Male Reproductive System and its Hormonal Control: (486)

- forms 8 weeks into pregnancy if testosterone is released within the fetus

- becomes functional during puberty (12-13 yrs old), spermatogenesis begins and continues until death

exterior parts:

Penis - transfers sperm cells into the female

Testes - bundles of coiled up seminiferous tubules (almost 250 m !!!!), the site of meiosis and spermatogenesis. Contains Sertoli cells which care for the developing sperm. Mature sperm move from here to be stored in the epididymis.

Scrotum - holds the testes outside the body so they are several degrees cooler than internal body temp.....better sperm health and motility

3% infants...testes not descended
Interior parts:

**Seminal vesicles** make a lubricating mucus that also contains fructose to supply sperm mitochondria with energy.

**Prostate and Cowper’s glands** secrete a basic fluid to counteract the acidity of the female system.

(Semen is a combination of sperm cells, and fluids from all three glands)

When sexually aroused, blood flow to penile tissue produces an erection, and stimulation of the male nervous system (sympathetic and parasympathetic) leads to ejaculation.

Sperm cells travel from the epididymis inside each testes, through the **vas deferens** (or sperm duct) around each side of the bladder, combine with fluid from the **seminal vesicle**, then the **prostate**, and out through the male’s **urethra**...leaving the body.
Male Sexual Hormones (androgens)...

- puberty starts with
  - release of GnRH from the hypothalamus
  - this stimulates the production of FSH and LH in ant. Pit gland
  - testosterone provides negative feedback

- sperm production begins, activity in sem. tubules also makes inhibin, antagonist to FSH, this loop controls speed of spermatogenesis
- LH (leuteinizing hormone)...stimulates interstitial cells...they make antagonist testosterone. Sex characteristics develop....organ enlargement, larynx, muscle mass, body hair. Fat deposition is inhibited, muscle mass promoted.