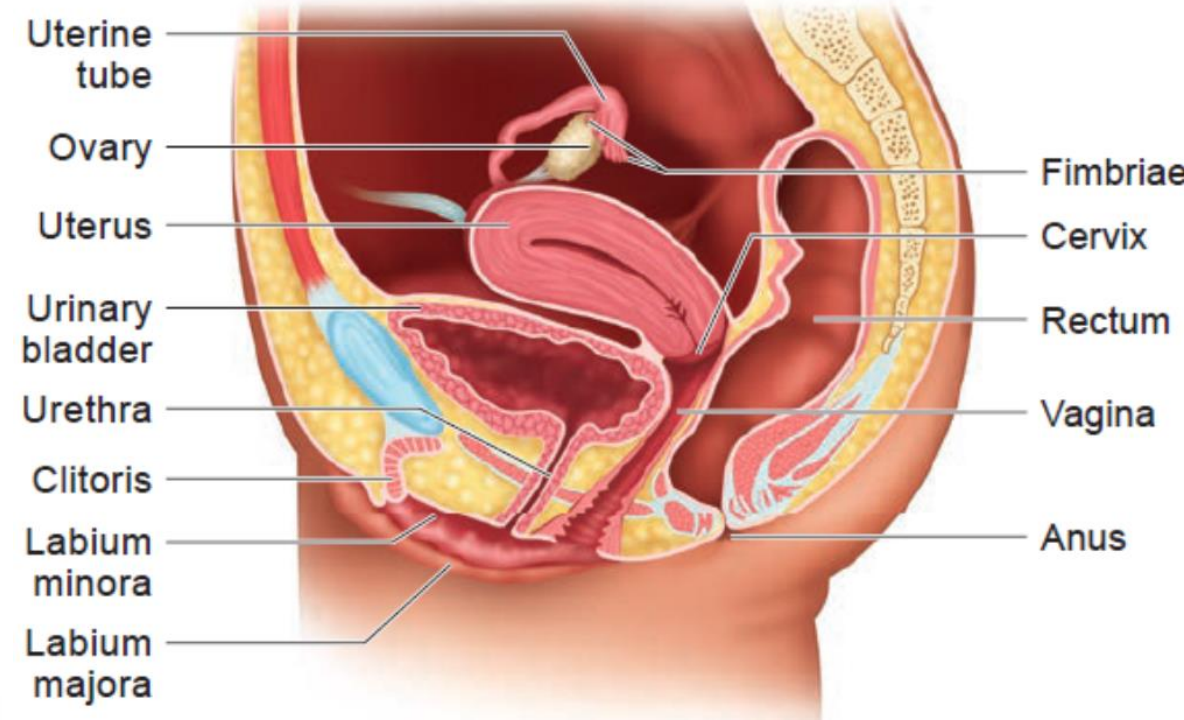
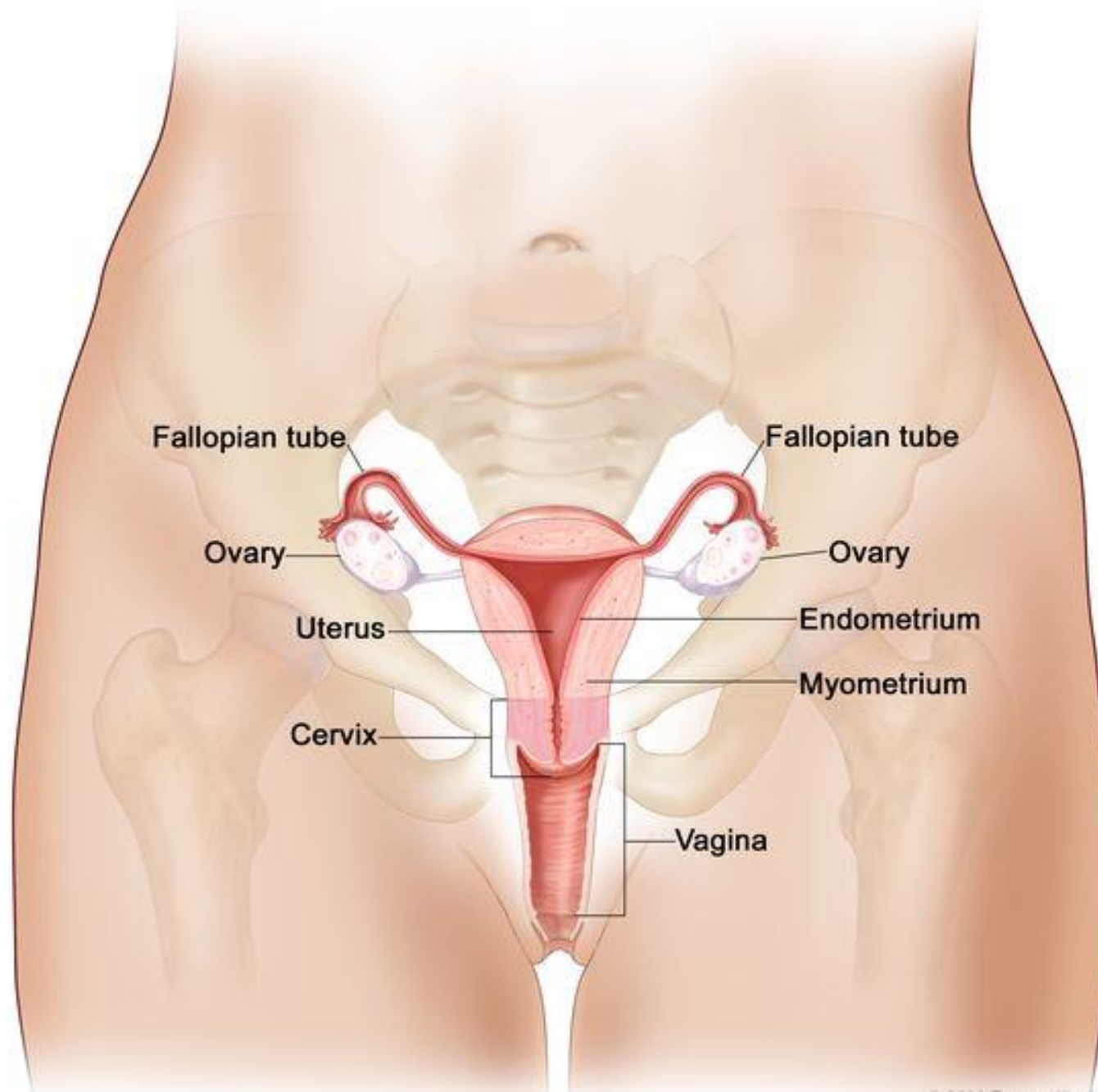


