

MALE REPRODUCTIVE SYSTEM

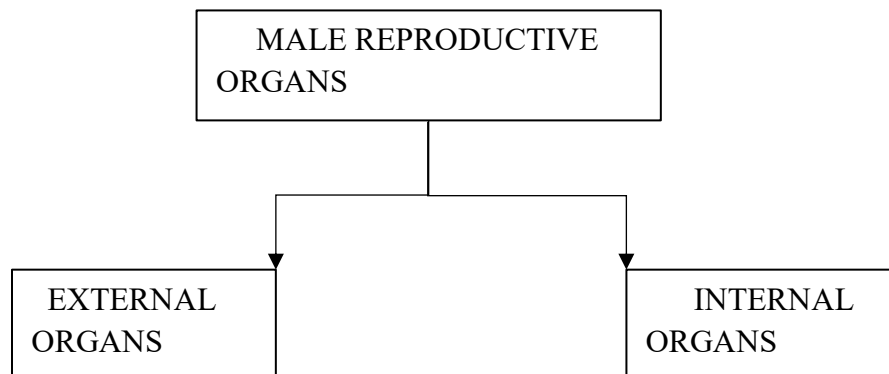
INTRODUCTION:

- Both male and female reproductive tissues develop similar in early stages of fetus development until small amount of testosterone released in males.
- The tissue that develops Penis in males produce Clitoris in females.
- The tissue that develops Scrotum in males produce Labia in females. Hence, they are similar in structures.
- Both male and female reproductive system working together to produce a new life.

Male Reproductive System:

It contains external and internal reproductive organs.

It also combined with male urinary system, which are not involved in reproduction



External Organs:

- Testes
- Scrotum
- Penis

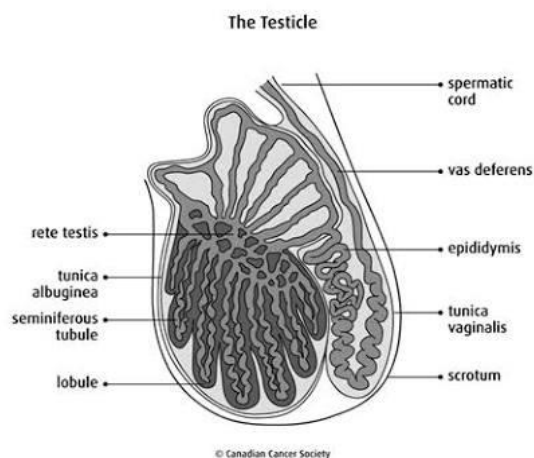
Internal Organs:

- Epididymis
- Vas deference
- Ejaculatory ducts
- Accessory glands
 - Seminal vesicle
 - Prostate gland
 - Bulbourethral gland

EXTERNAL GENETALIA:

TESTES:

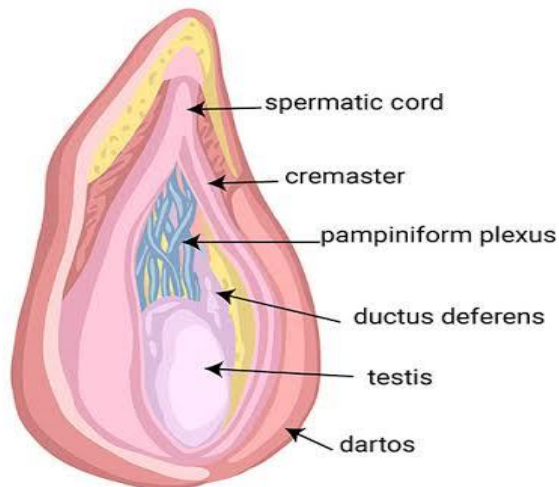
- It is an oval shaped gland
- Its size is about 5cm long and 2.5cm width
- A pair of testes lodged into the scrotum, secured at either end by a structure called the spermatic cord.
- Its main function is to produce and release Testosterone, the primary male sex hormone.
- The coiled mass of tubes present here are called seminiferous tubules, where Spermatogenesis, the process of sperm production, takes place here.



SCROTUM:

- It is loose pouch-like sac of skin that hangs behind the penis.
- It holds testicles also contains many nerves and blood vessels.
- The scrotum has a protective function and act as a climate control system for testes.
- For normal sperm production the testes must be cooler than normal body temperature.
- The presence of scrotum outside the body reduces the temperature 2-4° c less than the body temperature.

