

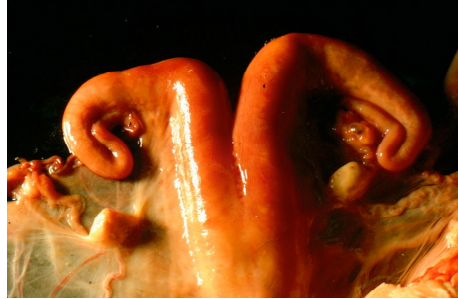
Animal Science/Dairy Science 434

Reproductive Physiology

Lecture 1: Female Anatomy

Updated: 9/8/08

Lecture 1 Female Reproductive Tract Anatomy



Updated: 9/8/08

Learning Objectives

- To be able to describe the female reproductive system in cattle.
 - » Structure
 - » Function

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Equine - Horse

Male → Stallion

Female → Mare



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Bovine - Cattle

Male → Bull

Female → Cow



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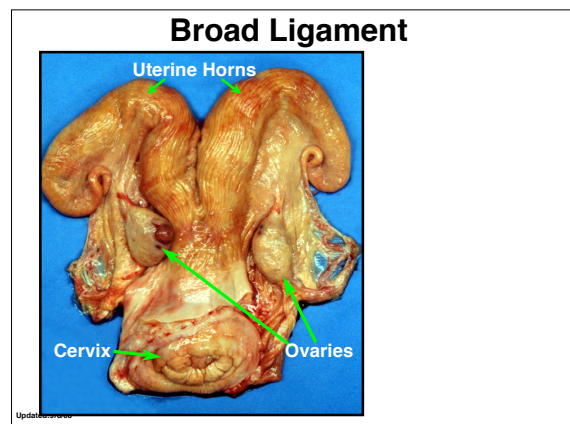
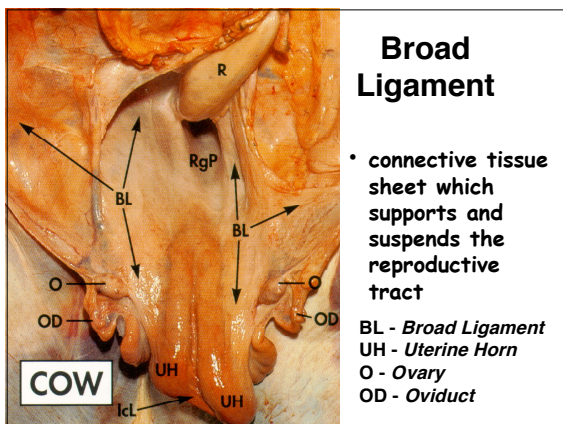
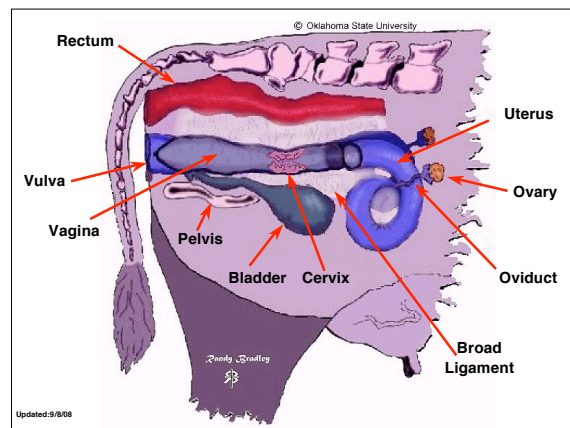
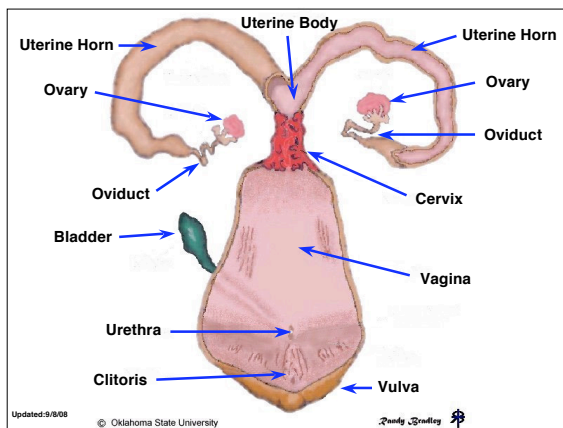
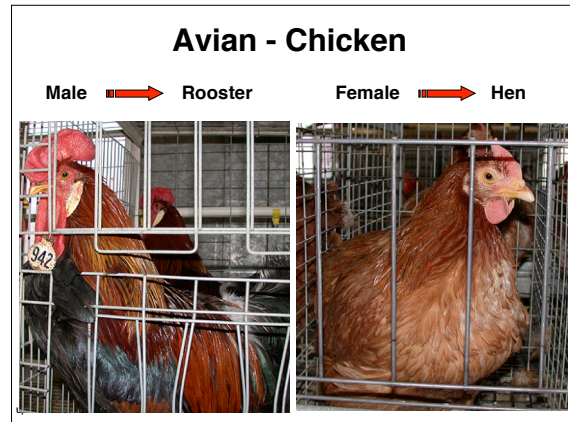
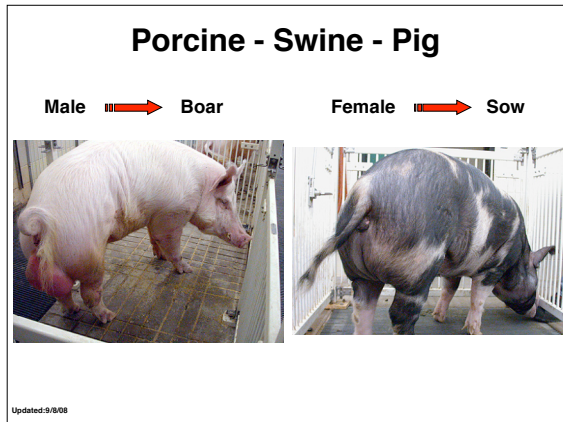
Ovine - Sheep