Female Reproductive System





Female Reproductive System

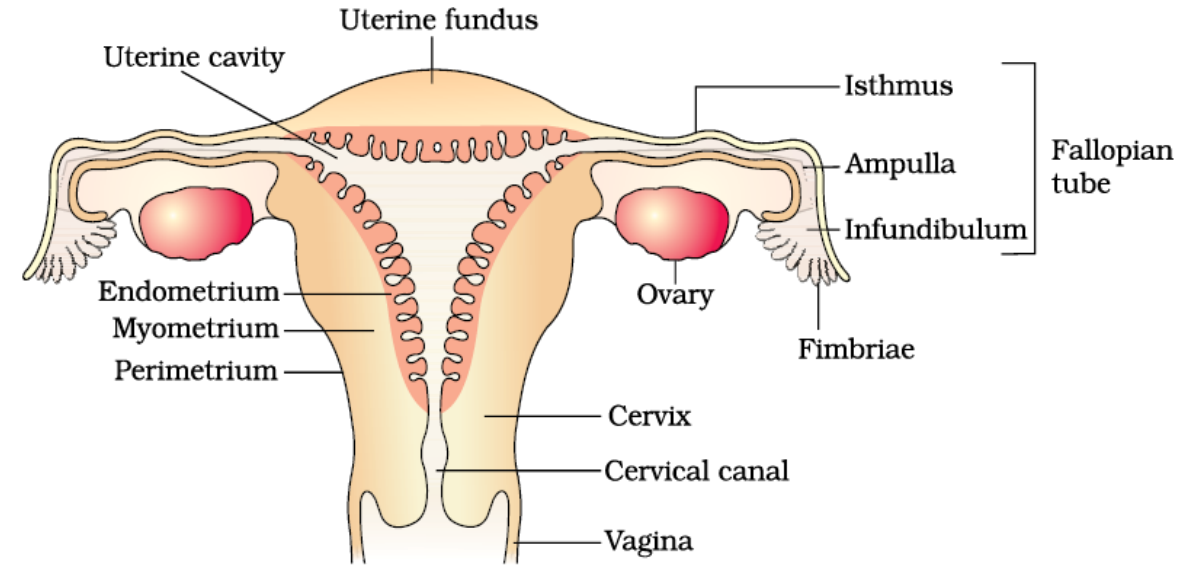


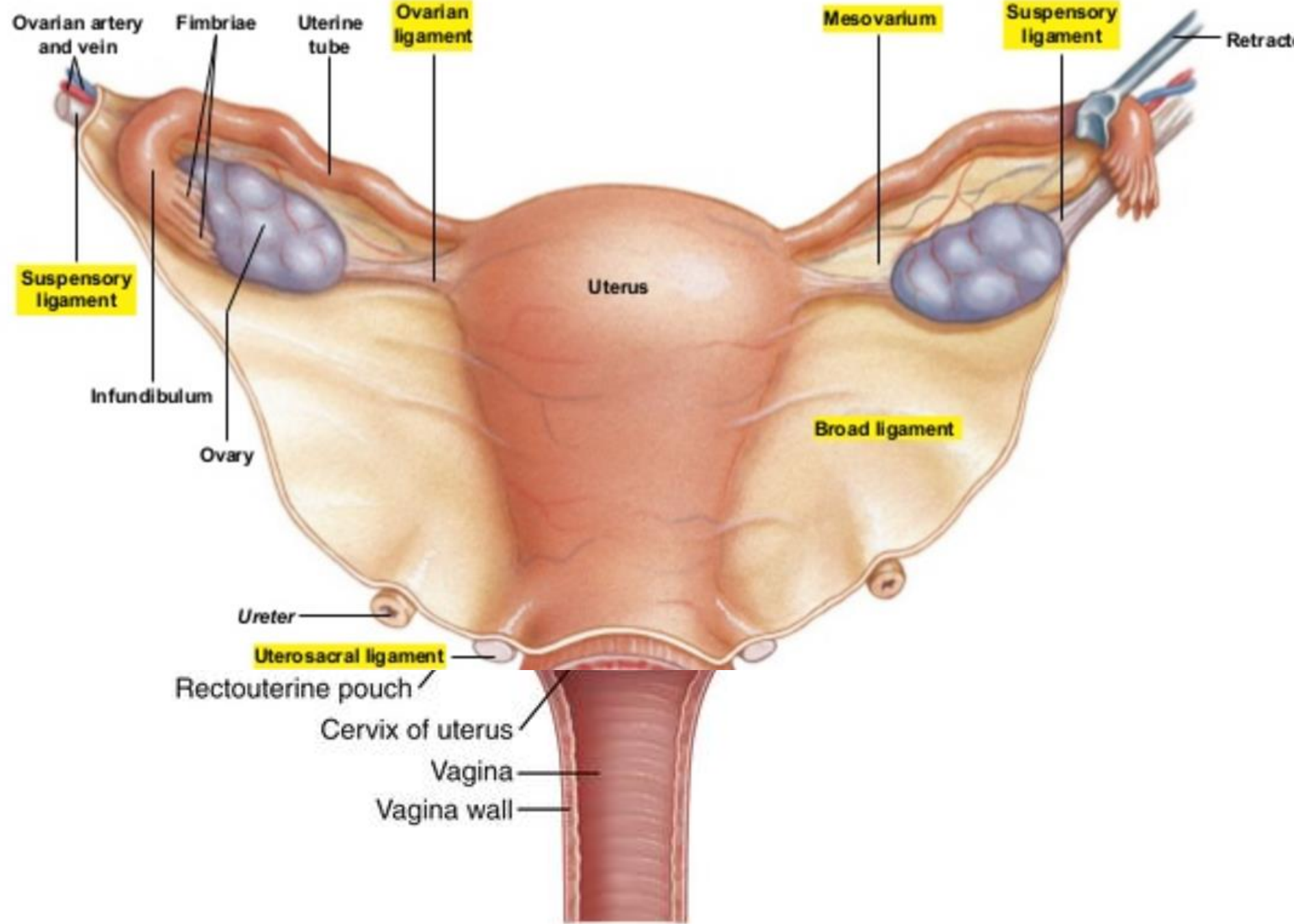
1.Ovaries (ஓரிணை அண்டகங்கள்)



1.Ovaries

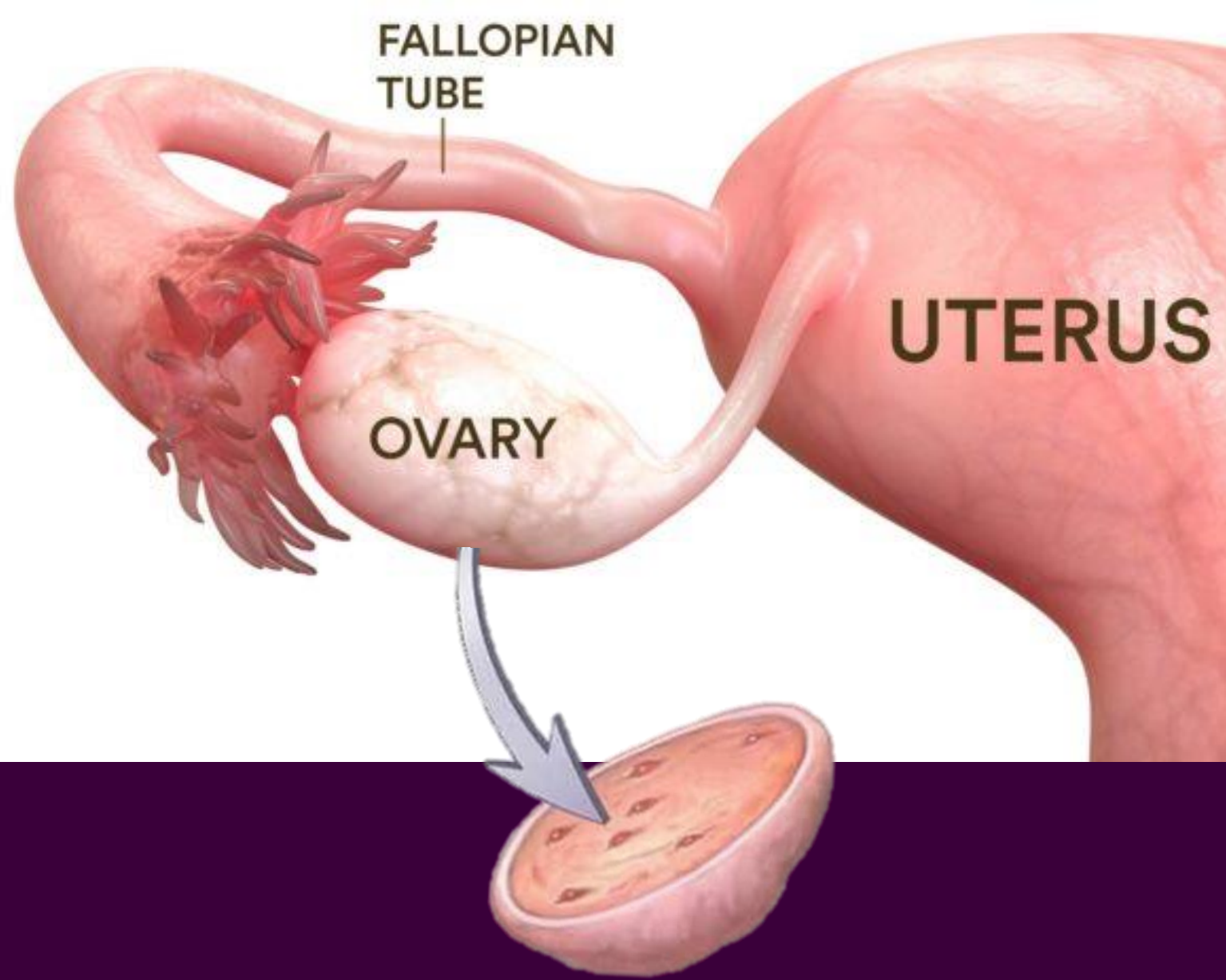
- **Primary** female sex organs
- ✓ Produce female **gamete (ovum)**
(அண்ட செல்)
- Secrete several steroid/ ovarian hormones (**Endocrine gland**)
- Plays a major role in menstrual cycle & fertility
- Located one on each side of the lower abdomen
- 2 to 4 cm in length
- Connected to the pelvic wall (இடுப்புச் சுவர்) and uterus (கருப்பை) by ligaments.

