

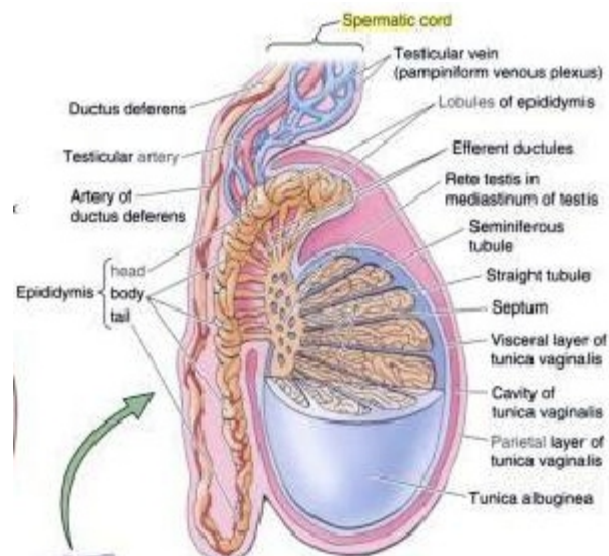
MALE REPRODUCTIVE SYSTEM

May 4, 1977, 13 May 1982, rvsd 5/22/97, 11 May 05 (see also Balinsky. p 61 etc.)(Ganong),
 19May08, 17May10
 Martini's 5th: p. 1016-1034, 6th: 1047-1064, 7th: 1031-1047, 8th: 1043-1059

Draw and label: OVERVIEW: P 1043

TESTES STRUCTURE AND FUNCTION: (p 1046)

Tunica albuginea	capsule around testis
septa	between lobules
seminiferous tubules (1035)	form spermatozoa
spermatogonia	line basement membrane
spermatocytes (1° & 2°)	pushed away from basement membrane
Sertoli cells	nurse cells
Interstitial cells of Leydig	synthesize testosterone
rete testis (P 1052)	collects differentiated spermatozoa
efferent ducts	ciliated, carries to epididymus
head of epididymis	spermatozoans mature
tail	
vas deferens	ciliated, loops over ureter
spermatic cord	See previous page of notes



SCROTUM: (1046 & 1045)

Descent of testes caused out pouching of

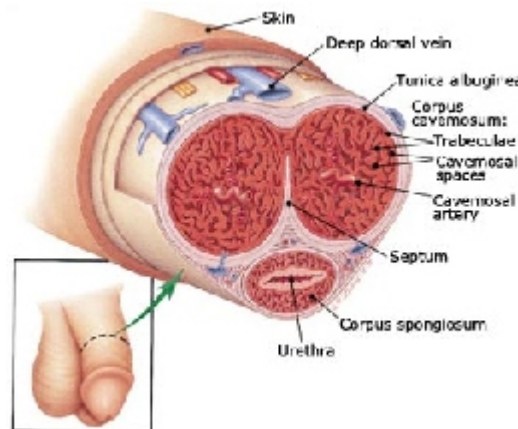
peritoneum	(vaginal process) (note that the peritoneum does not contain the testes, they are retroperitoneal)
gubernaculum	<i>fibromuscular band</i> attached to floor of scrotum and to testes, causes them to descend.
cremaster muscle	extension of abdominal internal oblique , raises testes during cold, & final phases of sex.
dartos tunic	thin layer of smooth muscle under skin. Cold: wrinkles scrotum, warm: relaxes

DUCTUS DEFERENS AND ACCESSORY ORGANS (p 1053)

- ampulla
- seminal vesicle
- ejaculatory duct
- prostate (makes prostoglandins as well as seminal fluids)

PENIS: (p 1055)

- bulbourethral glands
- penis
- corpora cavernosa (two, dorsal) form crura (legs)
- corpora spongiosum (one, with urethra)
- glans penis
- prepuce



COMPOSITION:

- spermatozoa (p 1051)
- HCO₃⁻
- mucus
- spermine (polyamine: NC₃NC₄NC₃N)
- fructose (semen about 50% fructose)
- ascorbic acid
- fibrinogenase

GLAND PRODUCTION:

- seminal vesicle (60%)
- prostate (15-33%)
- Cowpers (bulbourethral gland)

SEMEN: (p 1043):

Production:	2.5 to 3.5 ml per ejaculation after 3 days continence.
Concentration	~100,000,000/mL sperm (50% sterility if 20-40 x 10 ⁶ , all under 20 x 10 ⁶ .)

SEXUAL RESPONSE:

Erection: dilation of arterioles of penis stim by either physical stim, or erotic psychic stim, parasympathetic stim. Filling with blood, veins compressed, block outflow.

ORGASM two stages:

Emission: (movement into urethra) fluids move fr prostate to prostatic urethra
 Smooth muscle contractions moves into urethral bulb, which doubles in size, cremaster draws up testes.
 Sense of impending orgasm

Ejaculation: sympathetic impulses: propulsion out of urethra by skeletal muscles (bulbocavernosus muscle)
 spinal reflex mediated by centers in sacral/lumbar region of spine (rhythmic contractions of pelvic floor)
 intense pleasure

Resolution: Sympathetic vasoconstrictor impulses on arterioles terminate erection, followed by **refractory period**

Testosterone synthesized from cholesterol in interstitial cells of Leydig, Keto at #17

Androgens: increase penis size, scrotum pigmented, seminal vesicles enlarge, secrete, form fructose. Larynx enlarges.