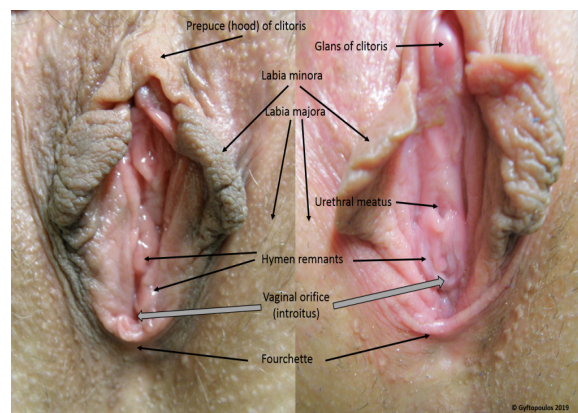


GROSS ANATOMY OF EXTERNAL FEMALE GENITALIA

The external female reproductive structures are referred to collectively as the vulva, situated immediately external to the genital orifice. Its functions are threefold: acts as sensory tissue during sexual intercourse, assists in micturition by directing the flow of urine through opening of the female urethra, protects the internal female reproductive tract from infection. The vulva is rich in nerves that are stimulated during sexual activity and arousal. Major structures of the vulva include the labia majora and labia minora, mons pubis, vulva vestibule, genital orifice (for opening of the vagina), the external portion of the clitoris and the clitoris hood or introitus, the pudendal cleft, the hymen, the opening of the urethra (or urinary meatus), the frenulum labiorum pudendi or fourchette, the perineum, the sebaceous glands or labia majora, the vaginal glands (Bartholin's gland and paraurethral or Skene's glands).

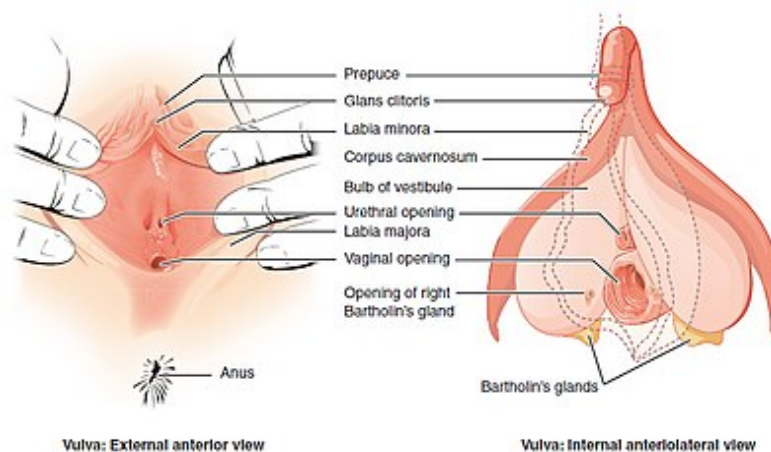
The vulva consists of the external genital organs of the female mammal. Its development occurs during several phases, chiefly during the fetal and pubertal periods. As the outer portal of the human uterus or womb, the vulva protects its opening with a double door: labia majora—large lips and the labia minora—small lips. The vulva also contains the opening of the female urethra that serves the vital function of passing urine.

The subcutaneous fat pad located anterior to the pubic symphysis, the mons pubis, is formed by the fusion of the labia majora. The labia majora are two hair-bearing external skin folds that extend from the mons pubis posteriorly to the posterior commissure (a depression overlying the perineal body). They are embryologically derived from labioscrotal swellings. Within the labia majora lie two hairless folds of skin called labia minora. They fuse anteriorly to form the hood of the clitoris and extend posteriorly on either side of the vaginal opening. They merge posteriorly, creating a fold of skin known as the fourchette. They are embryologically derived from urethral folds.



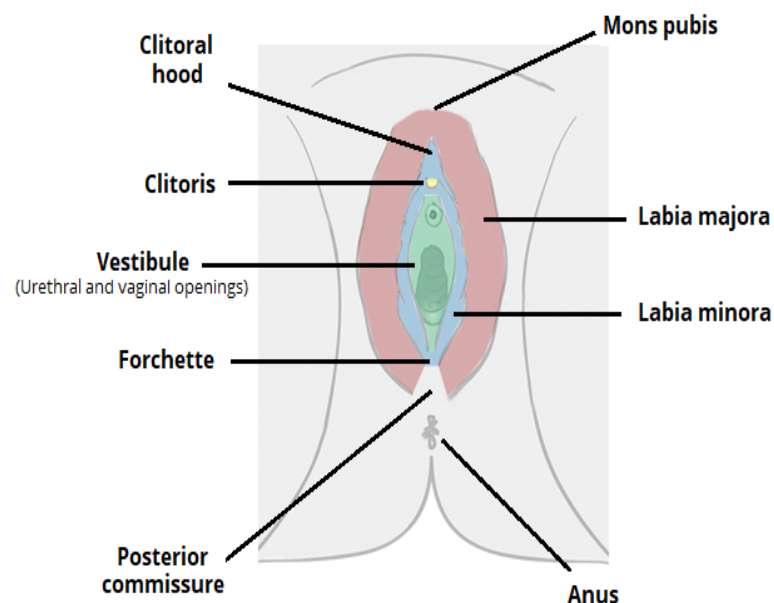
The inside skin and mucus membrane are often pink or brownish. After the onset of puberty, the mons pubis and labia majora become covered by pubic hair. This hair sometimes extends to the inner thighs and perineum, but the density, texture, colour and extent of pubic hair coverage vary considerably due to both individual variation and with cultural practices of hair modification or removal.