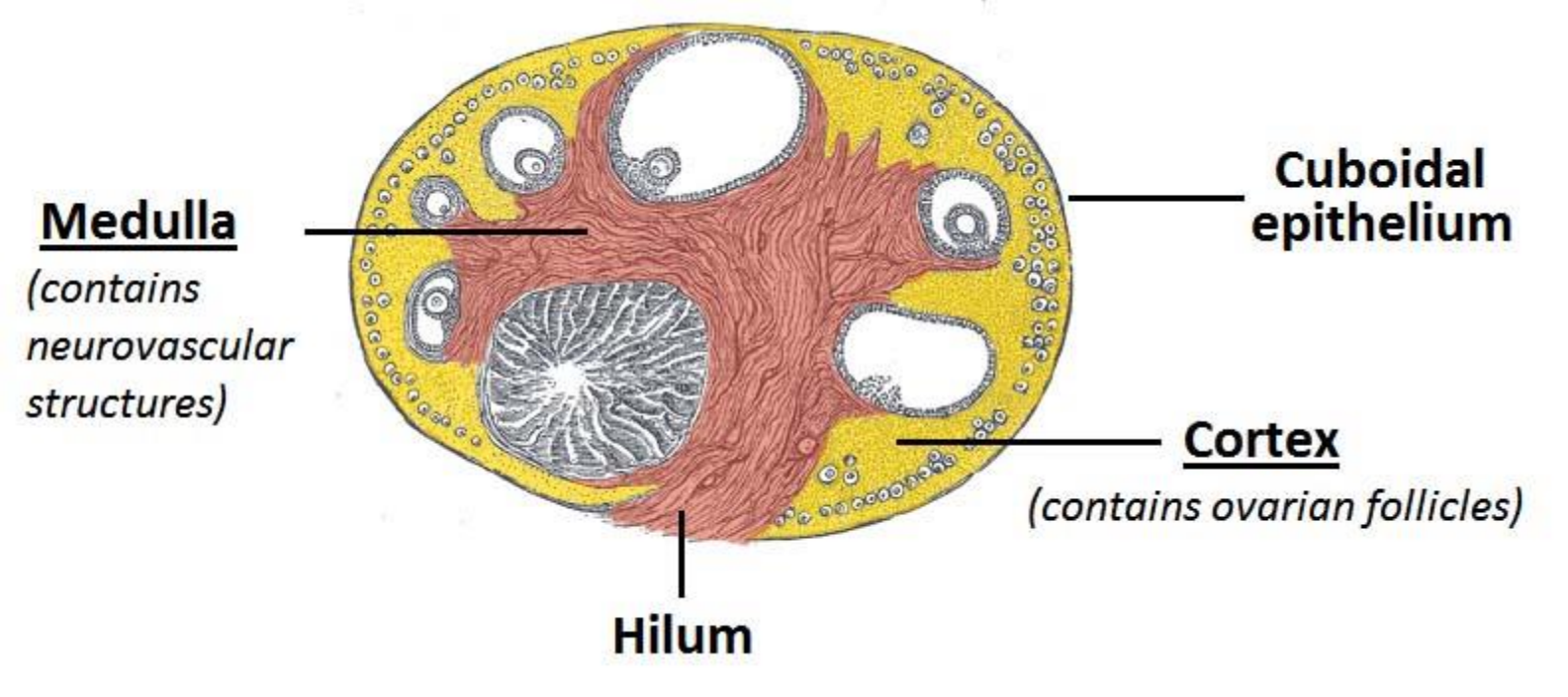




Uterus and broad ligament (posterior view)

- **Ovarian ligament/** Utero ovarian ligament connects uterus and ovary
- **Broad ligament** - wide fold of peritoneum that connects the sides of the uterus to the walls and floor of the pelvis.





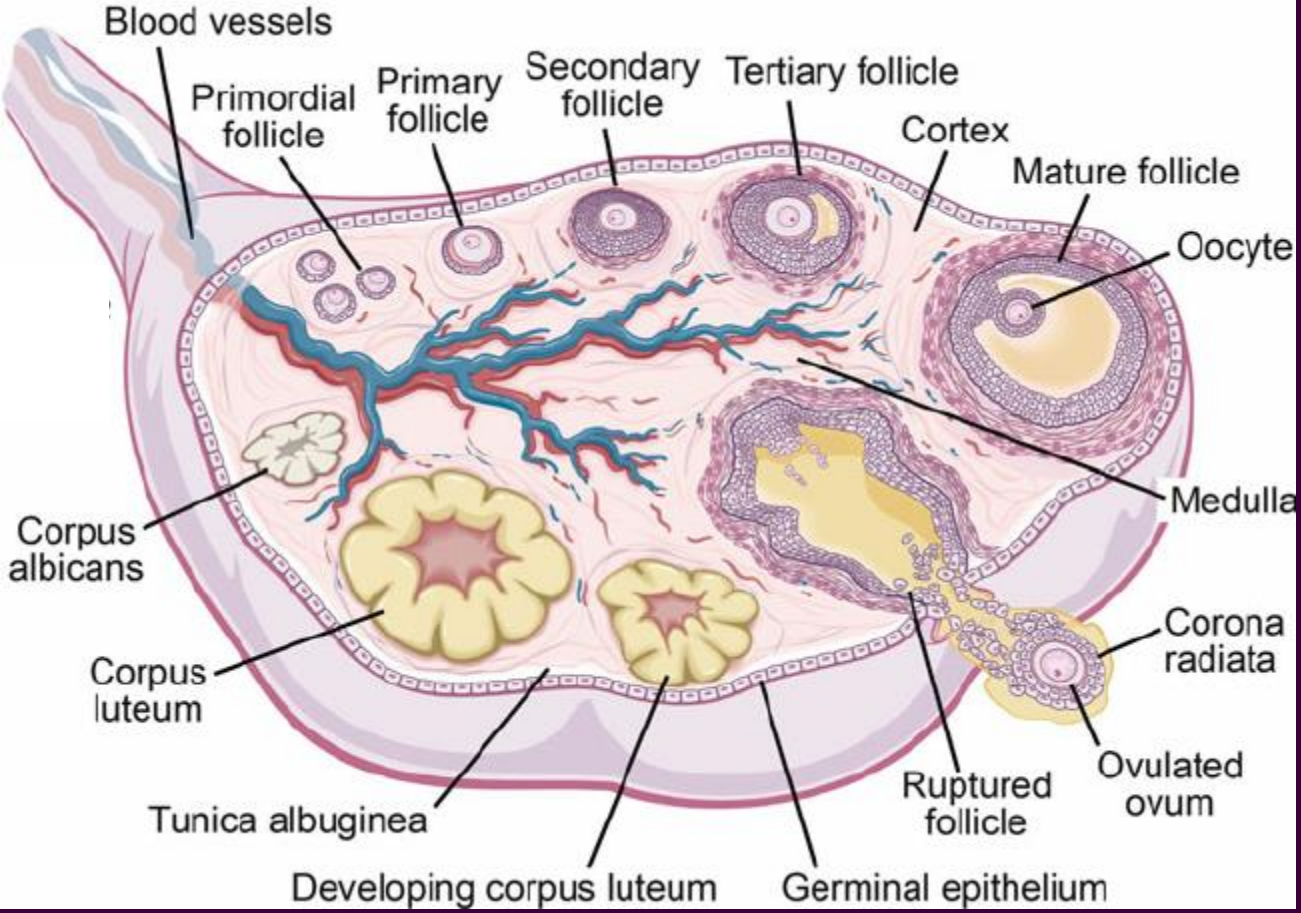
Each ovary is covered by a thin epithelium (**germinal epithelium**) which encloses ovarian stroma.

Stroma is divided into 2 zones:

(அண்டக இழைய வலை)

- peripheral cortex
- inner medulla

- Cortex consists of cellular connective tissue
 - Cortex is dense and granular
- Medulla is a loose connective tissues
 - with abundant blood vessels, lymphatic vessels and nerve fibres.