Scrotum



Two important thermal regulators of testes:

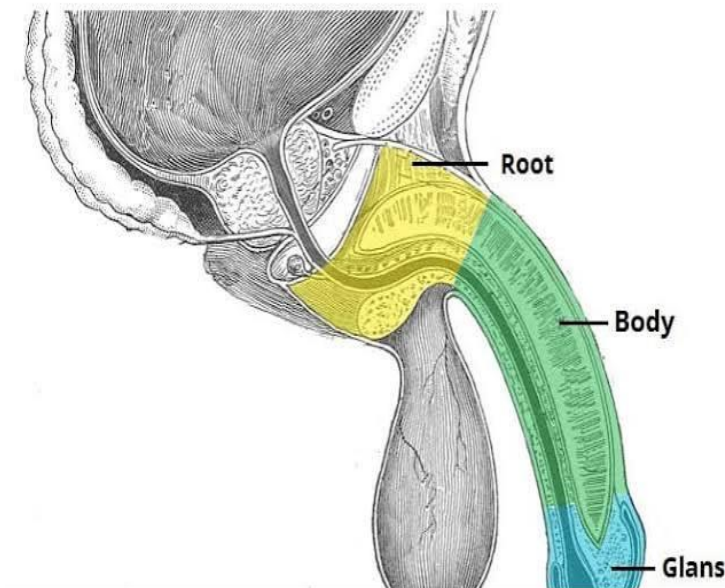
Tunica dartos – acts as a natural thermostat to regulate the temperature of the testicles for healthy sperm production

Pampiniform plexus – a network of small veins that surrounds the testicular artery to regulate the testicular temperature.

PENIS:

- It is for male sexual intercourse and for urination
- It has three parts : Root, Body/Shaft, and Glans

- The root attaches to the wall of the abdomen
- The glans is the cone shaped end of the penis, is covered with a loose layer of skin called foreskin (this skin removal procedure called – circumcision)
- The tube inside the penis called urethra, transport urine during urination and semen during ejaculation and exit them at the end of the urethral opening called glans penis.
- The body of the penis is cylindrical shape and consists of three internal chambers.
- These chambers are made up of special, sponge like erectile tissue
- This tissue contains thousands of large spaces that fill with blood during sexual orgasm.
- When the penis filled with blood, it becomes rigid and erect, which allows for penetration during sexual intercourse.
- The skin of the penis is loose and elastic to allow for changes in penis size during erection.



INTERNAL GENETALIA:

EPIDIDYMIS:

- It is a long, coiled tube that lies on the backside of each testicle
- It functions in carrying and storing the sperm cells that are produced in the testicles.
- It acts as a maturational spot of sperm cells
- During sexual arousal, contraction forces the sperm cell into vas deference.

VAS DEFERENCE:

- It is a tube 45cm long
- It travels from the epididymis into the pelvic cavity, to just behind the bladder
- It transports mature sperm into urethra in preparation for ejaculation

EJACULATORY DUCTS:

- It is formed by fusion of the vas deference and seminal vesicle
- It empties into the urethra

URETHRA:

- It is a tube that carries urine from the bladder to outside of the body
- It also functions as expelling (ejaculation) semen during sexual orgasm
- When the penis is erect during sex the flow of urine is blocked from the urethra by sphincters muscle, allowing only semen to be ejaculated.

SEMINAL VESICLE:

- It is a pair of glands, attached to the vas deference near the base of the bladder.
- Its secretions support 60% of the seminal plasma
- It produces sugar-rich (fructose) fluid which can be used as an energy source to the sperm, which aids its motility

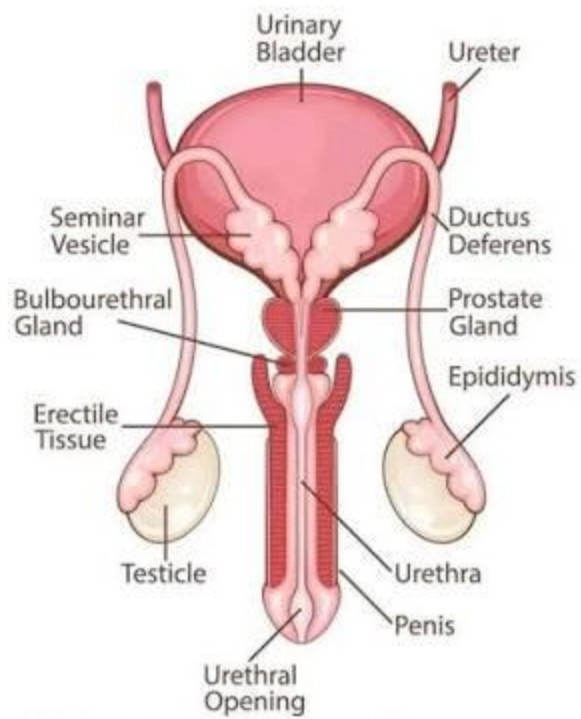
- It produces a fluid as an alkaline
- It also produces protein called semenogelin 1 & 2, which reduces the sperm motility in female reproductive system by forming the sperm cell as coagulum.
- Its secretion also contain prostaglandin that helps to stimulate muscular contractions in female reproductive tract to assist sperm transport and enhance mobility.

PROSTATE GLAND:

- It is a walnut-sized organ, located below the urinary bladder in front of the rectum.
- It contributes additional volume such as 30% to the seminal volume
- Its secretion contains citrate, which helps to nourish the sperm

BULBOURETHRAL GLAND:

- It's also known as Cowper's gland
- It is pea-sized structures located on the sides of the urethra just below the prostate gland.
- It contributes to 5% of the seminal plasma volume.
- It produces protease called Prostate Specific Antigen (PSA) which breaks down semenogelin 1 & 2 and thus aids complete motility of the sperm cell within the female reproductive system



Male Reproductive
system