

Male Reproductive System: Testes

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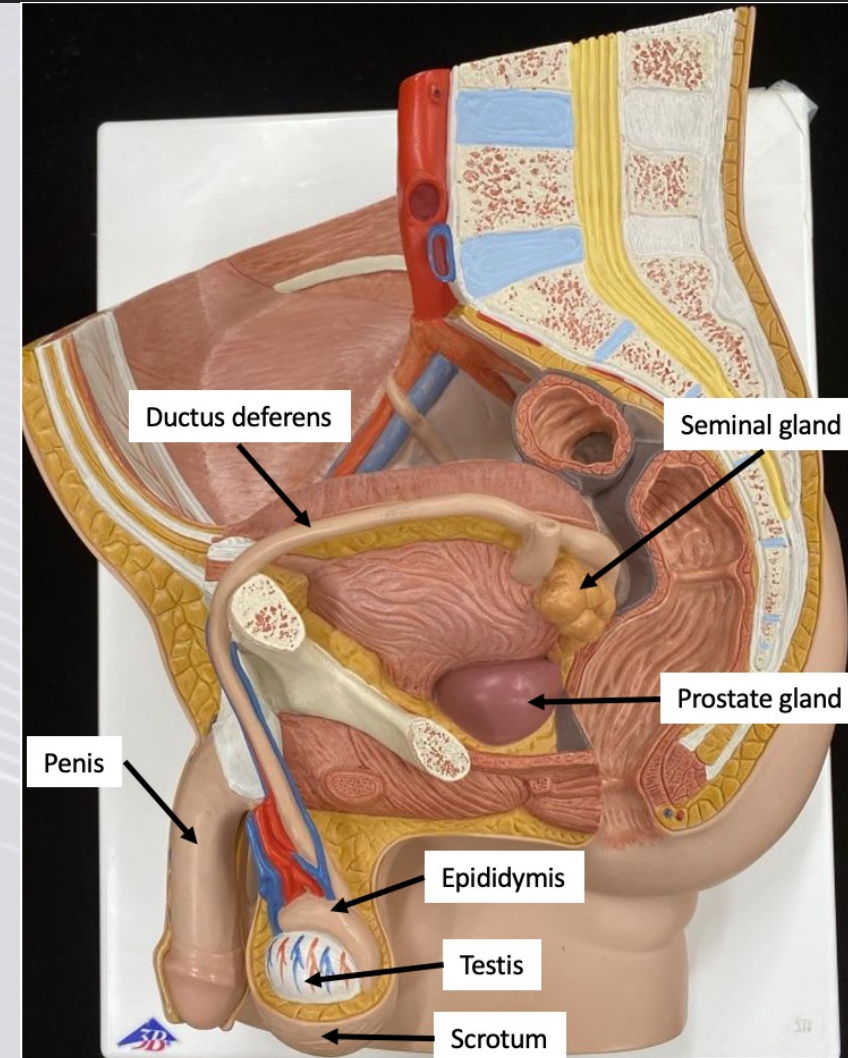
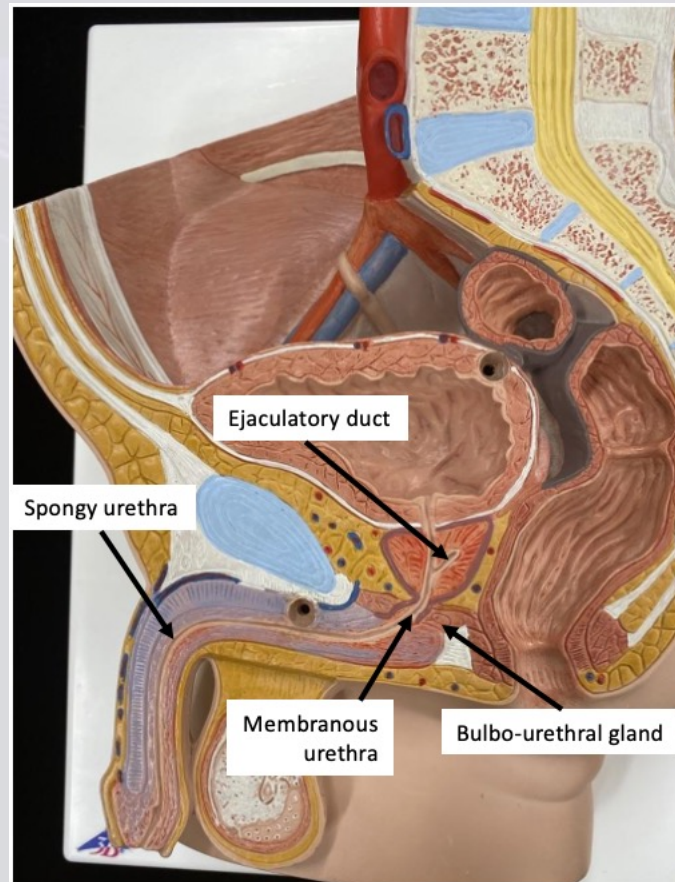