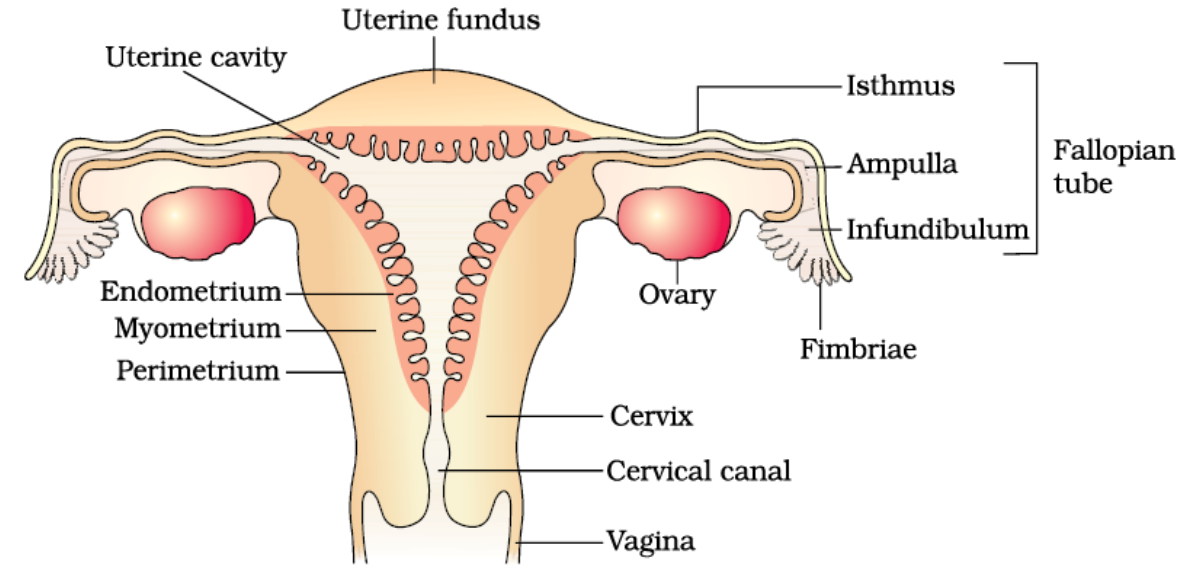
- Below the germinal epithelium is a dense connective tissue, **tunica albuginea** (Capsule)

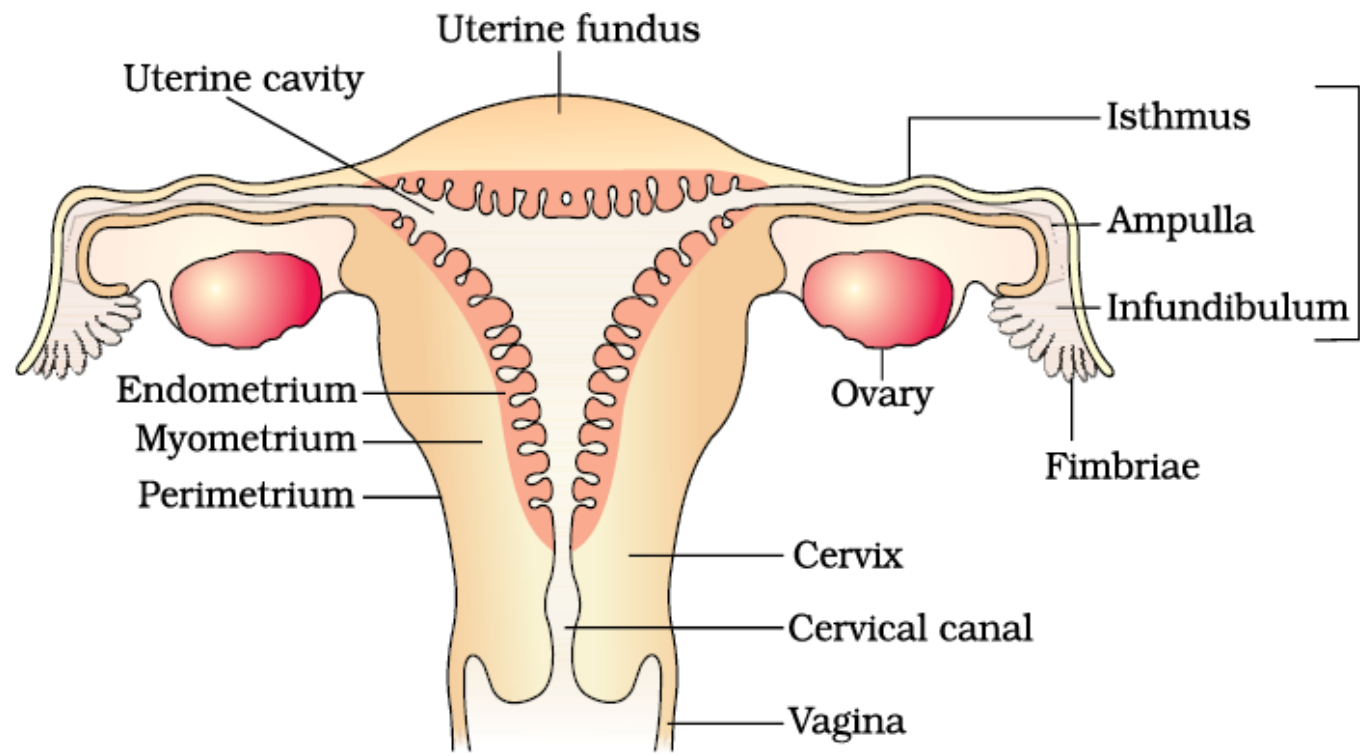
2.Oviducts (ஓரிணை அண்ட நாளங்கள்)



