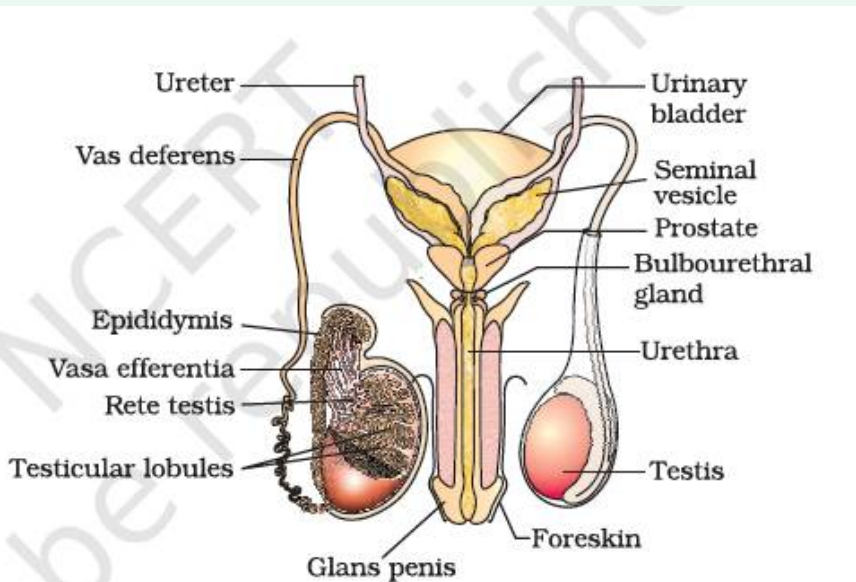
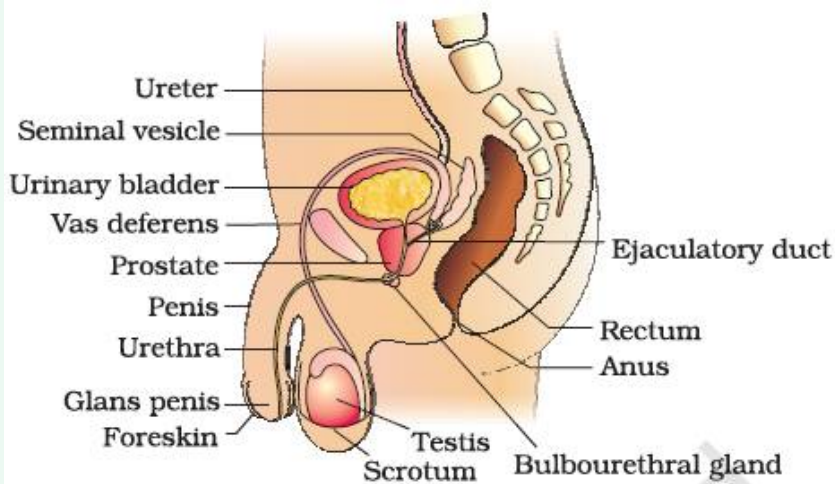


# Male Reproductive System Overview



**Figure 2.1(b)** Diagrammatic view of male reproductive system (part of testis is open to show inner details)



**Figure 2.1(a)** Diagrammatic sectional view of male pelvis showing reproductive system

Human Reproductive System

Lecture notes based on the diagram contents given here.

## Male Reproductive System - Lecture Notes

### 1. Overview of Male Reproductive System Components

The male reproductive system comprises primary reproductive organs (testes), secondary ducts

and glands, and external genitalia, all involved in the production, nourishment, and delivery of sperm and associated fluids.

## 2. Primary Reproductive Organ: Testis

- **Location:** The testes are housed within the scrotum, an external sac that maintains the temperature lower than body temperature, essential for sperm production.
- **Structure:** Each testis is divided into compartments containing seminiferous tubules where spermatogenesis (sperm production) occurs.
- **Components:** Inside the testis, the seminiferous tubules connect to the **rete testis** and lead into the **epididymis** through the **vasa efferentia**.

## 3. Epididymis and Vas Deferens

- **Epididymis:** A coiled tube where sperm mature and are stored temporarily.
- **Vas Deferens:** A muscular tube that transports sperm from the epididymis towards the ejaculatory duct, eventually merging into the urethra.

## 4. Accessory Glands

- **Seminal Vesicles:** Glands that produce a fluid rich in fructose, which provides energy to sperm. The secretion also contains prostaglandins and proteins that help in sperm motility and survival.
- **Prostate Gland:** Surrounds the urethra and adds a slightly alkaline, milky fluid to semen, improving sperm motility.
- **Bulbourethral (Cowper's) Glands:** Located near the base of the penis, these glands secrete a clear fluid that lubricates the urethra for sperm passage and neutralizes acidic traces in the urethra.

## 5. Urethra

- A shared channel for urine and semen, the urethra extends through the penis and opens to the external environment.
- During ejaculation, the flow of urine is blocked, allowing only semen to pass through the urethra.

## 6. External Genitalia

- **Penis:** The organ through which semen is ejected from the body. It consists of erectile tissue that facilitates penetration during intercourse.
- **Glans Penis:** The sensitive tip of the penis, covered by foreskin (prepuce), which can be retracted in uncircumcised individuals.

## 7. Sperm Transport Pathway

- Sperm are produced in the seminiferous tubules of the testes → transferred to the epididymis for maturation → moved to the vas deferens → propelled through the ejaculatory ducts → mixed with glandular fluids in the urethra → expelled through the penis during ejaculation.

## 8. Support Structures

- **Scrotum:** Maintains optimal temperature for spermatogenesis by contracting or relaxing to move testes closer or farther from the body.

- **Ejaculatory Ducts:** Formed by the merging of vas deferens and seminal vesicles ducts, transporting semen to the urethra.

### **Summary**

The male reproductive system is designed to produce, mature, and transport sperm cells, supported by accessory glands that enhance sperm viability and motility, facilitating successful fertilization. The urethra serves as the final conduit for ejaculation, controlled by a series of glands and muscular structures.