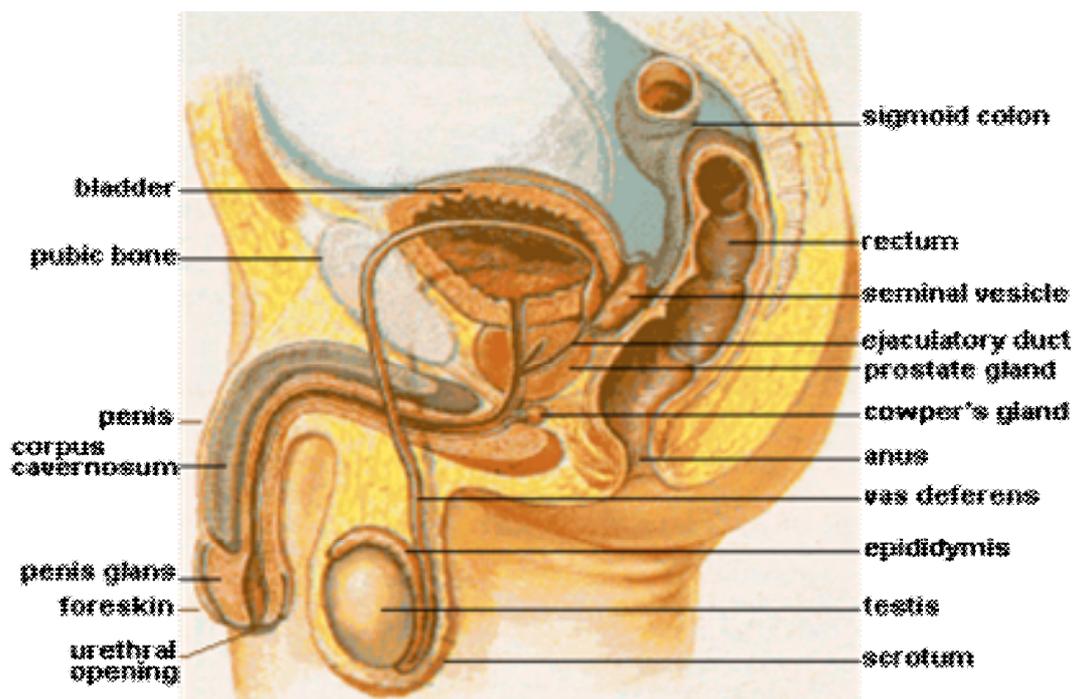


## 1. Major parts of male reproductive system.



Source:

[http://en.wikibooks.org/wiki/Human\\_Physiology/The\\_male\\_reproductive\\_system](http://en.wikibooks.org/wiki/Human_Physiology/The_male_reproductive_system)

### 1.1. Testes

In the male fetus, the testes develop near the kidneys, and then descend into the scrotum just before birth. Each testis is about 1.5 inches long and 1 inch diameter. Testosterone is produced in the testes which stimulates the production of sperm as well as give secondary sex characteristics at the beginning of puberty.

Testes are held in sacs called scrotum (a sac of skin between the upper thighs). The major function of the scrotal sac is to keep the temperature of testes lower than 37 °C. The external appearance of the scrotum varies for the same individual depending upon temperature and the subsequent contraction or relaxation of two muscles. The muscles are the dartos and cremaster and contract involuntarily to move the testes closer to the heat of the body in the pelvic region. On the contrary, they relax at a suitable temperature to cause the testes down and the scrotum become flaccid.

The temperature of the testes is maintained at about thirty-five degrees Celsius which below normal body temperature. Temperature should be lower than normal in order that spermatogenesis (sperm production) takes place.

Around 90% of the weight of each testis consists of seminiferous tubules. The seminiferous tubules are the functional units of the testis, where spermatogenesis takes place. Once the sperm are produced, they moved from the seminiferous tubules into the rete testis for further maturation. In between the seminiferous tubules within the testes, are interstitial cells, or, Cells of Leydig. They are responsible for secreting the male sex hormones (i.e., testosterone).a Sertoli cell (a kind of sustentacular cell) is a 'nurse' cell of the testes which is part of a seminiferous tubule.

It has also been called the "mother cell." Because provides both secretory and structural support for the sperm development.,

### **1.2. Epididymis**

Epididymis is a tube that is about 20 feet long coiled on the posterior surface of each testis. Within the epididymis, sperm complete maturation and the flagella become ready to function. It is also a site of storing the sperm by Ductus Deferens until the next ejaculation. Smooth muscle in the wall of the epididymis propels the sperm into the ductus deferens. The sperm are transported from the testis to the epididymis through a series of efferent ductules.

### **1.3. Ductus Deferens**

The ductus (vas) deferens, also called sperm duct, or, spermatic deferens, extends from the epididymis in the scrotum on its own side into the abdominal cavity through the inguinal canal. The smooth muscle layer of the ductus deferens contracts in waves of peristalsis during ejaculation. In addition, the testes receive blood through the testicular arteries (gonadal artery). Venous blood is drained by the testicular veins. The right testicular vein drains directly into the inferior vena cava, and the left one into the left renal vein.

### **1.4. Seminal Vesicles**

The pair of seminal vesicles is posterior to the urinary bladder. They secrete fructose to provide an energy source for sperm and alkalinity to enhance sperm mobility. The duct of each seminal vesicle joins the ductus deferens on that side to form the ejaculatory duct. There are two ejaculatory ducts; each receives sperm from the ductus deferens and the secretions of the seminal vesicle on its own side. Both ejaculatory ducts empty into the single urethra.

### **1.5. Prostate Gland**

The prostate gland is a muscular gland surrounding the urethra. The smooth muscle of the prostate gland contracts during ejaculation to contribute to the expulsion of semen from the urethra.

### **1.6. Bulb urethral Glands**

The bulb urethral glands also called Cowper's glands located below the prostate gland and empty into the urethra. The alkalinity of seminal fluid helps neutralize the acidic vaginal pH and permits sperm mobility in what might otherwise be an unfavorable environment.

### **1.7. Penis**

The penis is an external genital organ. The distal end of the penis is called the glans and is covered with a fold of skin called the prepuce or foreskin. Within the penis masses of erectile tissue, each consists of a framework of smooth muscle and connective tissue that contains blood sinuses, which are large, irregular vascular channels.