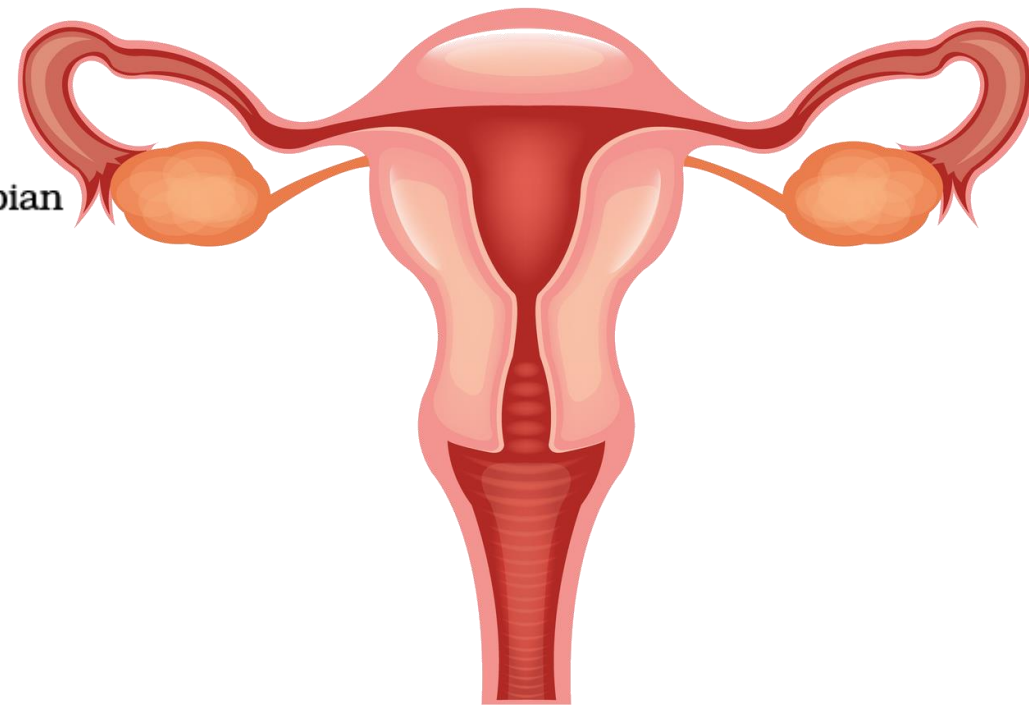
2. Oviducts

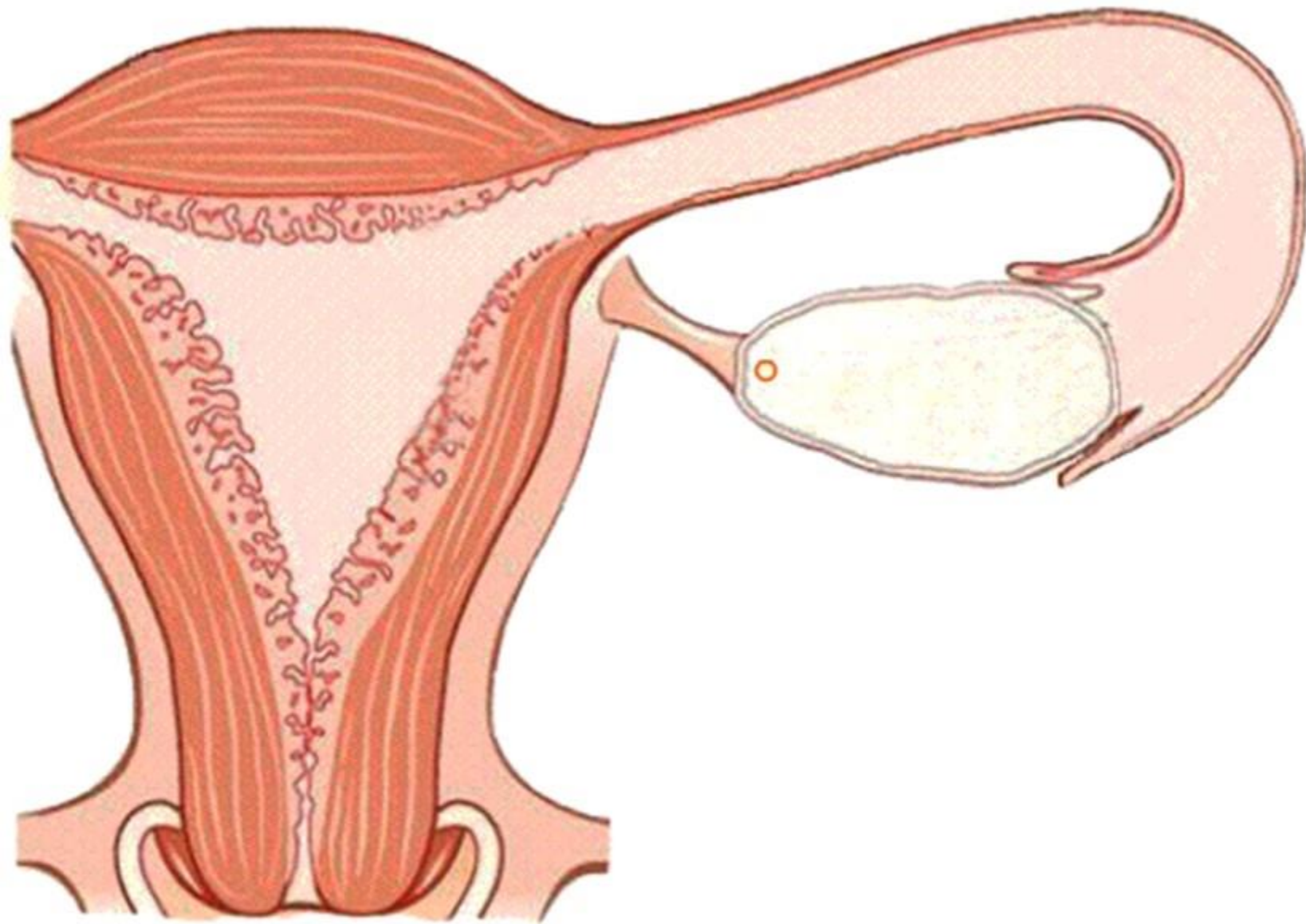
- ✓ Each fallopian/uterine tube is 10-12 cm long
- ✓ Extends from periphery of each ovary to the uterus
- The part closer to ovary is the funnel-shaped infundibulum (புனலுரு)
- ✓ Edges of infundibulum possess finger-like projections called fimbriae (நுண் நீட்சிகள்)
- ✓ It helps in collection of ovum after ovulation.
- ✓ Infundibulum leads to a wider part called ampulla (ஆம்புல்லா)
- ✓ Last part is isthmus has a narrow lumen joins ampulla, infundibulum to uterus.





Fallopian tube



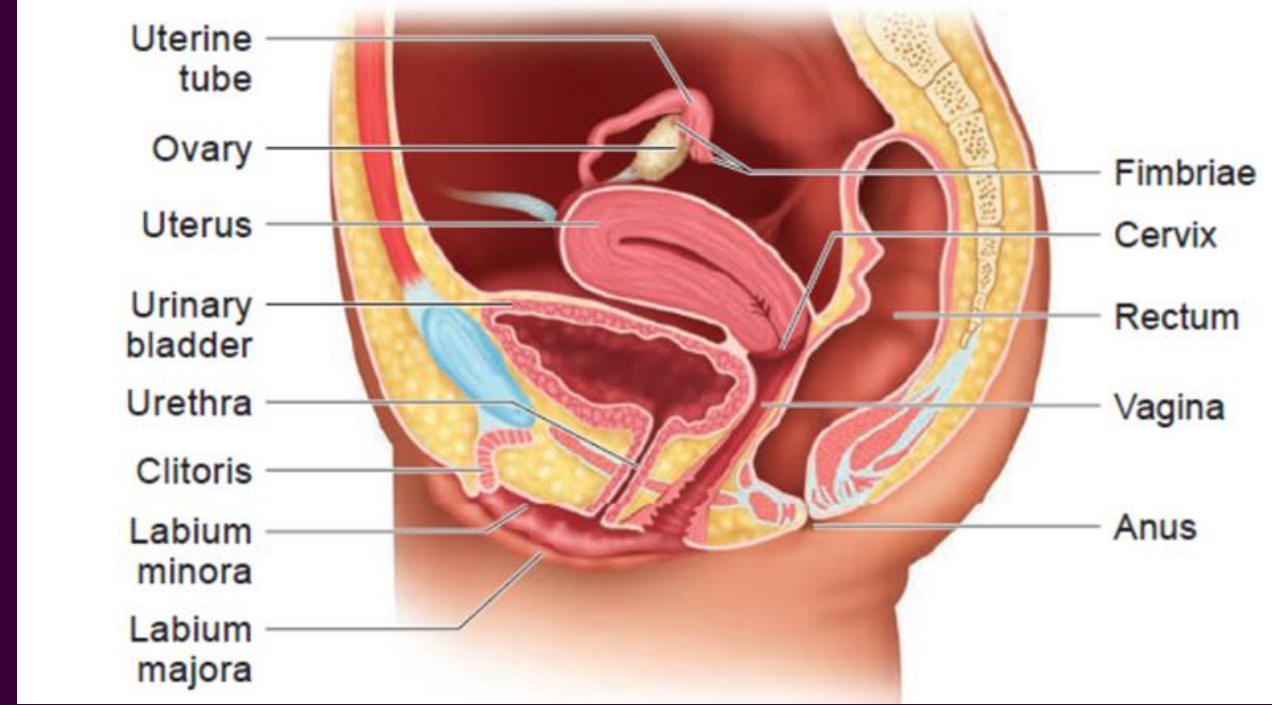


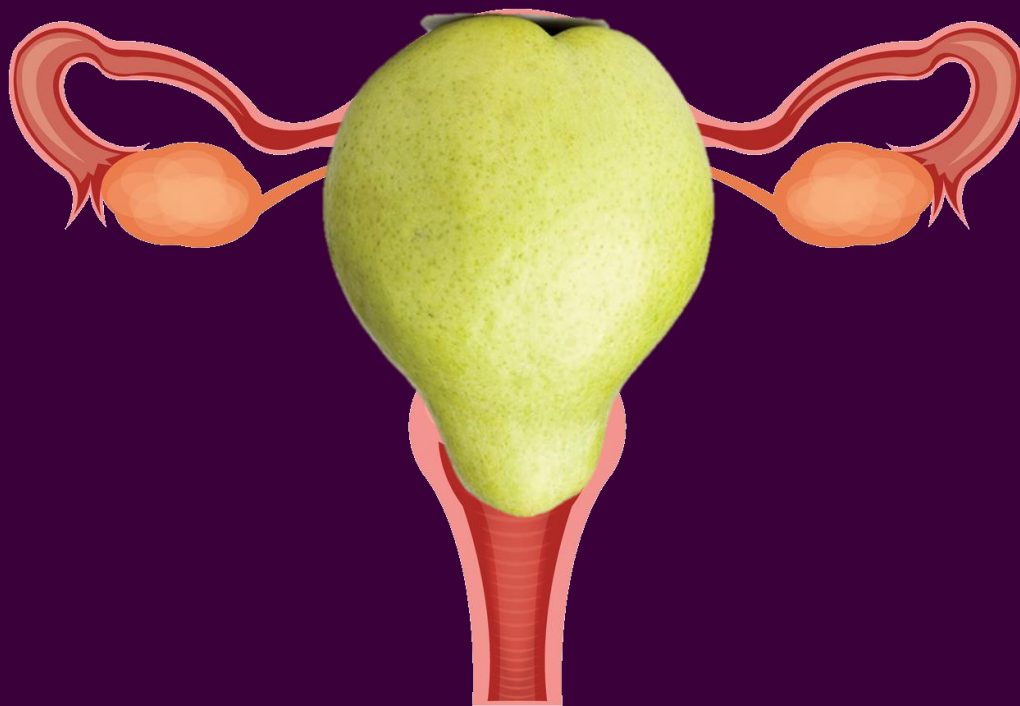
3. Uterus/Womb (கருப்பை)

