



Female Reproductive System

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The female reproductive system consist of:

A- Two ovaries

B- Two oviducts (Uterine tubules)

C- Uterus


D- Vagina

Functions:

- 1- Produce female gametes (Oocytes)
- 2- Provide the environment for fertilization
- 3- To hold the embryo during its complete development
- 4- Produces steroidal hormones that control organs of the reproductive system

Ovaries

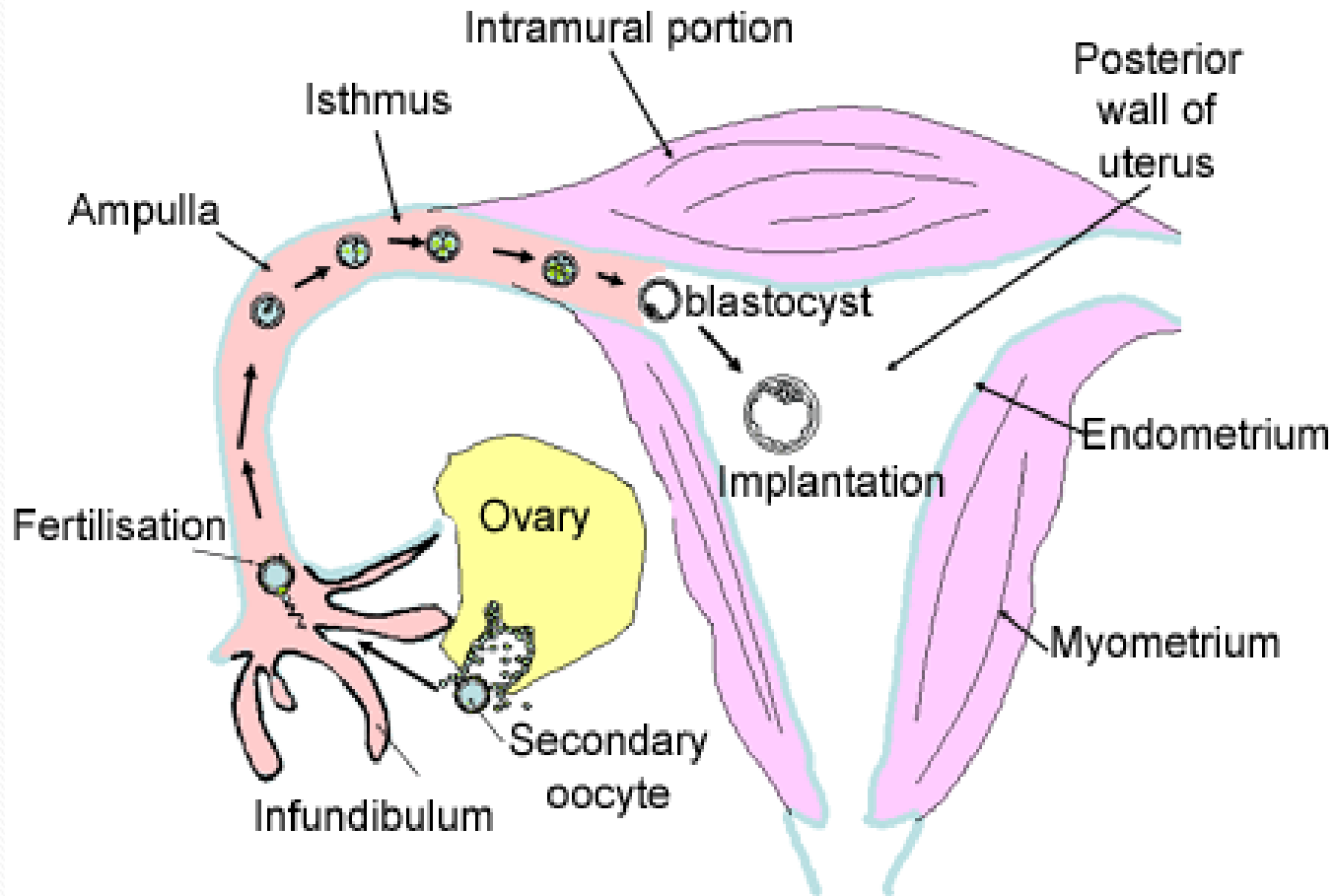
- Ovaries are almond-shaped bodies approximately 3-cm long, 1.5-cm wide, and 1-cm thick.
- Each ovary is covered by a simple cuboidal epithelium, the surface (or germinal) epithelium, continuous with the mesothelium and overlying a layer of dense connective tissue capsule, the tunica albuginea, responsible for the white color of ovary.

