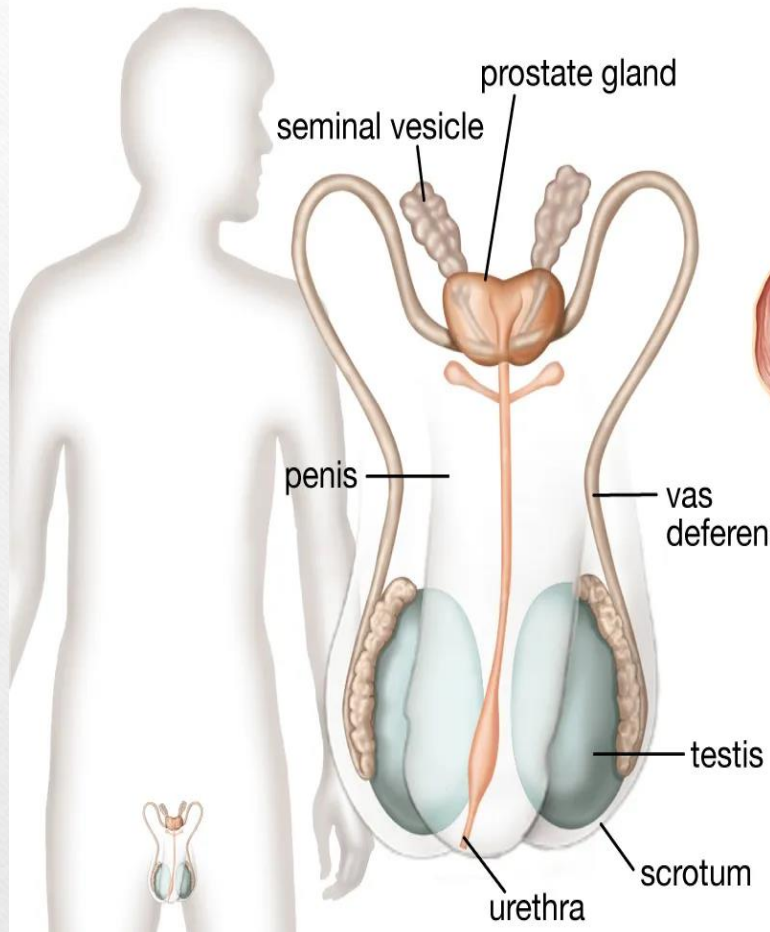


10th Grade

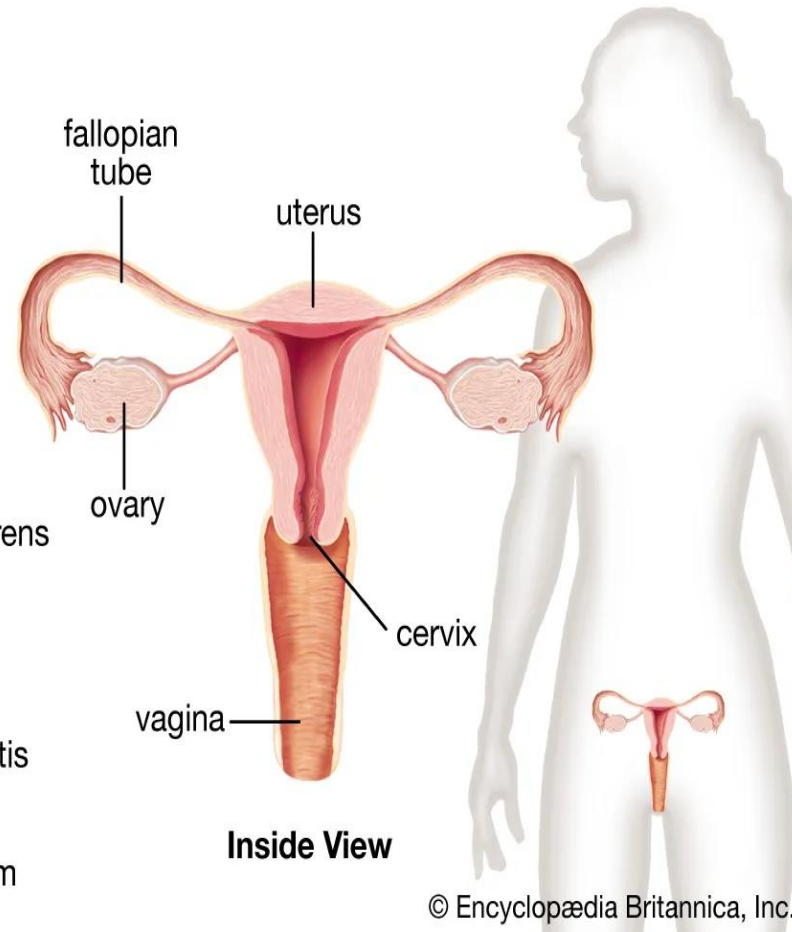
Male and female reproductive system

Male and Female reproductive system

Male Reproductive System



Female Reproductive System



What is Male reproductive system?

1. The male reproductive system includes a group of organs that make up a man's reproductive and urinary system. These organs do the following jobs within your body:
2. They produce, maintain and transport sperm (the male reproductive cells) and semen (the protective fluid around sperm).
3. They discharge sperm into the female reproductive tract.
4. They produce and secrete male sex hormones.
5. The male reproductive system is made up of internal and external parts.
6. Together, these organs help you urinate (rid your body of liquid waste materials), have sexual intercourse and make children.

How does the Male reproductive system function?

1. The entire male reproductive system is dependent on hormones. These are chemicals that stimulate or regulate the activity of your cells or organs. The primary hormones involved in the functioning of the male reproductive system are **follicle-stimulating hormone (FSH)**, **luteinizing hormone (LH)** and **testosterone**.
2. **FSH** and **LH** are produced by the pituitary gland. It's located at the base of your brain and it's responsible for many functions in your body. FSH is necessary for sperm production (spermatogenesis). LH stimulates the production of testosterone, which is necessary to continue the process of spermatogenesis. Testosterone is also important in the development of male characteristics, including muscle mass and strength, fat distribution, bone mass and sex drive.

What are the external male reproductive structure?

1. Most of the male reproductive system is located outside of your abdominal cavity or pelvis. The external parts of the male reproductive system include the penis, the scrotum and the testicles.

