



Lab 21: The female Reproductive System

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(The Female Reproductive System)

The female reproductive system consists of:

- 1- Two ovaries and oviducts (or uterine tubes)
- 2- The uterus
- 3- The vagina
- 4- The external genitalia

The functions of this system:

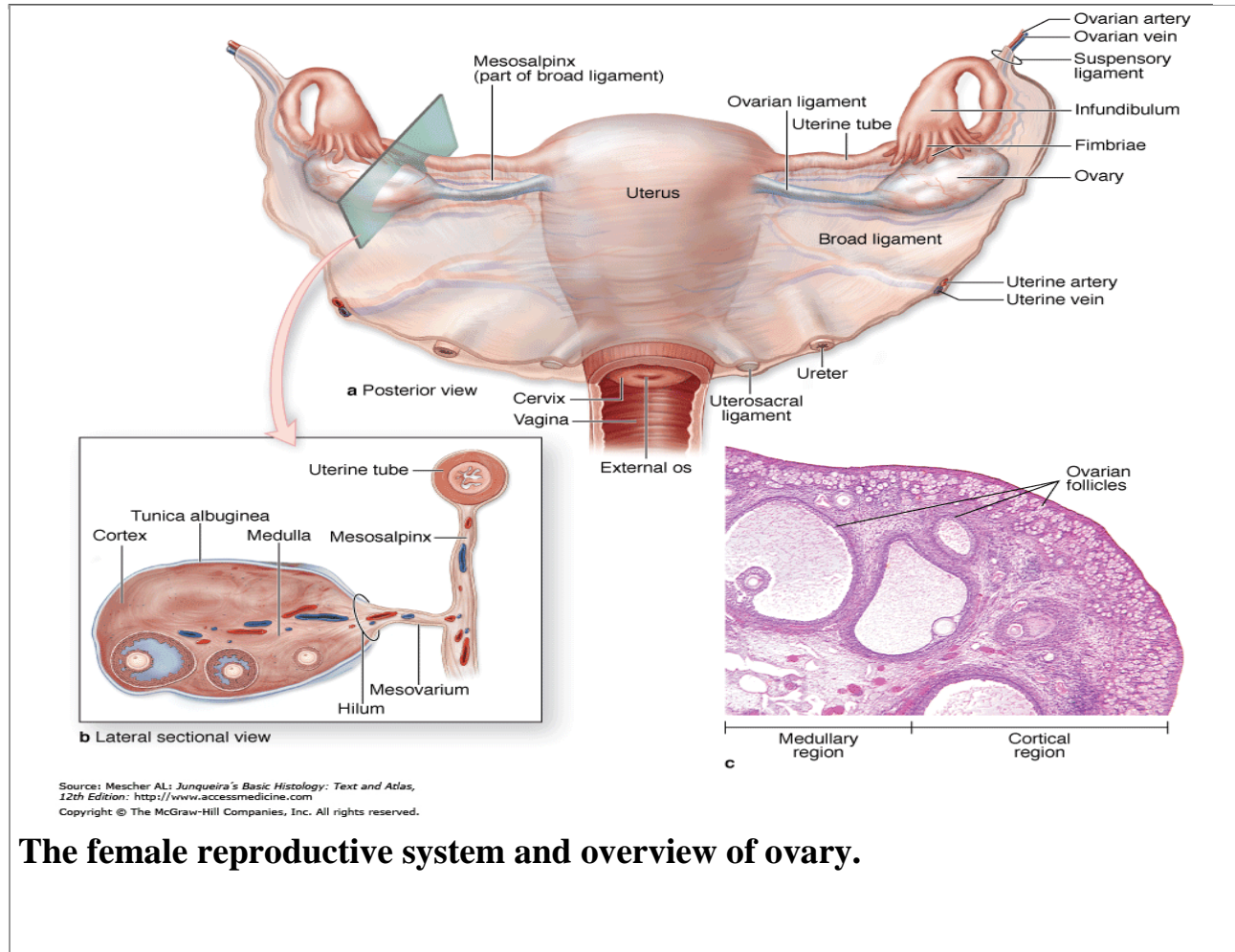
It has several important functions, including:

- Releasing eggs, which can potentially be fertilized by sperm
- Producing female sex hormones, such as progesterone and estrogen
- Providing an environment for a fertilized egg to develop during pregnancy
- Facilitating labor and childbirth



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The female reproductive system and overview of ovary.

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 **germinal epithelium**, continuous with the mesothelium and overlying a layer of **dense connective tissue capsule**.

The **tunica albuginea**, like that of the testis and responsible for the whitish color of the ovary. Most of the ovary consists of the **cortex**, a region filled with a



highly cellular connective tissue stroma and many ovarian follicles, which in the adult ovary vary greatly in size.

The most internal part of the ovary is the **medulla**, which **contains loose connective tissue and blood vessels** entering the organ through the hilum from mesenteries suspending the ovary. There are no sharp limits between the ovarian cortical and medullary regions.

The ovaries produce a variety of female sex hormones, which are important for regulating a woman's cycle and pregnancy. These include progesterone and estrogen.

Uterus

The uterus is a muscular, pear-shaped organ that's found in the pelvis. It's made up of two major parts:

- **Cervix:** The cervix is the lower portion of the uterus. It connects the main body of the uterus with the vagina.
- **Corpus (body):** This is the larger, main portion of the uterus.

The interior membrane that lines the uterus is called the **endometrium**. The thickness of this lining can vary depending on the levels of various hormones throughout the menstrual cycle.

During a woman's cycle, increases in the hormones estrogen and progesterone cause the lining of the uterus to thicken. This helps to prepare the uterus to receive and nurture a fertilized egg during pregnancy.



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If no fertilization occurs, the egg begins to break down. Levels of estrogen and progesterone also decrease. The egg passes from the body, along with the endometrium, during the menstrual cycle.

Fallopian tubes

The fallopian tubes connect the uterus to the ovaries. One fallopian tube is associated with each ovary.

The fallopian tubes work to transport an egg from the ovaries to the uterus. Smooth muscle contractions and the rhythmic beating of small hair-like structures called cilia help to keep the egg moving toward the uterus. Fertilization often occurs in the fallopian tube.