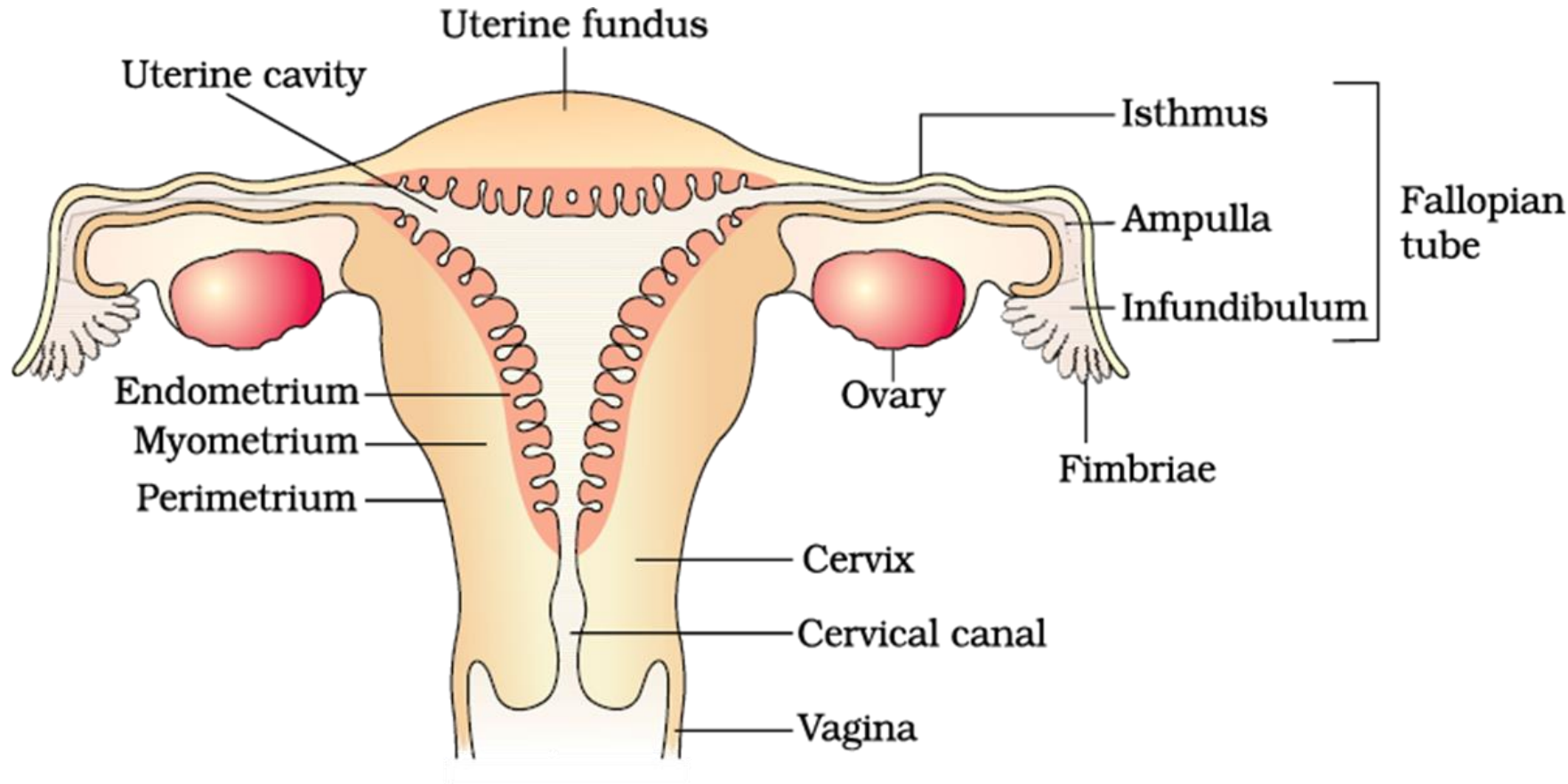


3. Uterus/Womb

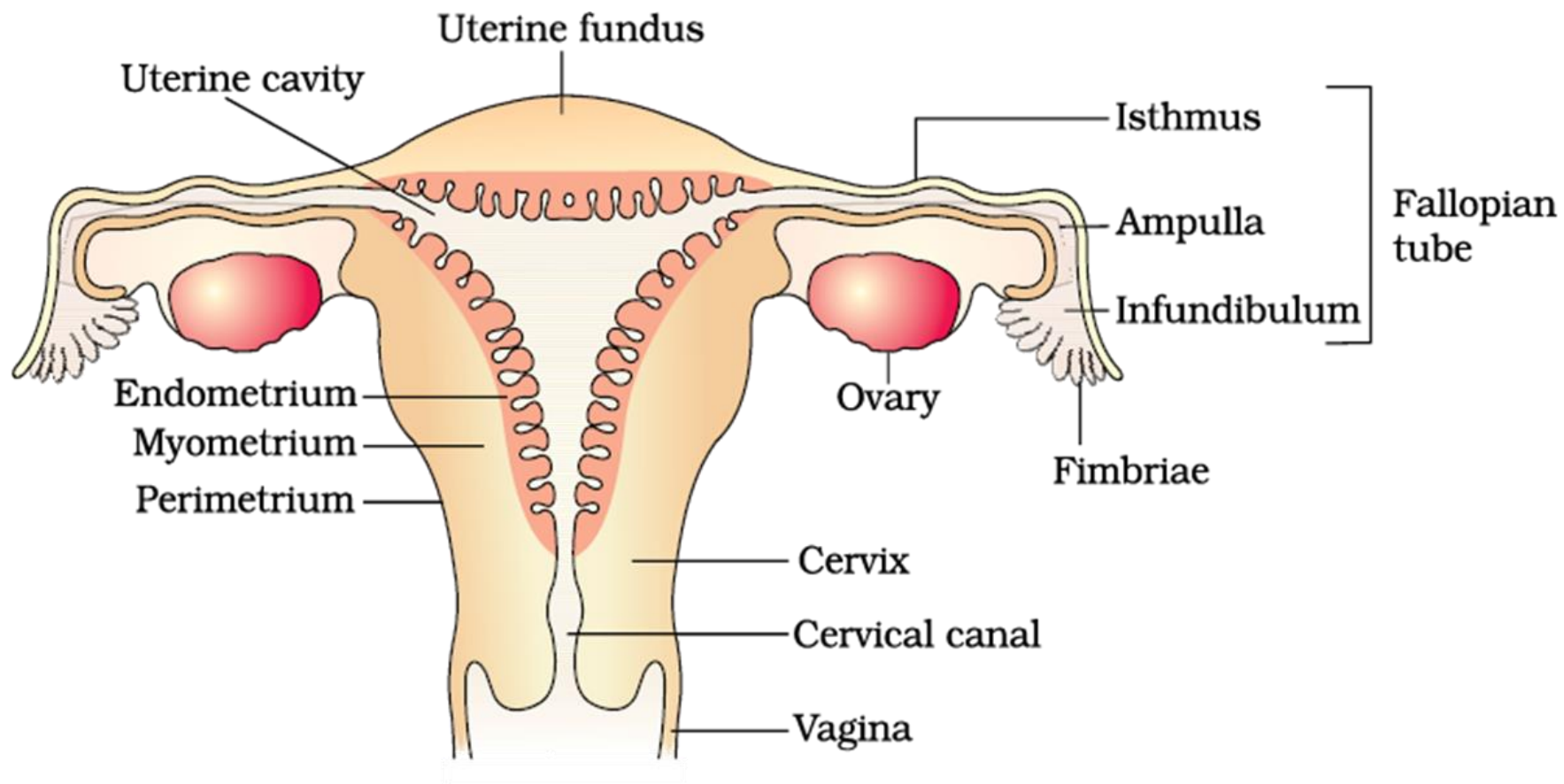
- ✓ Uterus is single
- ✓ Hollow, **muscular**, thick walled, highly vascular
- ✓ located in the pelvic cavity between the urinary bladder and rectum
(சிறுநீர்ப்பைக்கும் மலக் குடலுக்கும் இடையில்)
- ✓ **Inverted pear shaped**







- Major portion of the uterus is the **body**
- Rounded region superior to body is **fundus** (குவிமுகடு)
- Uterus opens into vagina through a narrow **cervix** (கருப்பை வாய்)
- The cavity of the cervix is called **cervical canal** (கருப்பை வாய் கால்வாய்)
- Along with vagina forms the **birth canal** (பிறப்புக் கால்வாய்)