Penis

- 2.
3. The penis is the male organ for sexual intercourse. It has three parts:
4. **The root:** This is the part of the penis that attaches to the wall of your abdomen.
5. **The body or shaft:** Shaped like a tube or cylinder, the body of the penis is made up of three internal chambers. Inside these chambers there's a special, sponge-like erectile tissue that contains thousands of large spaces that fill with blood when you're sexually aroused. As the penis fills with blood, it becomes rigid and erect, which allows for penetration during sex. The skin of the penis is loose and elastic, allowing for changes in penis size during an erection.
6. **The glans:** This is the cone-shaped end of the penis. The glans, which is also called the head of the penis, is covered with a loose layer of skin called foreskin. This skin is sometimes removed in a procedure called circumcision.

1. **The opening of the urethra** — the tube that transports both semen and urine out of the body — is located at the tip of the glans penis. The penis also contains many sensitive nerve endings.
2. Semen, which contains sperm, is expelled (ejaculated) through the end of the penis when a man reaches sexual climax (orgasm). When the penis is erect, the flow of urine is blocked from the urethra, allowing only semen to be ejaculated at orgasm.

Scrotum

- 3.
4. The scrotum is the loose pouch-like sac of skin that hangs behind the penis. It holds the testicles (also called testes), as well as many nerves and blood vessels. The scrotum protects your testes, as well as providing a sort of climate control system. For normal sperm development, the testes must be at a temperature slightly cooler than the body temperature. Special muscles in the wall of the scrotum allow it to contract (tighten) and relax, moving the testicles closer to the body for warmth and protection or farther away from the body to cool the temperature.

Testicles (testes)

1.