Reproductive System Functions

- Components:
 - ❖ Reproductive organs
 - Gonads
 - ❖ Reproductive tract
 - ❖ Accessory glands and organs
 - ❖ Perineal structures
- Male
 - Gonads = testes (singular: testis)
 - ✓ Hormones = androgens
 - ✓ Produce gamete = sperm
- Female
 - Gonads = ovaries
 - ✓ Hormones = estrogen and progesterone
 - ✓ Produce gamete = oocyte

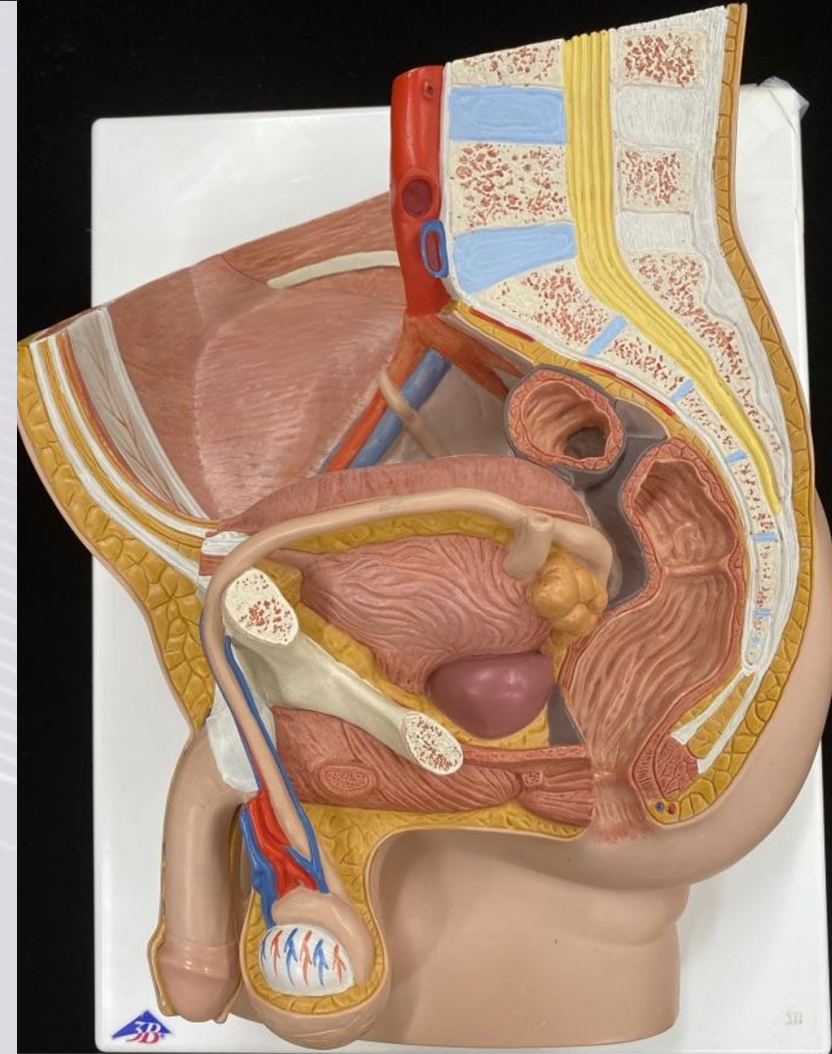
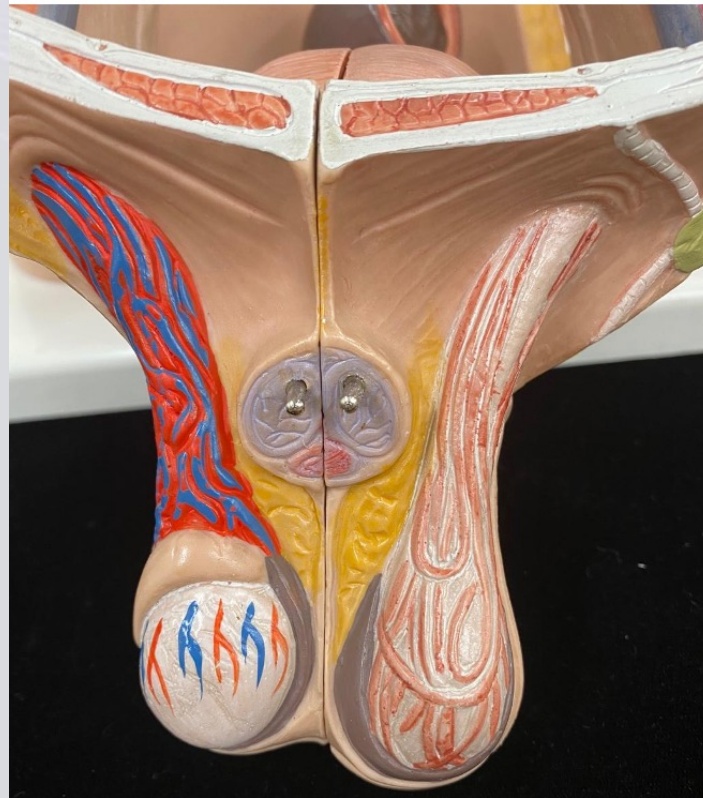
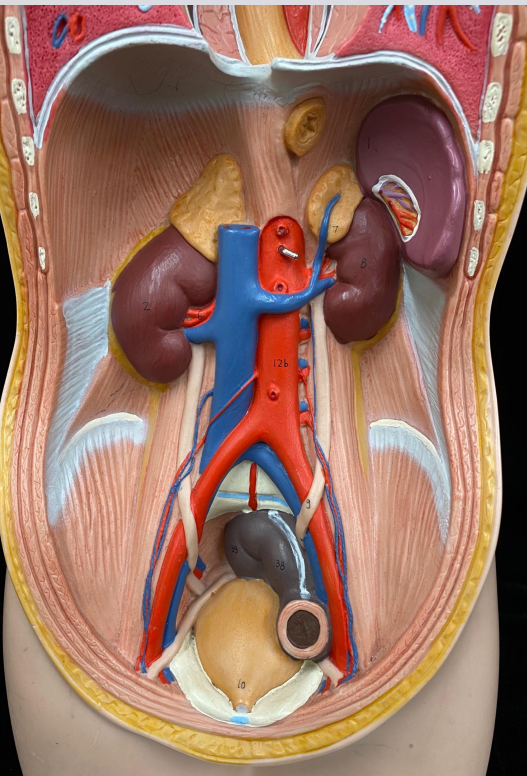
Male Reproductive System Major Components

