

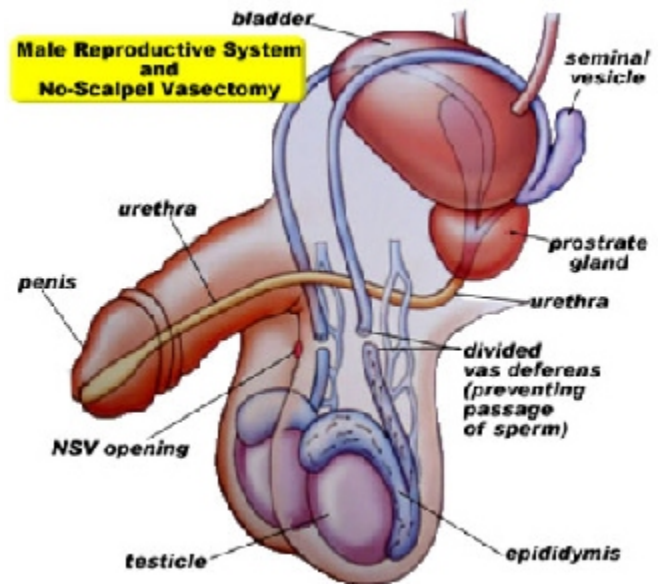
HUMAN REPRODUCTION

22 May 2000, 22 May 2002, 23 May 2003, 23 May 2005, 24 May 06, 23May08, 22May09, 21May10
Campbell's 5th: 918-927, 6th: 980-989, 7th: 964-978, Sadava: 896-918

System "designed" to
 produce gametes
 facilitate their union
 nourish the product to birth
 Deliver infant at term

Gonads house "germ line" cells by meiosis to produce haploid gametes.
gonadotropins from the anterior pituitary regulate reproductive system

Ant. Pit. Hormone	effect in female	effect in male
Follicle Stimulating Hormone	development of follicles	spermatogenesis
Luteinizing Hormone	ovulation	testosterone production



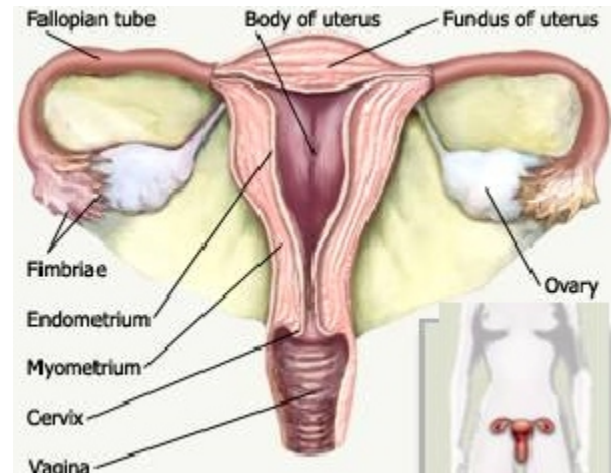
MALE (p 906) testes, epididymus, vas deferens, seminal vesicles, prostate, urethra, corpus spongiosum, corpus cavernosi, bulbourethral glands

Spermatogenesis: (p. 907) mitosis followed by meiosis: seminiferous tubules, spermatogonia, 1° spermatocytes, 2° spermatocytes, spermatids, spermatozoa

MALE SEXUAL RESPONSE:

parasympathetic arousal, erection by constricted veins, blood trapped
emission, initial stage of orgasm, mixing fluids and sperm together
sympathetic ejaculation, loss of erection

FEMALE: (909) "Plumbing": ovaries, fimbria, fallopian tubes, uterus, endometrium, cervix, vagina



EXTERNAL GENITALIA: hood, clitoris (enclosed), urethral opening, labia minora and majora, vaginal orifice, anus, perineum.

HORMONAL REGULATION: two cycles within monthly cycle: **FSH, estrogen, LH, progesterone**

OVARIAN CYCLE: gonadotropin effects, start with **primordial follicle** (910):

- estrogen effects:**
- 1) stops FSH release,
 - 2) inhibits follicle growth,
 - 3) stimulates endometrial proliferation,
- HIGH estrogen from Graafian follicle:**
- 4) triggers ant pituitary to release luteinizing hormone, triggers ovulation
 - 5) sexual receptivity

upon ovulation, **corpus luteum** forms in response to L.H., releases progesterone, (which inhibits release of L.H.). Because corpus luteum depends on L.H. for sustenance, **luteolysis** results if no pregnancy.

UTERINE CYCLE: (911) estrogen causes endometrium proliferation, progesterone causes secretion and support of endometrium. Withdrawal of progesterone causes shedding (menstruation).

Pharmacology:

Fertility pills	FSH	stimulates follicle development
Birth control	estrogen	inhibits FSH production by anterior pituitary
uterine shedding	RU486	progesterone analog, blocks progesterone receptors
"Morning after"	plan B	progesterone analog, uncertain mechanism