2. The testes are oval organs about the size of very large olives that lie in the scrotum, secured at either end by a structure called the spermatic cord. Most men have two testes. The testes are responsible for making testosterone, the primary male sex hormone, and for producing sperm. Within the testes are coiled masses of tubes called seminiferous tubules. These tubules are responsible for producing the sperm cells through a process called spermatogenesis.

Epididymis

3.

4. The epididymis is a long, coiled tube that rests on the backside of each testicle. It carries and stores sperm cells that are created in the testes. It's also the job of the epididymis to bring the sperm to maturity — the sperm that emerge from the testes are immature and incapable of fertilization. During sexual arousal, contractions force the sperm into the vas deferens.

What are the internal male reproductive structure?

1. You have several internal organs — also called accessory organs — that play a big part in the male reproductive system. These organs include:
 - 2.
 3. **Vas deferens:** The vas deferens is a long, muscular tube that travels from the epididymis into the pelvic cavity, to just behind the bladder. The vas deferens transports mature sperm to the urethra in preparation for ejaculation.
 4. **Ejaculatory ducts:** These ducts are formed by the fusion of the vas deferens and the seminal vesicles. The ejaculatory ducts empty into the urethra.
 5. **Urethra:** The urethra is the tube that carries urine from the bladder to outside of your body. In males, it has the additional function of expelling (ejaculating) semen when you reach orgasm. When the penis is erect during sex, the flow of urine is blocked from the urethra, allowing only semen to be ejaculated at orgasm.

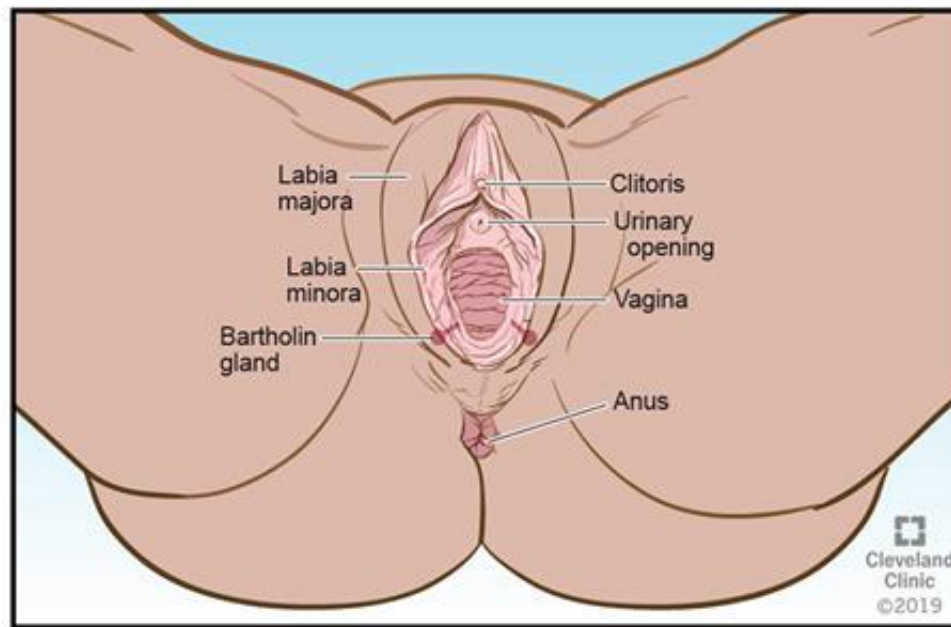
1. **Seminal vesicles:** The seminal vesicles are sac-like pouches that attach to the vas deferens near the base of the bladder. The seminal vesicles make a sugar-rich fluid (fructose) that provides sperm with a source of energy and helps with the sperms' ability to move (motility). The fluid of the seminal vesicles makes up most of the volume of your ejaculatory fluid, or ejaculate.
2. **Prostate gland:** The prostate gland is a walnut-sized structure that's located below the urinary bladder in front of the rectum. The prostate gland contributes additional fluid to the ejaculate. Prostate fluids also help to nourish the sperm. The urethra, which carries the ejaculate to be expelled during orgasm, runs through the center of the prostate gland.
3. **Bulbourethral glands:** The bulbourethral glands, or Cowper's glands, are pea-sized structures located on the sides of the urethra, just below the prostate gland. These glands produce a clear, slippery fluid that empties directly into the urethra. This fluid serves to lubricate the urethra and to neutralize any acidity that may be present due to residual drops of urine in the urethra.