The clitoris is located at the front of the vulva where the labia minora meet. The visible portion of the clitoris is the shape of a pea. The clitoris glans is highly sensitive, containing as many nerve endings as the analogous organ in males, the glans penis. It is formed of erectile corpora cavernosa tissue, which becomes engorged with blood during sexual stimulation. The point where the labia minora attach to the clitoris is called the frenulum clitoris. A prepuce, the clitoris hood, normally covers and protects the clitoris; however, in women with particularly large clitorises or small prepuces, the clitoris may be partially or wholly exposed. The clitoral hood is the female equivalent of the male foreskin and may be partially hidden inside of the pudendal cleft. The clitoris is embryotically derived from the genital tubercle.



The area between the labia minora is called the vulval vestibule, and it contains the vaginal openings that make it important in sexual sensation and orgasm (external vaginal orifice, vaginal introitus) and urethral openings. The urethral openings (meatus) is located below the clitoris and just in front of the vagina. This is where urine passes from the urinary bladder.

The opening of the vagina is located at the bottom of the vulval vestibule toward the perineum. The term introitus is more technically correct than "opening", since the vagina is usually collapsed with the opening closed unless something is inserted. The introitus is sometimes partly covered by a thin membrane called the hymen at the entrance of the vagina. An intact hymen cannot be used as an indication of "virginity"; even at birth, this is only a partial membrane, as menstrual fluid and other secretions must be able to exit the body, regardless of penile-vaginal intercourse. However, the hymen may also rupture spontaneously during exercise or be stretched by normal activities such as use of tampons. The vaginal opening is located between the opening of the urethra and the anus. It is flanked by outlets to the Bartholin's glands(or greater vestibular glands) that secrete lubricating mucus from small ducts during sexual arousal.



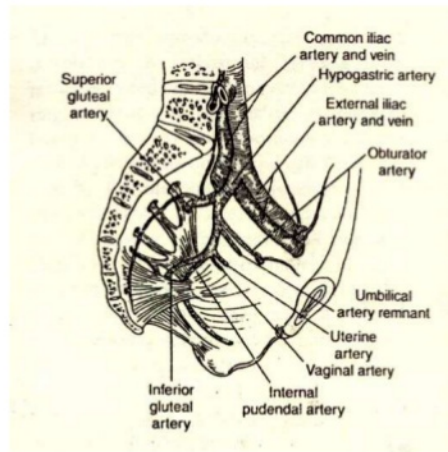
VASCULAR SUPPLY AND LYMPHATICS

The arterial supply to the vulva is from the paired internal and external pudendal arteries(branches of the internal iliac). Venous drainage is achieved via the pudendal veins, with smaller labial veins contributing as tributaries. Lymph drains to the nearby superficial inguinal lymph nodes.

Blood supply for female genitalia

Arterial system

1. **Ovarian artery:** the chief source of the blood for ovaries.
2. **Uterine artery:**
corpus branch
cervical-vaginal branch
3. **Vaginal artery:** main source of the blood for the middle part of vagina
4. **Internal pudendal artery:** supply for superficial perineum, labia majora, labia minora, lower part of the vagina, clitoris



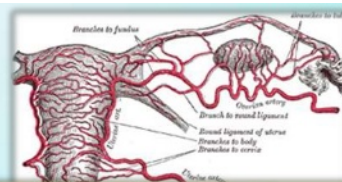
• Blood supply

- Arteries:
 - Uterine A
 - Ovarian & Vaginal As.
- Veins drain into
 - Internal iliac veins

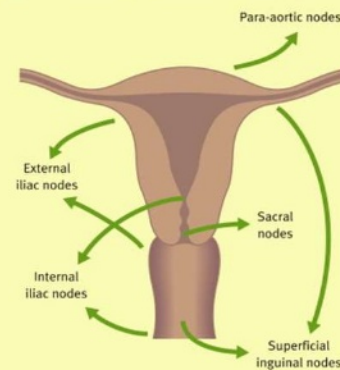
• Lymphatics

• Nerves

- Sympathetic
 - Motor : T5 & T6
 - Sensory : T10 – L1
- Parasympathetic
 - Pelvic N (S2,3,4) : both motor and sensory : ends in ganglia of Frankenhauser



Lymphatic drainage of the uterus and vagina



INNERVATION

The vulva receives sensory and parasympathetic nervous supply. The vulva can be divided into anterior and posterior sections:

Anterior: ilioinguinal nerve, genital branch of the genitofemoral nerve.

Posterior: pudendal nerve, posterior cutaneous nerve of the thigh.

The clitoris and the vestibule also receive parasympathetic innervation from the cavernous nerves - derived from the uterovaginal plexus.

Vulval Anatomy: Innervation