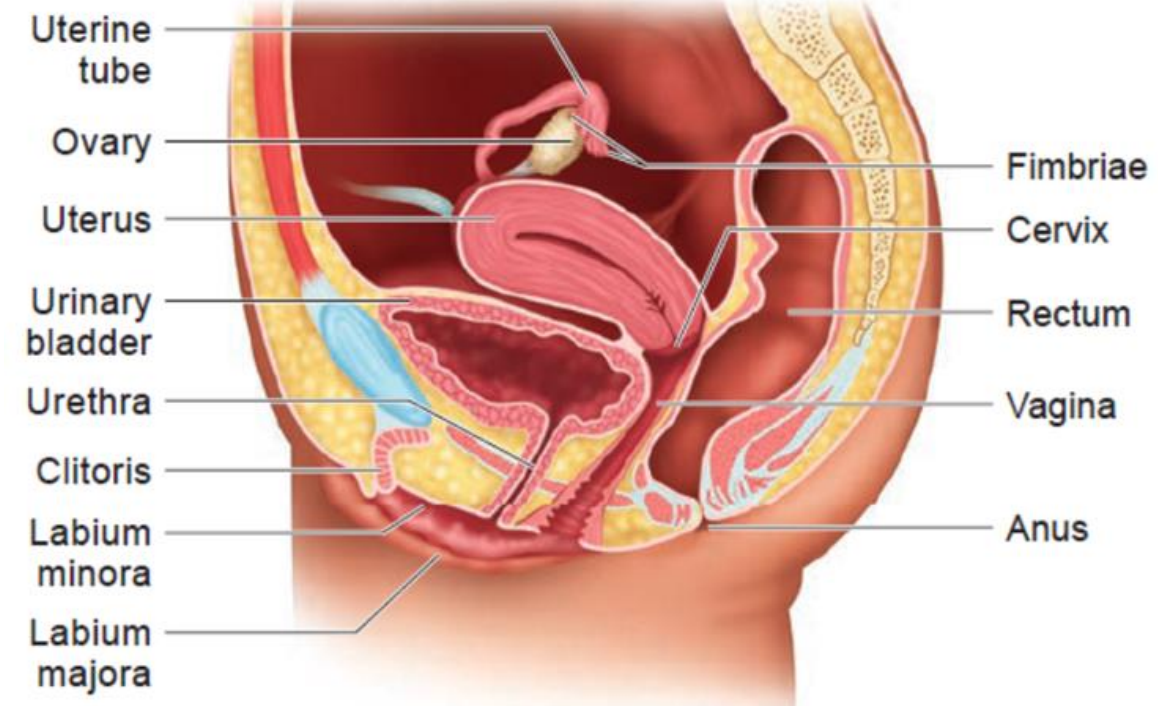
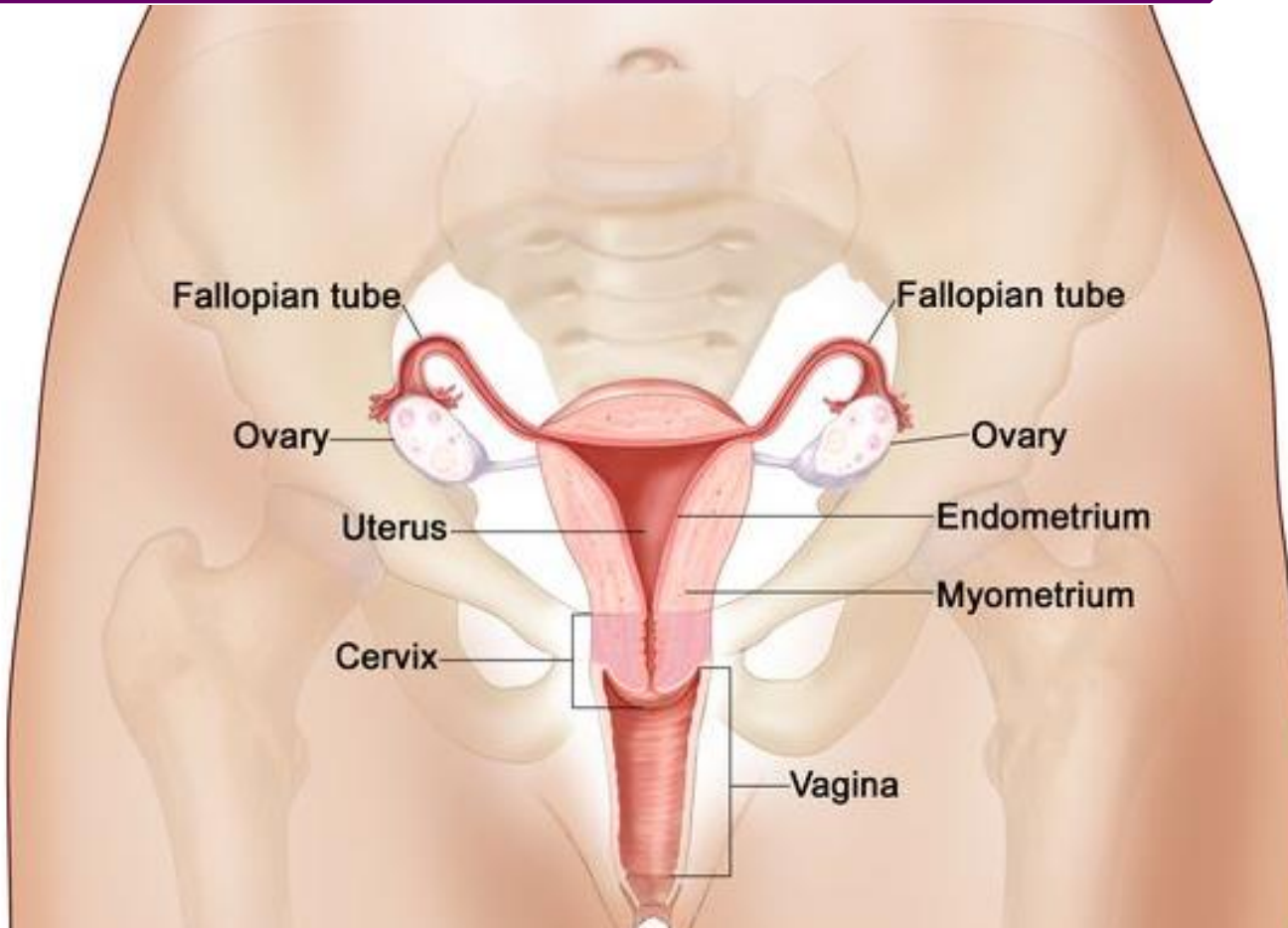
- Wall of uterus has **three layers of tissue**.
- External thin membranous perimetrium
- Middle thick layer of smooth muscle, myometrium
- Inner glandular layer called endometrium that lines the uterine cavity.

Myometrium exhibits strong contraction during delivery
Endometrium undergoes cyclical changes during menstrual cycle

4. Vagina



4. Vagina



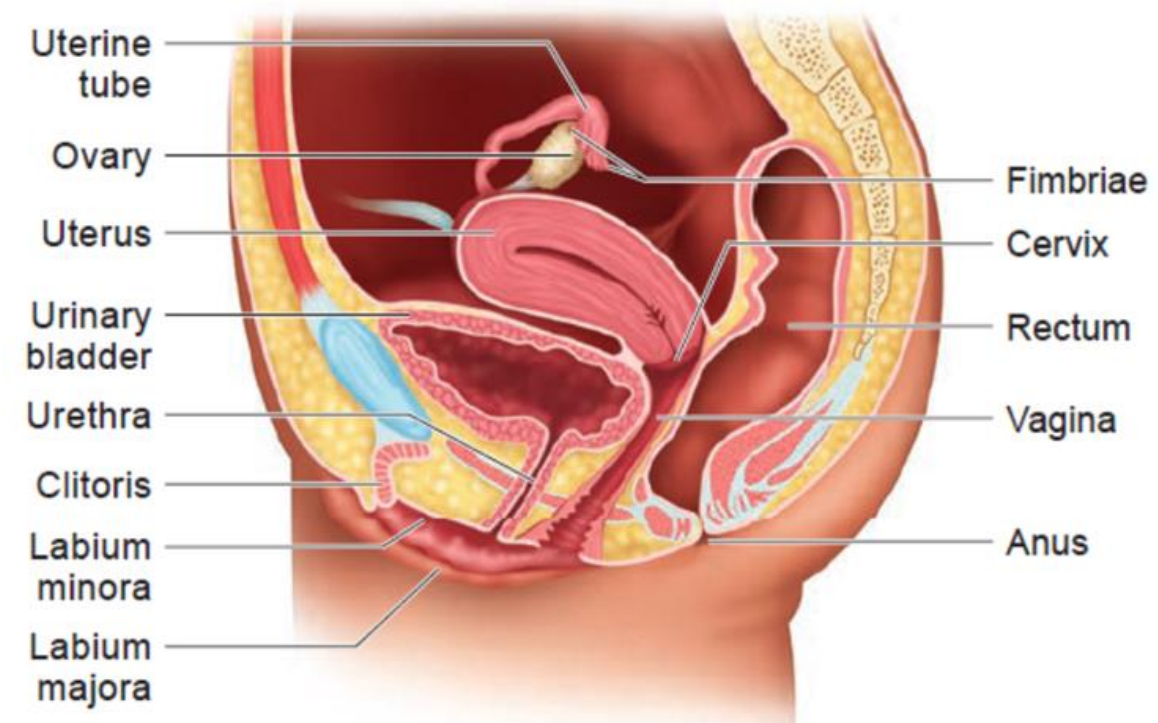
- Large fibromuscular tube that extends from the cervix to the exterior
- It is the female organ of copulation.