- Ducts
 - ❖ Ejaculatory duct
 - ❖ Urethra
 - Membranous urethra
 - Spongy urethra
 - ❖ Ductus deferens
 - ❖ Epididymis
- Gonad
 - ❖ Testis
- External genitalia
 - ❖ Penis
 - ❖ Scrotum
- Accessory glands
 - ❖ Seminal gland
 - ❖ Prostate gland
 - ❖ Bulbo-urethral gland



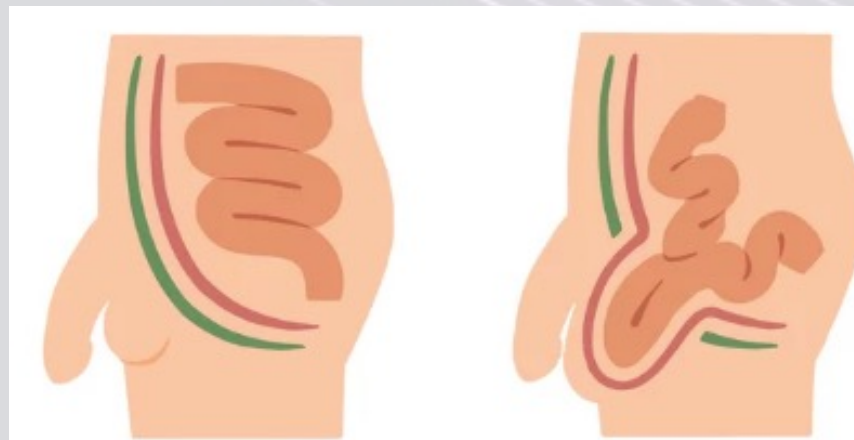
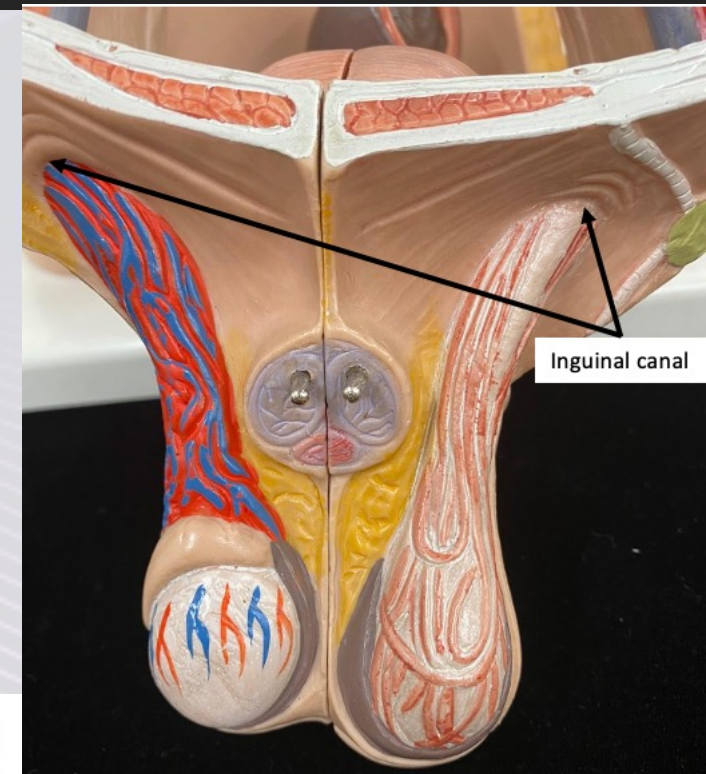
Testes

- Hang within the scrotum
- During development
 - ❖ Form close to kidneys
 - ❖ Move down → descent of the testes
 - Spermatic cord



