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Topic: Anatomy of the Female Reproductive System

Anatomy of the Female Reproductive System

The organs of the female reproductive system include the ovaries; the uterine (fallopian) tubes or oviducts; the uterus; the vagina; and external organs, which are collectively called the vulva or pudendum.

- Female internal reproductive organs are the vagina, uterus, fallopian tubes, cervix, and ovary.
- External structures include the mons pubis, pudendal cleft, labia majora and minora, vulva, Bartholin's gland, and the clitoris.
- The female reproductive system contains two main parts: the uterus, which hosts the developing fetus, produces vaginal and uterine secretions, and passes the anatomically male sperm through to the fallopian tubes; and the ovaries, which produce the anatomically female egg cells.

Ovary:

The ovary is an ovum-producing reproductive organ, typically found in pairs as part of the vertebrate female reproductive system. Ovaries in females are analogous to testes in males in that both are gonads and endocrine glands. Ovaries secrete both estrogen and progesterone. Estrogen is responsible for the appearance of secondary sex characteristics of females at puberty and for the maturation and

maintenance of the reproductive organs in their mature functional state. Progesterone functions with estrogen by promoting menstrual cycle changes in the endometrium.

The ovaries are located in the lateral wall of each side of the pelvis in a region called the ovarian fossa. The fossa usually lies beneath the external iliac artery and in front of the ureter and internal iliac artery.

In humans, the paired ovaries lie within the pelvic cavity on either side of the uterus, to which they are attached via a fibrous cord called the ovarian ligament. The ovaries are tethered to the body wall via the suspensory ligament of the ovary. The part of the broad ligament of the uterus that covers the ovary is known as the mesovarium.

There are two extremities to the ovary, the tubal extremity and the uterine extremity. The tubal extremity is the end to which the Fallopian tube attaches via the infundibulo-pelvic ligament. The uterine extremity points downward and is attached to the uterus via the ovarian ligament.

