

MALE REPRODUCTIVE SYSTEM

STRUCTURES of the Male Reproductive System (1)

Reproductive Organs:

- Testes
- Epididymus
- Vas deferens
- Ejaculatory duct
- Penis
- Urethra

Accessory Glands:

- Seminal vesicles
- Prostate Gland
- Bulbourethral (Cowper's) gland

FUNCTIONS (1 & 2)

- Penile erection
- Ejaculation (emission and expulsion)
- Sperm production
- Hormonal controls

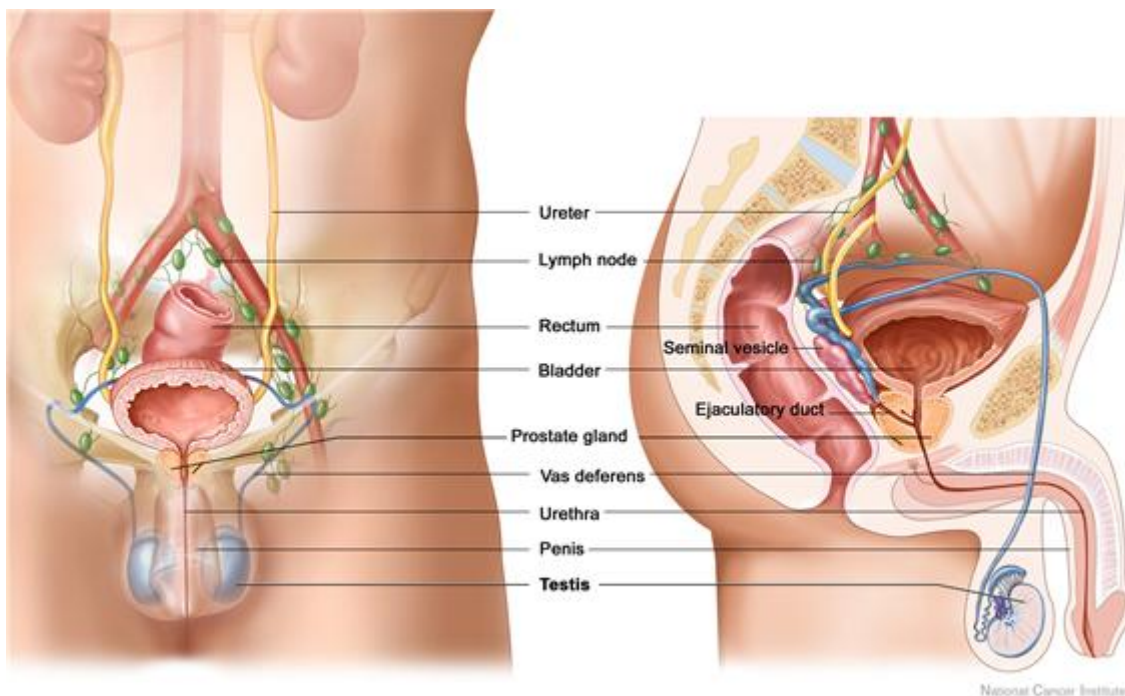


Figure 1: Male Reproductive System and Urinary System (3)

PENIS (2)

-Two major reproductive functions

1. Penile erection
2. Ejaculation

- Consists of nerves, blood vessels, fibrous tissue, and three parallel cylinders of spongy tissue: **corpora cavernosa** (x2) and **corpus spongiosum**
- The portion of the penis that extends internally into the pelvic cavity is referred as the **root**
- The external portion of the penis is known as the **shaft** and the head (tip) is called the **glans**
- The loose covering that folds over the glans of the penis is called the **foreskin**

Penile Erection & Ejaculation (4)

- The arteries supplying blood to the **corpora cavernosa** and **corpus spongiosum** respond to stimuli by dilating
- The widened arteries then dramatically increase blood flow to these erectile areas
- At the same time, muscles around the veins from the penis tighten, slowing the outflow of blood and elevating blood pressure in the penis
- At climax, **ejaculation** occurs as a result of muscle contraction forcing semen into the **urethra**

TESTES (1)

-Two major functions:

1. Secretion of sex hormones
2. Sperm production

Sex Hormones (1)

- The **Leydig cells** are found between the lobes in the testes
- These cells secrete **testosterone**, which plays a key role in sperm formation and the development of male sexual traits

Sperm Production and Travel (2)

- Sperm production takes place in the **seminiferous tubules** of the testes
- The sperm then move through a maze of tiny ducts into the **epididymus** where they mature
- The sperm eventually drain into the **vas deferens** that travels up through the scrotum inside the spermatic cord
- The vas deferens continues upward to the bladder where it is joined by the excretory duct of the seminal vesicle, forming the **ejaculatory duct**
- The end of each ejaculatory duct then opens to the **urethra**

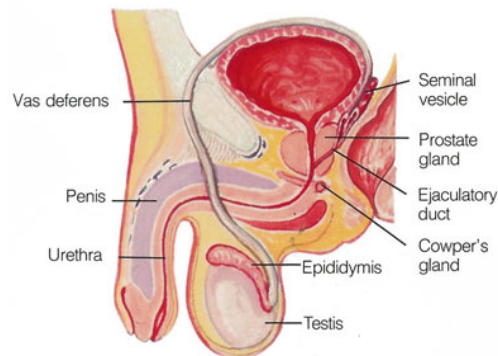


Figure 2: Male Reproductive Tract (5)

Sources cited

- (1) C Starr & R Taggart. *Biology: The Unity and Diversity of Life* (10th ed). Thomson Brooks/Cole. 2004.
- (2) R Crooks & K Baur. *Our Sexuality* (9th ed). Thomson Wadsworth. 2005.
- (3) Cancer Topics (National Cancer Institute) <http://www.cancer.gov/cancertopics/pdq/treatment/testicular/patient>
- (4) Biology of the Male Reproductive System (The Merck Manuals) <http://www.merck.com/mmhe/sec21/ch237/ch237b.html>
- (5) Male Reproductive Tract (Male Fertility Specialists) http://www.malefertility.md/images/sperm_blockage.jpg

For further information:

Men's Health Center (Mayo Clinic) <http://www.mayoclinic.com/health/mens-health/MC99999>
(includes information on prostate health, sexual health and fertility)

Sexually Transmitted Diseases (CDC) <http://www.cdc.gov/STD/>
(extensive look at STDs including general information, facts, statistics and treatments)