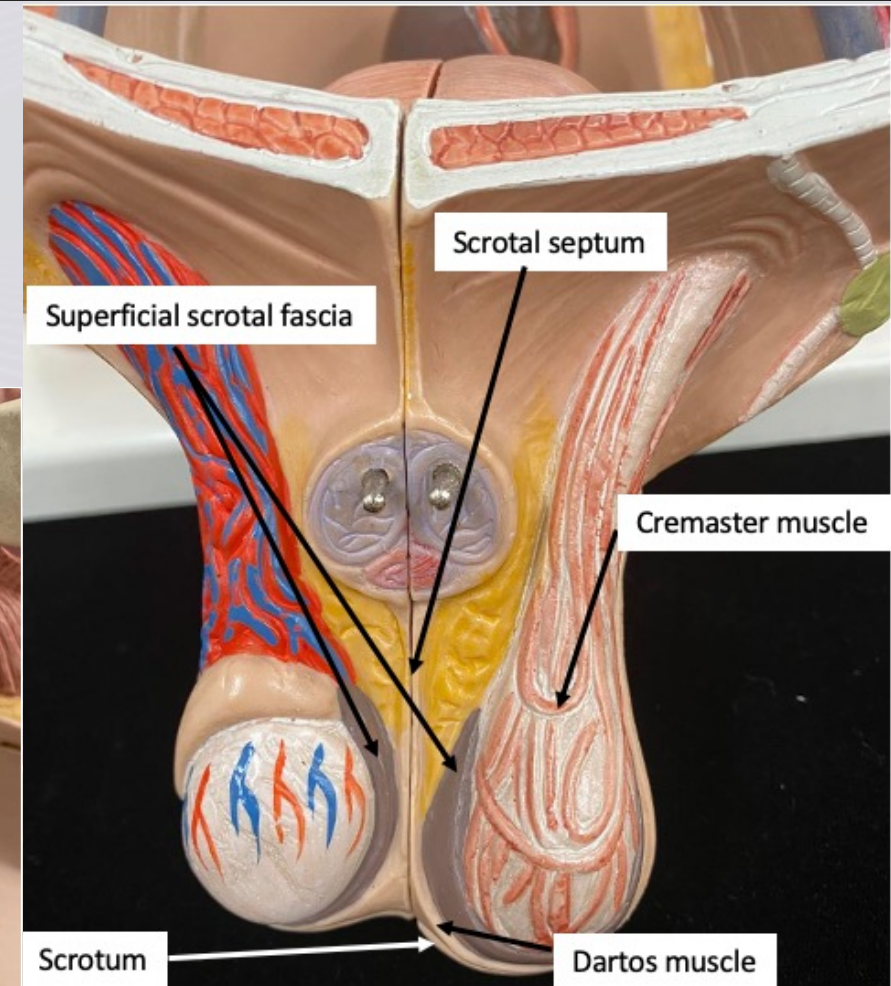
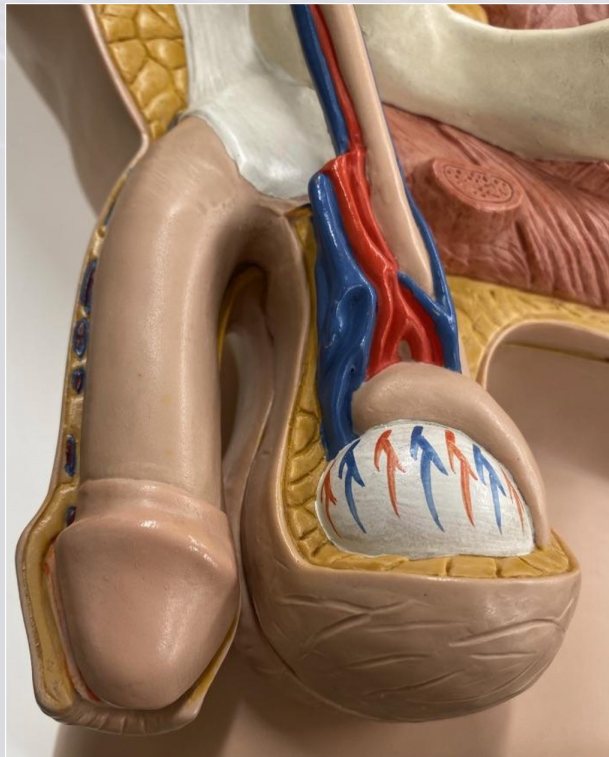
Spermatic Cord