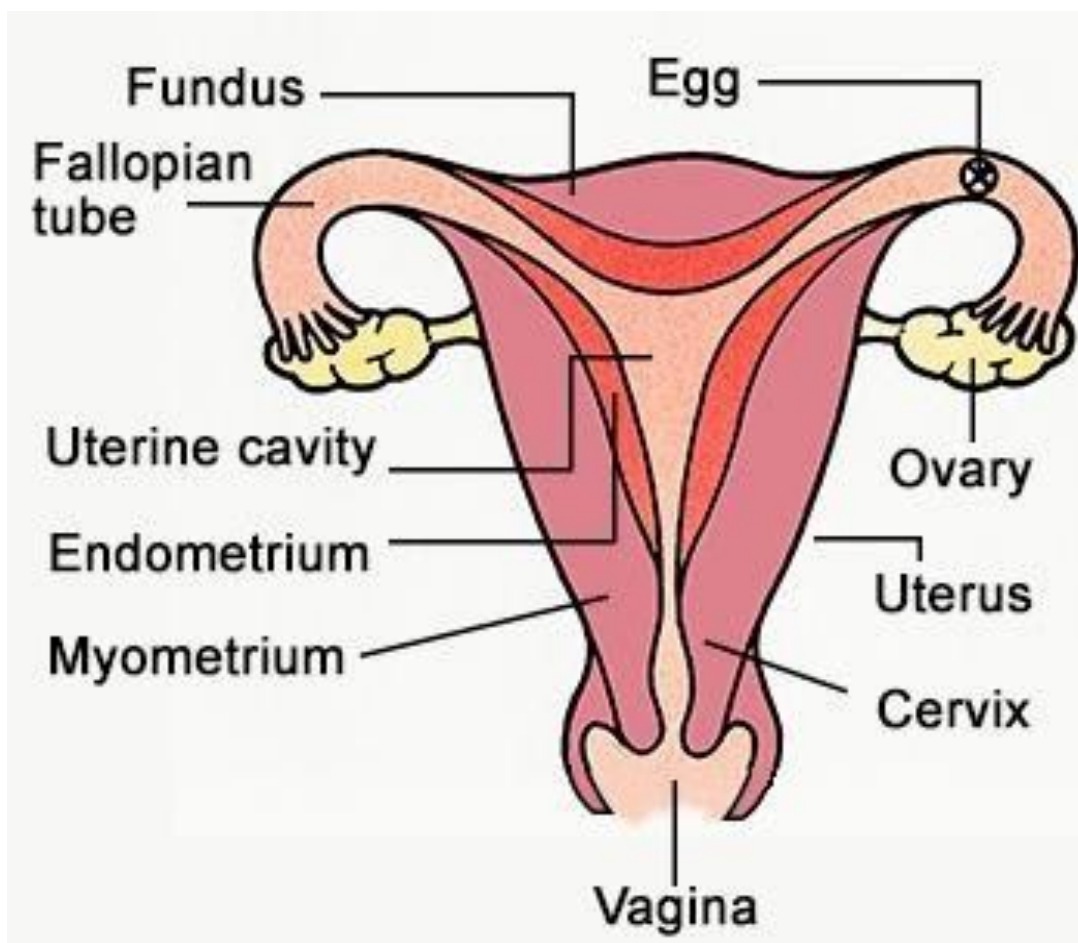


Fig. The Female reproductive system

Uterus:

The uterus or womb is a major female hormone -responsive reproductive sex organ of most mammals including humans. One end, the cervix, opens into the vagina, while the other is connected to one or both fallopian tubes, depending on the species. It is within the uterus that the fetus develops during gestation, usually developing completely in placental mammal's such as humans. The uterus consists of a body and a cervix. The cervix protrudes into the vagina.

The uterus is held in position within the pelvis by condensations of endopelvic fascia, which are called ligaments. These ligaments include the pubocervical, transverse, cervical, cardinal, and uterosacral ligaments. It is covered by a sheet-like fold of peritoneum, the broad ligament

- The reproductive function of the uterus is to accept a fertilized ovum which passes through the utero-tubal junction from the fallopian tube.
- The lining of the uterine cavity is called the endometrium, in which fertilized eggs are implanted.

The uterus is located inside the pelvis immediately dorsal to the urinary bladder and ventral to the rectum. The human uterus is pear-shaped and about three inches (7.6 cm) long. The uterus can be divided anatomically into four segments: The fundus, corpus, cervix and the internal os.

The uterus is in the middle of the pelvic cavity in frontal plane (due to ligamentum latum uteri). The fundus does not surpass the linea terminalis. The fundus of the uterus is the top, rounded portion, opposite from the cervix. The vaginal part of the cervix does not extend below interspinal line. The uterus is mobile and moves under the pressure of the full bladder or full rectum anteriorly, whereas if both are full it moves upwards. Increased intra-abdominal pressure pushes it downwards. The mobility is conferred to it by musculo-fibrous apparatus that consists of a suspensory and sustentacular part. Under normal circumstances the suspensory part keeps the uterus in anteflexion and anteversion (in 90% of women) and keeps it “floating” in the pelvis. In cases where the uterus is “tipped,” also known as retroverted uterus, women may have symptoms of pain during sexual intercourse, pelvic pain during menstruation, minor incontinence, urinary

tract infections, difficulty conceiving, and difficulty using tampons. A pelvic examination by a doctor can determine if a uterus is tipped.

The lining of the uterine cavity is called the endometrium. It consists of the functional endometrium and the basal endometrium from which the former arises. Damage to the basal endometrium results in adhesion formation and/or fibrosis (Asherman's syndrome). In all placental mammals, including humans, the endometrium builds a lining periodically which is shed or reabsorbed if no pregnancy occurs.

The uterus mostly consists of smooth muscle, known as myometrium. The innermost layer of myometrium is known as the junctional zone, which becomes thickened in adenomyosis. The parametrium is the loose connective tissue around the uterus. The perimetrium is the peritoneum covering of the fundus and ventral and dorsal aspects of the uterus. The uterus is primarily supported by the pelvic diaphragm, perineal body, and the urogenital diaphragm. Secondly, it is supported by ligaments and the peritoneum (broad ligament of uterus).

Female Duct System

The Fallopian tubes or oviducts connect the ovaries to the uterus. The uterine tubes, also known as oviducts or fallopian tubes, are the female structures that transport the ova from the ovary to the uterus each month. In the presence of sperm and fertilization, the uterine tubes transport the fertilized egg to the uterus for implantation.

The uterine tubes are uterine appendages located bilaterally at the superior portion of the uterine cavity. These tubes exit the uterus through an area referred to as the cornua, forming a connection between the endometrial and peritoneal cavities.