How does the Female reproductive system function?

1. The female reproductive system provides several functions. The ovaries produce the egg cells, called the **ova** or **oocytes**. The oocytes are then transported to the **fallopian tube** where fertilization by a sperm may occur. The fertilized egg then moves to the uterus, where the uterine lining has thickened in response to the normal hormones of the reproductive cycle. Once in the uterus, the fertilized egg can implant into thickened uterine lining and continue to develop. If implantation does not take place, the uterine lining is shed as menstrual flow. In addition, the female reproductive system produces female sex hormones that maintain the reproductive cycle.
2. During **menopause**, the female reproductive system gradually stops making the female hormones necessary for the reproductive cycle to work. At this point, menstrual cycles can become irregular and eventually stop. One year after menstrual cycles stop, the woman is considered to be **menopausal**.

What are the external female reproductive structure?

1. The female reproductive anatomy includes both external and internal structures.
2. The function of the external female reproductive structures (the genital) is twofold: To enable sperm to enter the body and to protect the internal genital organs from infectious organisms.



The main external structures of the female reproductive system include:

Labia majora: The labia majora (“large lips”) enclose and protect the other external reproductive organs. During puberty, hair growth occurs on the skin of the labia majora, which also contain sweat and oil-secreting glands.

Labia minora: The labia minora (“small lips”) can have a variety of sizes and shapes. They lie just inside the labia majora, and surround the openings to the vagina (the canal that joins the lower part of the uterus to the outside of the body) and urethra (the tube that carries urine from the bladder to the outside of the body). This skin is very delicate and can become easily irritated and swollen.

Bartholin’s glands: These glands are located next to the vaginal opening on each side and produce a fluid (mucus) secretion.

Clitoris: The two labia minora meet at the clitoris, a small, sensitive protrusion that is comparable to the penis in males. The clitoris is covered by a fold of skin, called the prepuce, which is similar to the foreskin at the end of the penis. Like the penis, the clitoris is very sensitive to stimulation and can become erect.

What are the internal male reproductive structure?

1. The **internal reproductive organs** include:
2. **Vagina:** The vagina is a canal that joins the cervix (the lower part of uterus) to the outside of the body. It also is known as the birth canal.
3. **Uterus (womb):** The uterus is a hollow, pear-shaped organ that is the home to a developing fetus. The uterus is divided into two parts: the cervix, which is the lower part that opens into the vagina, and the main body of the uterus, called the corpus. The corpus can easily expand to hold a developing baby. A canal through the cervix allows sperm to enter and menstrual blood to exit.
4. **Ovaries:** The ovaries are small, oval-shaped glands that are located on either side of the uterus. The ovaries produce eggs and hormones.
5. **Fallopian tubes:** These are narrow tubes that are attached to the upper part of the uterus and serve as pathways for the ova (egg cells) to travel from the ovaries to the uterus. Fertilization of an egg by a sperm normally occurs in the fallopian tubes. The fertilized egg then moves to the uterus, where it implants to the uterine lining.

Male vs Female reproductive system

	Male reproductive system	Female reproductive system
Definition	Male reproductive system is the organ that produces male gametes	Female reproductive system is the organ that produces female gametes
Main components	Scrotum, testes, spermatic ducts, sex glands and penis	Ovaries, fallopian tubes, uterus, vagina and vulva.
Hormones produced	testosterone	Progesterone, estrogen
Location in the body	Mostly located outside the body	Mostly located inside the body except for the vulva.
Gametes production	Takes place in cold environment	Takes place in warm environment