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- Ovaries have a cortex mostly connective tissue, and medulla (internal part) consist of loose connective tissue and blood vessels entering the organs
 - There is no distinct border between the ovarian cortex and the medulla.

Uterine tubule (Oviducts)

- The paired **uterine tubes**, or **oviducts**, muscular tubes each measure about 10-12 cm in length. Each opens into the peritoneal cavity near the ovary, with regions in the following sequence:
- The **infundibulum**, a funnel-shaped opening next to the ovary
- The **ampulla**, the longest and expanded region where fertilization normally occurs

- The **isthmus**, a more narrow portion nearer the uterus
- The **uterine** or **intramural part**, which passes through the wall of the uterus and opens into the interior of this organ.



The wall of the oviduct consists of

A- a folded mucosa, composed of simple columnar epithelium and lamina propria of loose connective tissue.

B- a thick, well-defined muscularis with interwoven circular (or spiral) and longitudinal layers of smooth muscle

C- a thin serosa covered by visceral peritoneum with mesothelium.

Uterus

- the uterus is a pear-shaped organ with thick, muscular walls supported by a set of ligaments
- Its wall has three layers
- A- An outer connective tissue the **perimetrium**
- B- A thick tunic of highly vascular smooth muscles called **myometrium**
- C- A mucosa (**endometrium**) lined by simple columnar epithelium

