

Topic Page: [Female Reproductive System](#)

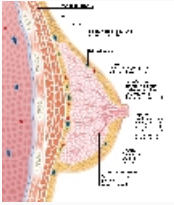


Image from: [Breast cross-section Each breast rests on the... in The Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders](#)

Summary Article: **Female Reproductive System**

From *The Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders*

Unlike the male, the female reproductive organs are sited entirely inside the body. Their function is to ripen and release an egg at regular intervals, and, if the egg is fertilized, to protect and nourish the embryo and fetus. No eggs are manufactured after birth – a female is born with a full set.

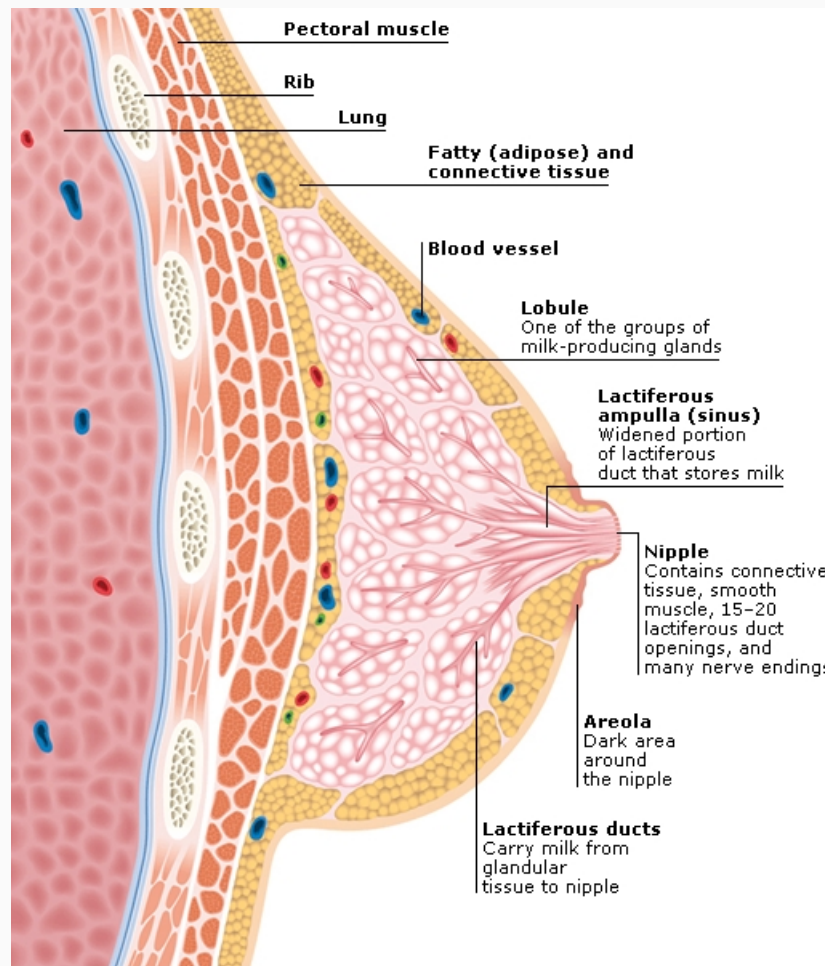
Reproductive tract

The female reproductive glands (ovaries) are located within the abdomen. From puberty, they mature and release the female sex cells (gametes), known as egg cells or ova. This release occurs roughly once a month as part of the menstrual cycle. The ripe egg travels along the fallopian tube to the uterus, the muscular sac in which it develops into an embryo and then fetus. Unfertilized

eggs, and the uterine lining, leave via the vagina. The ovaries also make the female sex hormone oestrogen.

Breasts

Both females and males have breasts (mammary), which contain modified sweat glands known as mammary glands. In females these are much larger and more developed than in males and produce milk at childbirth. Each breast contains 15–20 lobes of compound areolar glands, each lobe resembling a bunch of grapes on a long stalk. The cells of the glands secrete milk, which flows along merging lactiferous ducts towards the nipple. The breast also contains a widespread drainage system of lymph vessels (see section on Lymph and Immune Systems) .