- Ductus deferens
- Testicular artery
- Testicular veins → pampiniform plexus
- Nerves → ilioinguinal and genitofemoral



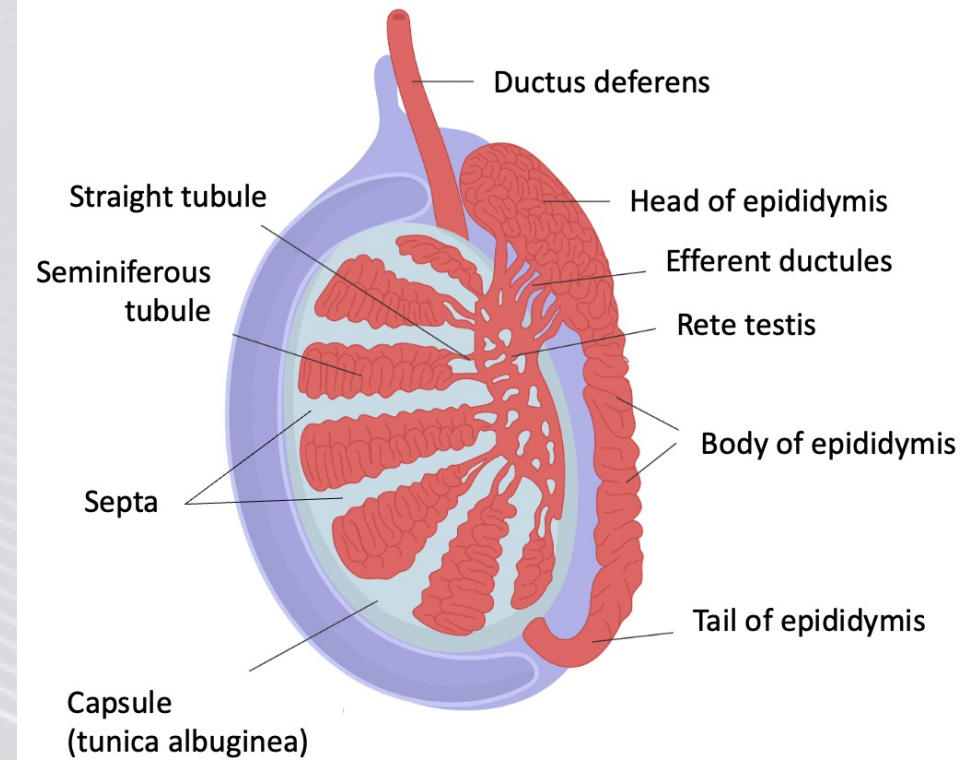
Scrotum and Testes Positioning

- Scrotal layers
 - ❖ Scrotal skin
 - ❖ Dartos muscle
 - Scrotal wrinkling
 - Temperature control
 - Indirect testes elevation
 - ❖ Superficial scrotal fascia
- Cremaster muscle
 - ❖ Elevates testes
 - Cremasteric reflex



Testis Anatomy

- Tunica albuginea
 - ❖ Septa
 - Lobules
- Seminiferous tubule
 - ❖ Sperm production
 - ❖ Interstitial cells of Leydig
 - Produce testosterone
 - ❖ Sertoli cells (nurse cells)
 - Maintenance of the blood-testis barrier
 - Support of spermatogenesis
 - Support of spermiogenesis
 - Secretion of inhibin
 - Secretion of androgen-binding protein
- Straight tubule
- Rete testis
- Efferent ductules
- Epididymis



Sperm

- Head
 - ❖ Acrosome (acrosomal cap)
- Middle piece
 - ❖ Neck
 - Centrioles
 - ❖ Mitochondria
- Tail
 - ❖ Flagellum