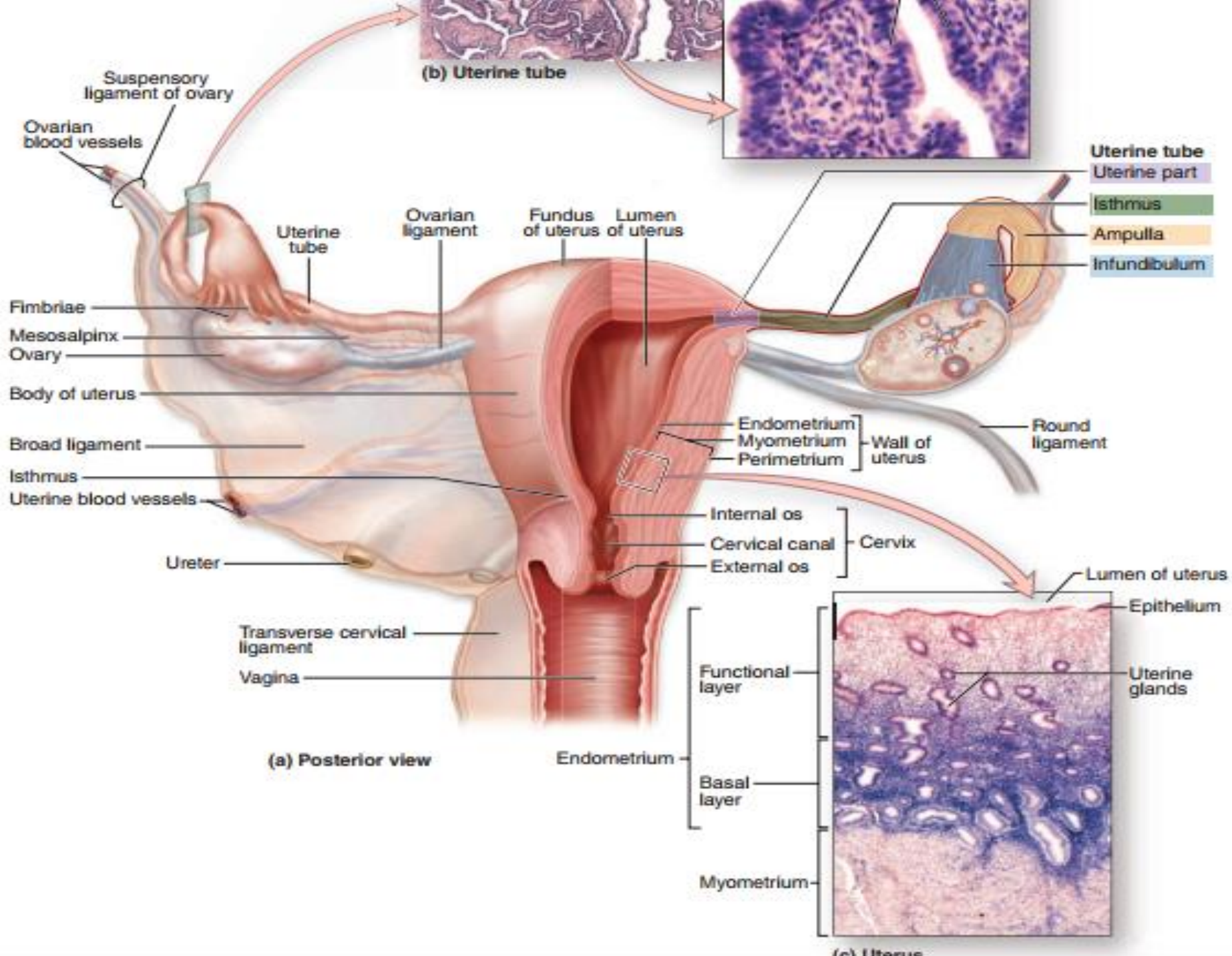


- **Parts of uterus**

- **the body:** Its largest part, is entered by the left and right uterine tubes

- **the fundus:** curved, superior area between the tubes.

