Match the following terms to the definitions:

B Bilateral Cryptorchidism A Unilateral Cryptorchidism

a. One testicle is descended from the body. Produces Testosterone. Can produce fertile sperm.
b. Both testicles are not descended from the body. Produces Testosterone. Cannot produce viable sperm.

D Testicular capsule A Parenchyma C Mediastinum B Rete Tubules

a. Seminiferous tubules and interstitial tissue that consists of the interstitial and tubule compartment
b. Tubules within the mediastinum that transports sperm to the efferent ducts
c. Central connective tissue core that houses and maintains the integrity of the rete testes
d. Consists of the visceral vaginal tunic and tunica albuginea

Sertoli cells are….

a. Have FSH and T receptors
b. Are the only somatic cells in the tubule compartment
c. "Nurse" cells for spermatogenesis
d. Form part of the blood testes barrier
e. All of the above

Leydig cells are…

a. Produce T
b. Are within the interstitial compartment
c. Stimulated by LH
d. All of the above

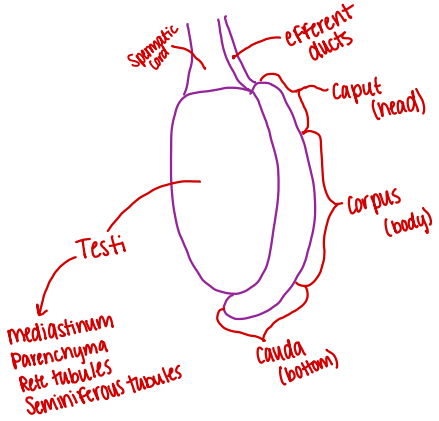
Ductus deferens and _____ are the same thing?

a. Efferent
b. Vascular
c. Spermatic
d. Vas
e. All are names for the ductus deferens. They are all interchangeable.

How can sperm be lost?

a. Reabsorbed by the excurrent duct system
b. Lost in urine
c. Masturbation
d. All of the above
e. None of the above

Draw a testi with an epididymis and label:



Describe the 3 portions of the epididymis and their functions:

- caput: fertilization factors are added. Sperm are not motile or fertile + still have a proximal cytoplasmic droplet.

- corpus: decapitation factors are added (army gear), some motility/fertility. cytoplasmic droplet moves ↓.

- cauda: forward moving motility factors are added. Sperm are stored here. ↓er pH (acidic), low O_2, high CO_2. "Swimming" factors acquire the ability to bind oocyte.

Do males have a surge and tonic center?

NO – only tonic

What animal does NOT have an ampulla?

Boar

Explain the steps for progesterone secretion:

1. Cholesterol LDL b/c its hydrophobic & needs a carrier in the blood to luteal cells
2. LH binds to LH receptor on plasma membrane
3. LH receptor complex activities intracellular cascade. Stimulates Adenylate cyclase
4. Adenylate Cyclase promotes conversion of ATP to cyclic AMP (cAMP)
5. cAMP protein kinase enzymes - promotes entry of cholesterol into the mitochondria
6. Mitochondria enzymes convert Cholesterol → pregnenolone
7. Pregnenolone converted to progesterone in smooth E.R.

Is cholesterol hydrophobic or hydrophilic?

hydrophobic

Large luteal cells have a round nucleus and abundant mitochondria. They produce ~85% of progesterone. They have a PGF2α receptor. They produce Relaxin as well as Oxytocin. The production of oxytocin signals PGF2A from the uterus to cause luteolysis.

Small luteal cells have irregular nucleus. They increase the percentage of lipid droplets. They do not have a PGF2A receptor, but they do have an Oxytocin receptor. And lastly…. They also produce progesterone.

If an ewe has an intact uterus, how many days does it take for the CL to regress?

15-17 days

If an ewe has a contralateral intact uterine horn (same side as CL), how many days does it take for the CL to regress?

15-17 days

If an ewe has no intact uterus, how many days does it take for the CL to regress?

148 days

If an ewe has an ipsilateral intact uterine horn (opposite side of the CL), how many days does it take for the CL to regress?

35 days

Key Hormones Involved:	Hormone Source:
PGF2a	Uterus Ovary (CL)
Oxytocin	Hypothalamus Ovary (CL)
Progesterone	Ovary (CL) placenta