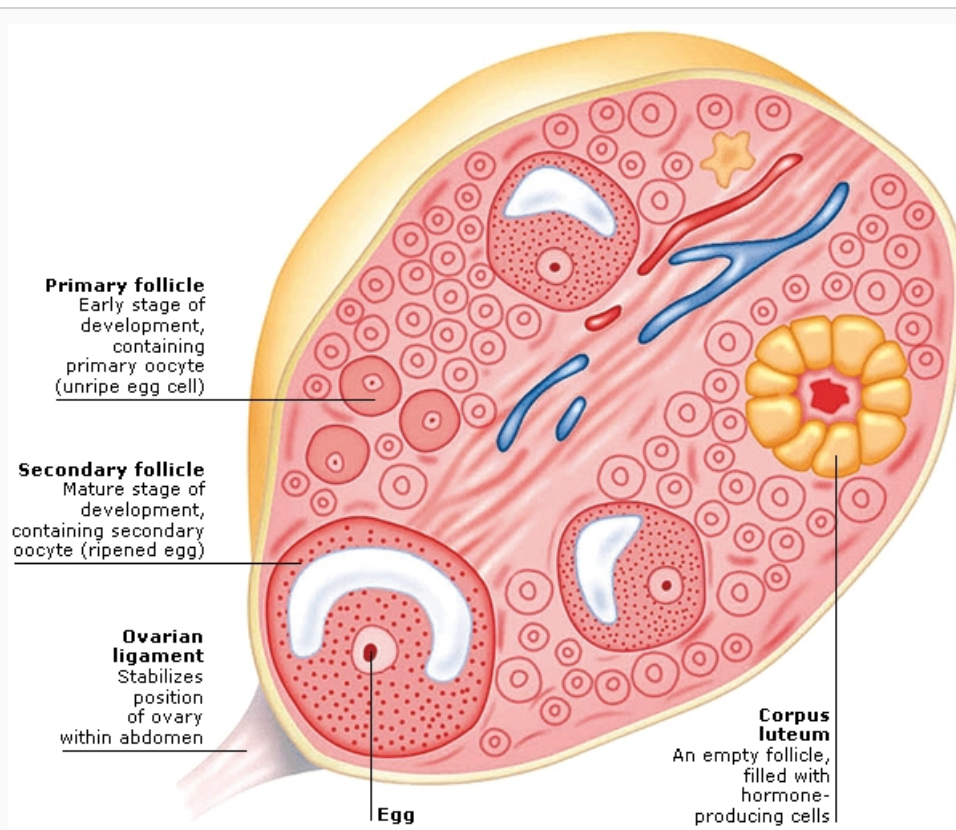


Breast cross-section

Each breast rests on the pectoralis major and minor muscles, and is given shape and support by internal suspensory ligaments.

Ovulation

An ovary contains thousands of immature egg cells. During each menstrual cycle, follicle-stimulating hormone (FSH) causes one egg to begin development; this takes place inside a primary follicle. The follicle enlarges as its cells proliferate, and begins to fill with fluid, becoming a secondary follicle that moves to the ovary's surface. It also increases its production of the hormone oestrogen. A surge of luteinizing hormone (LH) causes the follicle to rupture and release the ripe egg—this is ovulation. The lining of the empty follicle thickens into a corpus luteum—a temporary source of hormones.

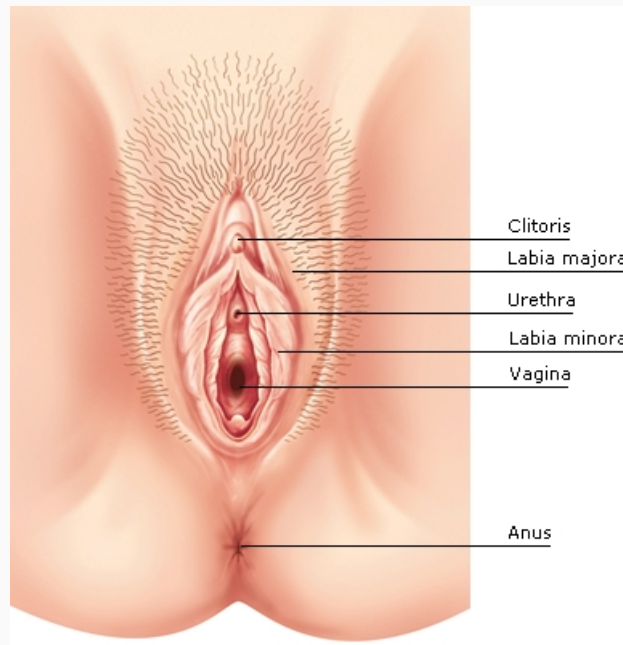


Inside an ovary

The ovary contains undeveloped eggs, eggs in follicles at various stages of maturation, and empty follicles forming corpora lutea. The bulk of the glandular tissue surrounding these follicles is known as the stroma.