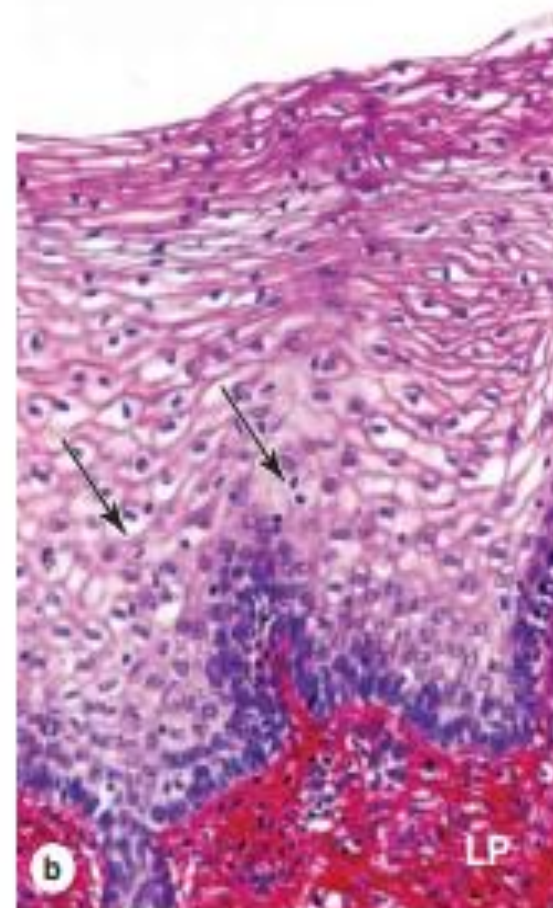
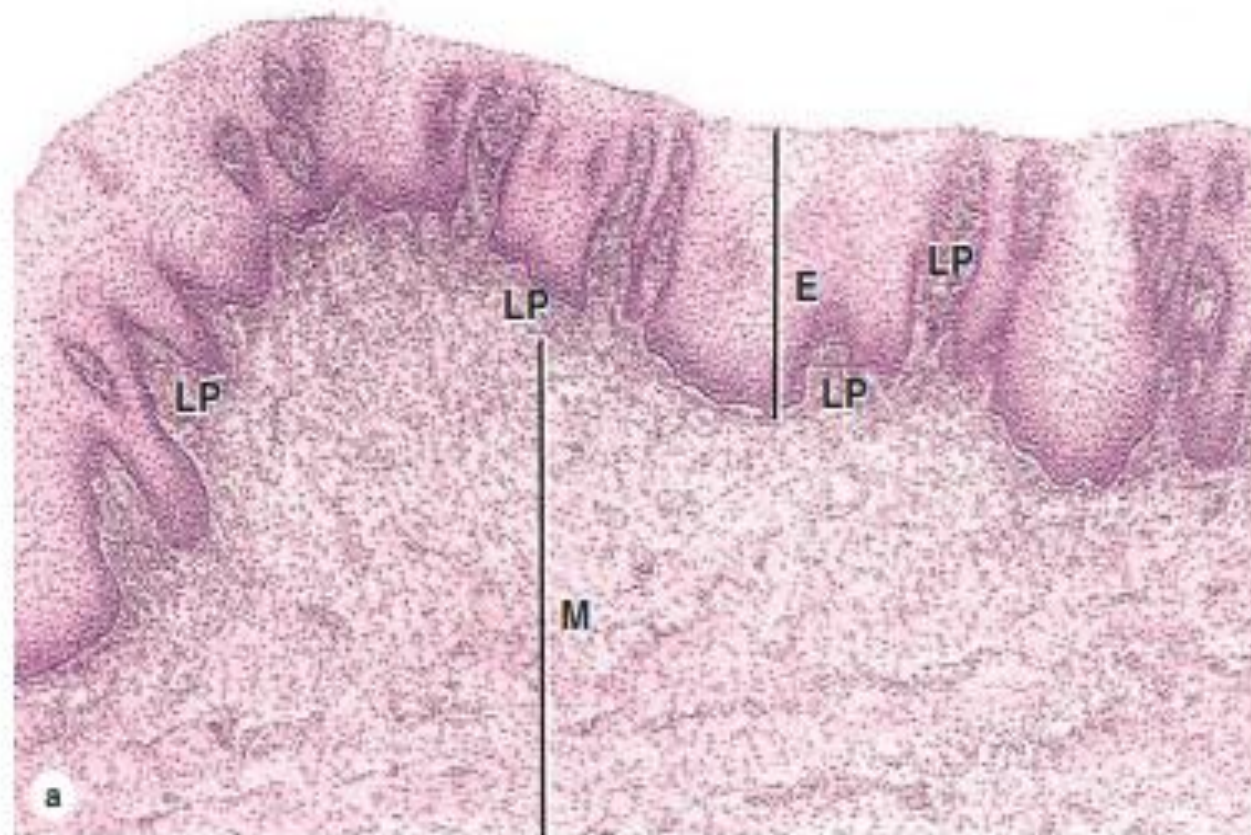
- **the cervix:** is the lower cylindrical structure of the uterus that narrows in the isthmus



Vagina

- The wall of the vagina consists of a mucosa, a muscular layer, and an adventitia.
- **Mucosa** is stratified squamous epithelium
- **The muscular layer** of the vagina is composed mainly of two indistinct layers of smooth muscle, disposed as circular bundles and as thicker longitudinal bundles
- **Adventitia** The dense connective tissue is rich in elastic fibers, making the vaginal wall strong and elastic while binding it to the surrounding tissues.

FIGURE 22-24 Vagina.



The vagina has mucosal, muscular, and adventitial layers. (a) The lamina propria (L) is highly cellular and extends narrow papillae into the thick, nonkeratinized stratified squamous epithelium (E). The muscular layer (M) has bundles of smooth muscle arranged in a circular manner near the mucosa and longitudinally near the adventitia. (X60; H&E)

(b) Higher magnification of the epithelium and lamina propria (LP) shows invasion of leukocytes (arrows) between epithelial cells from the connective tissue. (X200; PSH)



Thank you