5. External Genitalia

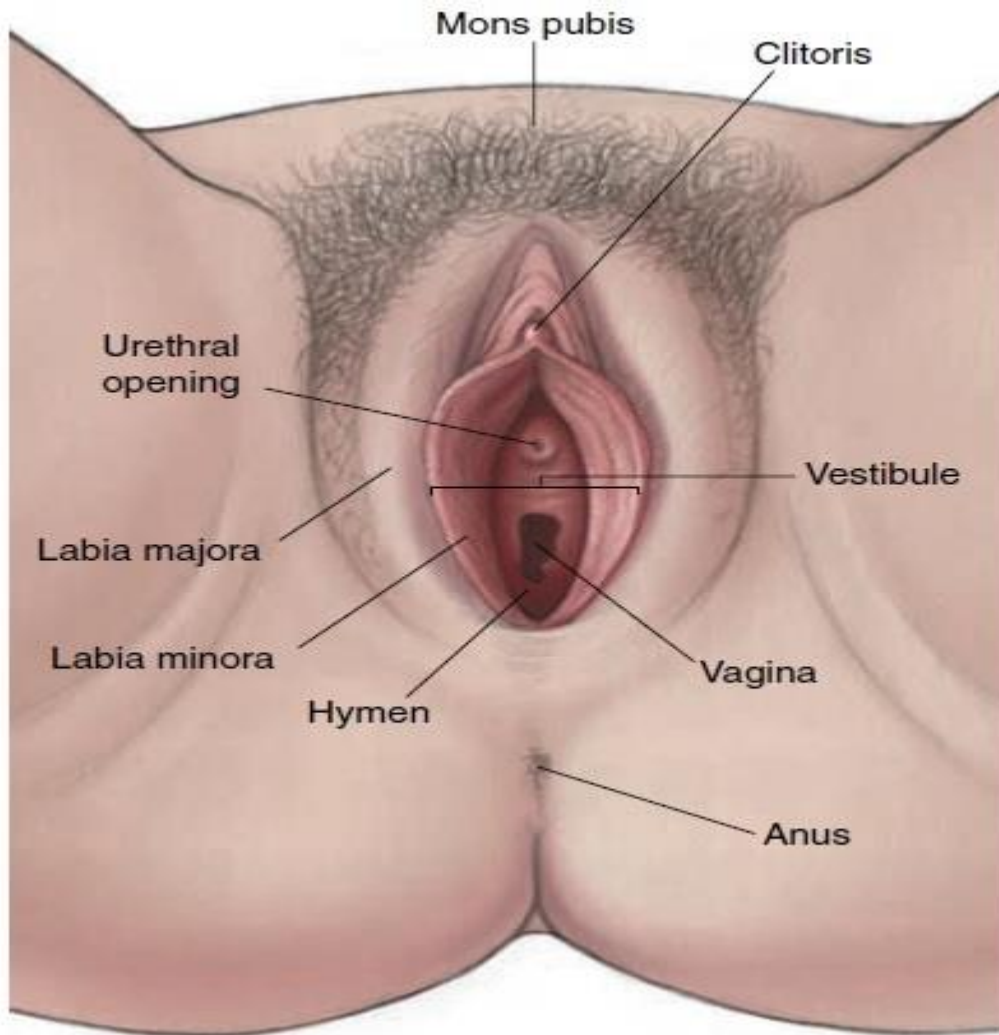
(புற இனப்பெருக்க உறுப்புகள்)

5. External Genitalia

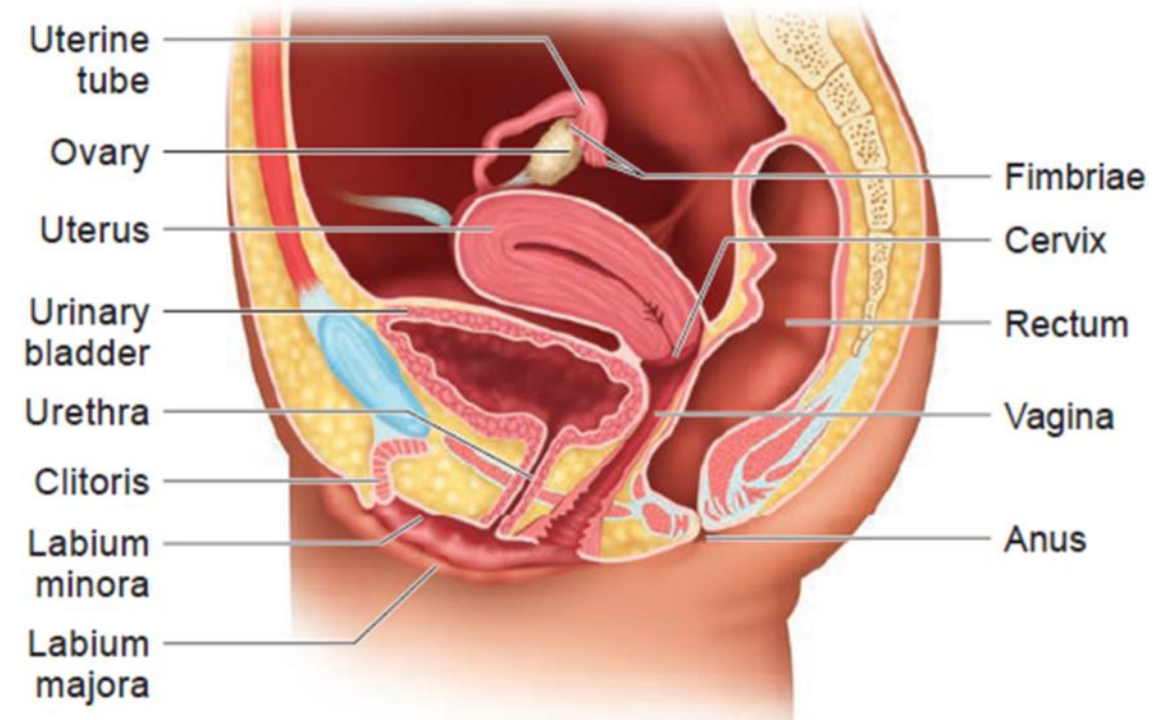
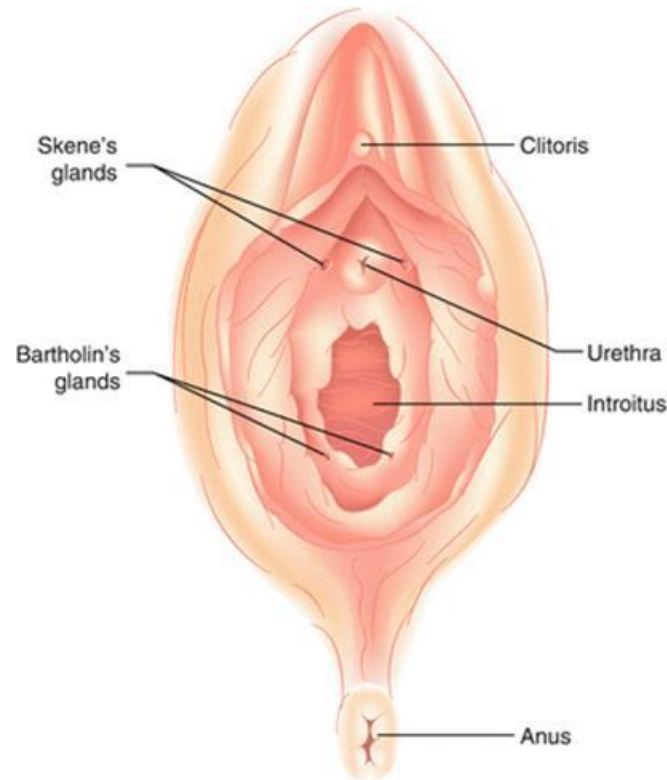
- ✓ Structures lie external to vagina
- ✓ Also called as "Vulva"
- ✓ Consists of:
 - Labia majora (பேரிதழ்கள்)
(fleshy folds of tissue)
 - Labia minora (சிறுநிதழ்கள்)
(paired folds of tissue)
 - Clitoris (சுமரி)
(tiny finger like structure)
 - Hymen (கன்னித்திரை)
(thin ring of tissue membrane)



5. External Genitalia



- Bartholin's glands (greater vestibular glands) located posterior to the left and right of the opening of vagina
- Secrete mucus to lubricate the vagina
- Skene's glands are located on the anterior wall of the vagina and around the lower end of the urethra.
- They secrete a lubricating fluid



COMING
UP
NEXT!

"Mammary Gland"