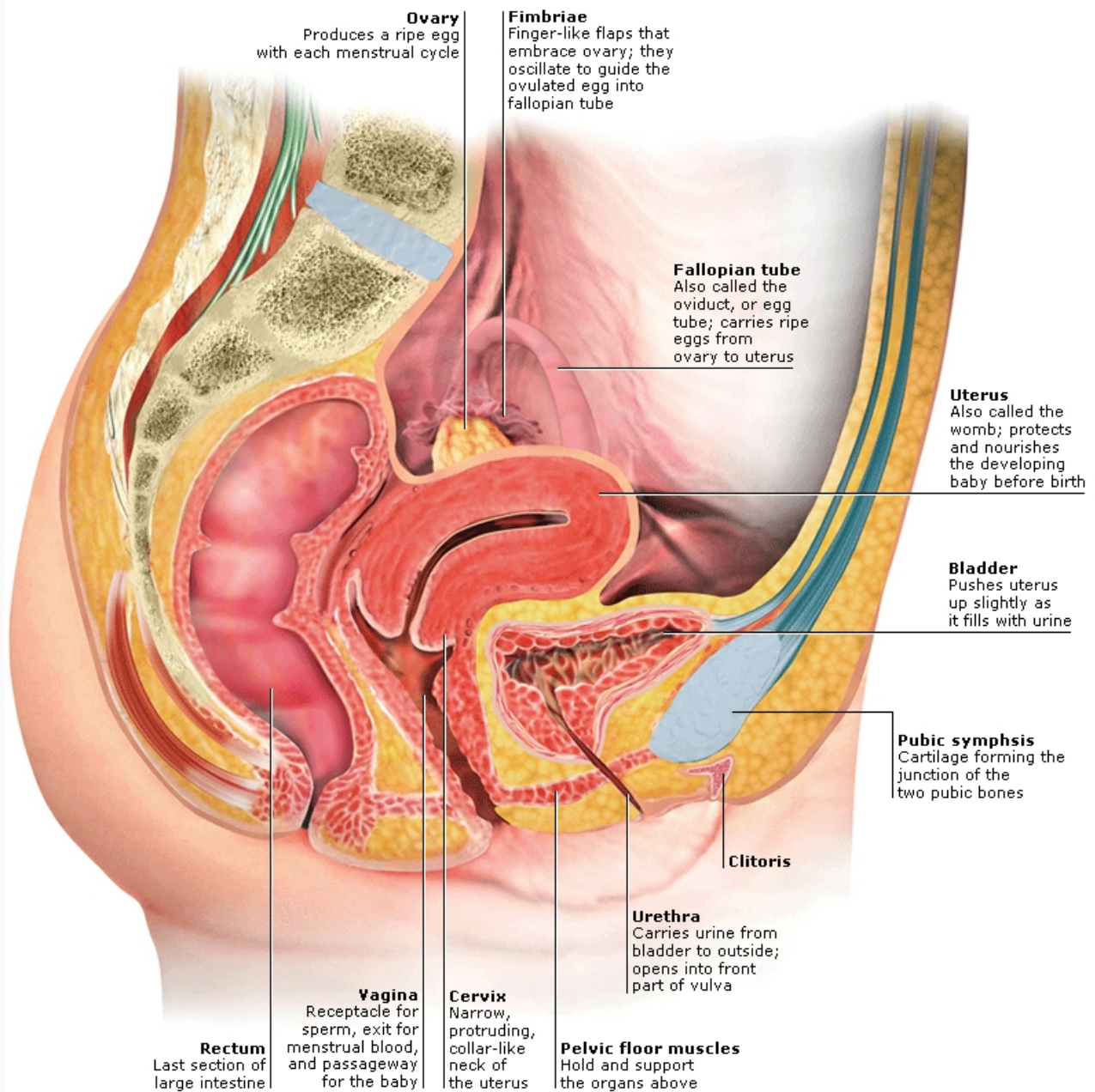
Vulva

The external genital parts of the female are together known as the vulva. They are sited under the mons pubis, a mound of fatty tissue that covers the junction of the two pubic bones, the pubic symphysis. Outermost in the vulva are the flap-like labia majora, with the smaller, fold-like labia minora within them. Both are called “labia” due to their resemblance to lips. The labia majora contain fatty and connective tissue, sebaceous glands, smooth muscle, and sensory nerve endings. At puberty their exposed surfaces begin to grow hairs. Within the vulva are the openings to the vagina and the urethra. At the front end of the labia minora is the clitoris. Like the male penis, it is sensitive and engorges with blood during sexual arousal.



External genitalia

The external genitalia have a protective role, preventing infection from reaching the urethra or vagina, but allowing urine to exit.



Reproductive organs

A cross-section through the female lower abdomen reveals the main reproductive elements and organs, which are well protected within the bowl formed by the hip bone (pelvis). The ovaries sit against the internal side walls of the abdomen, with the fallopian tubes arching from them, opening into the central, muscular, thick-walled womb (uterus).

Fallopian tube lining

Fallopian tubes facilitate an egg's progress to the uterus. This false-colour electron micrograph shows cells in the tube wall. Secretory cells (purple) lubricate the surface, and hairlike cilia (dark pink) waft a current of fluid down the tube, carrying the egg on its way.

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Female reproductive system. (2009). In S. Parker, *The human body book: an illustrated guide to its structure, function and disorders*. London, UK: Dorling Kindersley Publishing, Inc. Retrieved from https://search.credoreference.com/content/topic/female_reproductive_system



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Chicago

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