

KEY Male Reproductive Anatomy Pt. 2

1. What are the functions of the Epididymis?

Transport sperm from the Caput to the Cauda

Sperm Concentration

Maturation of Sperm

Storage of Sperm

- Can be stored for several weeks

2. What happens to unejaculated sperm?

- Reabsorbed by the excurrent duct system
- Sperm is lost in urine
- Masturbation

3. Where are sperm produced in the testes?

Seminiferous Tubules

4. Parts of the Spermatic Cord

Ductus Deferens (Vas Deferens)	Connects the cauda epididymis to the ampulla; transports sperm
Cremaster Muscle	Striated muscle supporting the testis
Pampiniform Plexus	Testicular vein that intertwines around the testicular artery, allows for countercurrent heat exchange

5. What are the functions of the Vas deferens and Ampulla for the transport of sperm?

Low Level steady-state contractions of Vas Deferens

- Occurs in a non-excited state

Increased contractions caused by sexual excitement

- Stimulated by nerves during sexual arousal

6. What happens to sperm stored in the Ampulla?

Age Rapidly

- Increased temperature
- Poor environment for sperm
- No secretions → increased metabolic activity

7. What are the functions of Seminal Plasma?

Transport Media

- Gives fluid volume to sperm, helps sperm move through urethra

Culture Media

- Proper environment for sperm viability and motility in the female reproductive tract (defense against the female's hostile vagina)

Stimulates sperm motility

- Activates metabolic activity in sperm that was reduced in the cauda epididymis

Retards Sperm Capacitation

- Prevents immediate fertilization of the oocyte by the sperm (do not want sperm to activate until it reaches site of fertilization (AI junction))

Stimulates sperm transport in female

- Oxytocin and PGF2a are in seminal plasma → involved in muscle contractions

8. What are the major and minor sources of Seminal Plasma?

Major Sources

Accessory Sex Glands

- Seminal Vesicles
- Prostate
- Cowper's (Bulbourethral) Gland

Minor Sources

- Testis
- Epididymis
- Vas Deferens
- Ampulla

9. What are the different species characteristics when it comes to their reproductive anatomy?

Ram - No body of the Prostate (only has disseminate prostate)

Boar - No Ampullae, Large Cowper's Gland

Stallion - No disseminate Prostate

10. What are the 3 main sections of the penis?

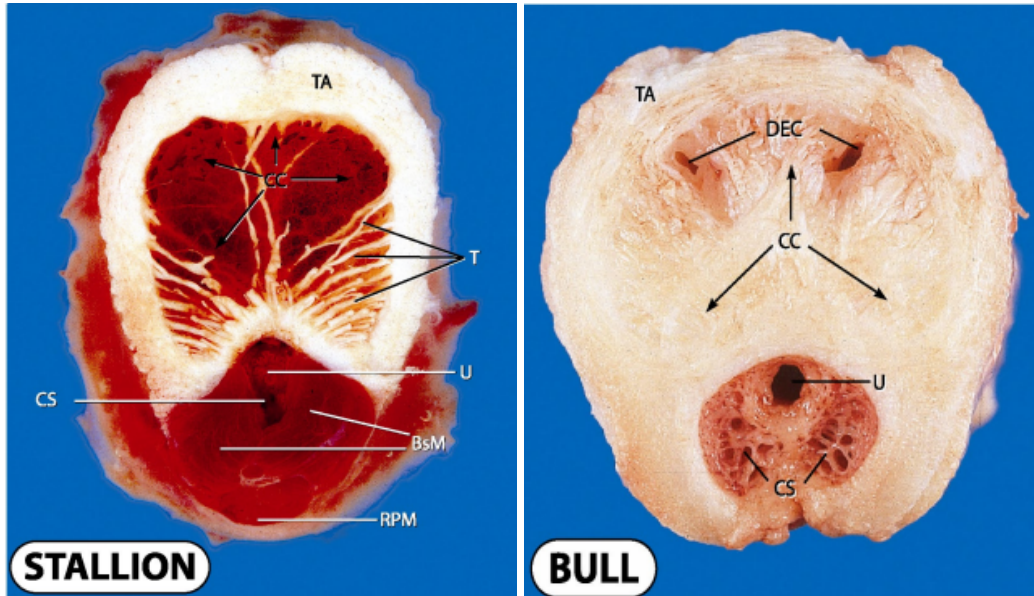
Base - attachment at the ischial arch

Shaft - main portion of the penis

Glans penis - Heavily populated with sensory nerves

11. What 2 parts form the penis?

- Corpus Cavernosum (blood filled spaces lined by endothelium surrounded by smooth muscle)
- Corpus Spongiosum (spongy erectile tissue surrounding penile urethra)



CS: corpus spongiosum CC: corpus cavernosum TA: tunica albuginea

12. What are the two types of penis and what species have them?

- Fibroelastic = bulls, boars, and rams (sigmoid flexure)
- Musculo-vascular = stallion and human

13. Muscles associated with the Penis

Bulbocavernosus (bulbospongiosus)	A single muscle that functions to empty the extra-pelvic part of the urethra
Ischiocavernosus	Paired muscles that compresses and stop the return of blood through veins
Retractor Penis	Paired muscles that maintain the sigmoid flexure in a fibroelastic penis

14. What are the steps of Spermatozoa Transport?

1. Seminiferous Tubules
2. Rete Tubules
3. Mediastinum
4. Efferent Duct
5. Caput Epididymis (Proximal -> Distal)
6. Corpus Epididymis
7. Cauda Epididymis
8. Vas Deferens
9. Ampulla (except Boar)
10. Colliculus Seminalis
11. Urethra

Excurrent Duct System Review...