Male → Ram

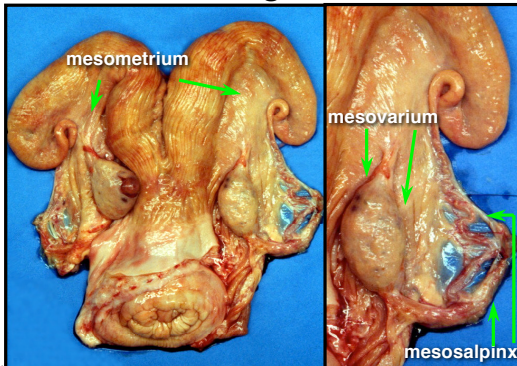
Female → Ewe



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Broad Ligament



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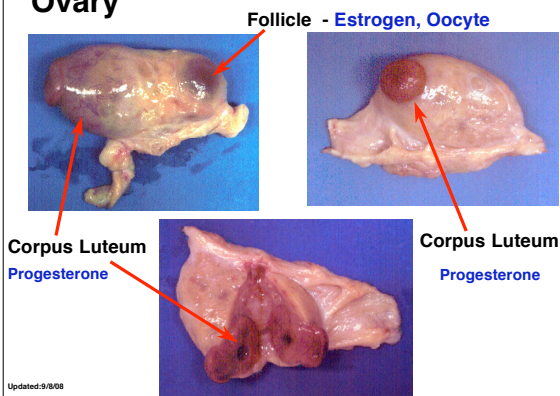
Ovary - Primary Sex Organ

- Functions
 - » Hormonal
 - Estrogen
 - Progesterone
 - » Female gamete
 - Oocyte



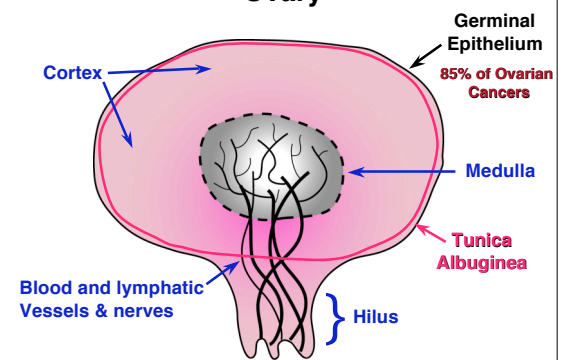
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Ovary

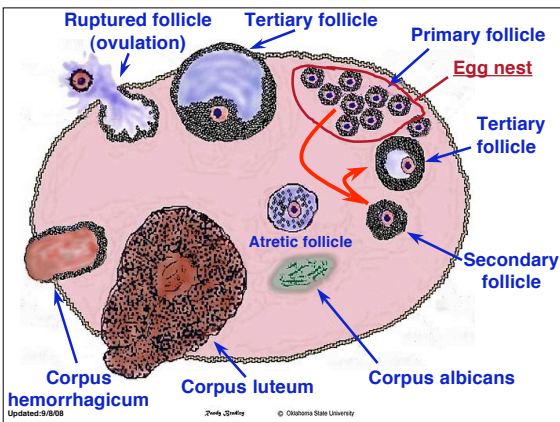


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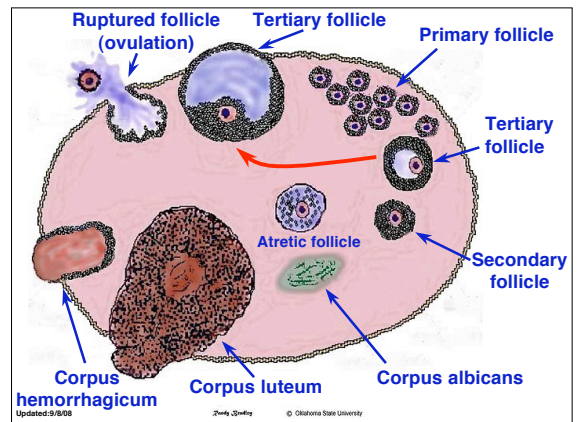
Ovary



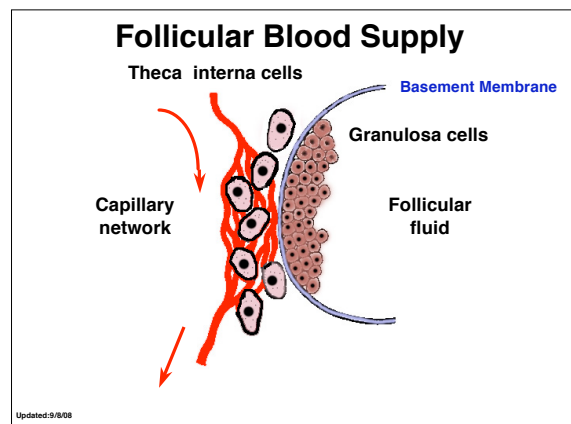
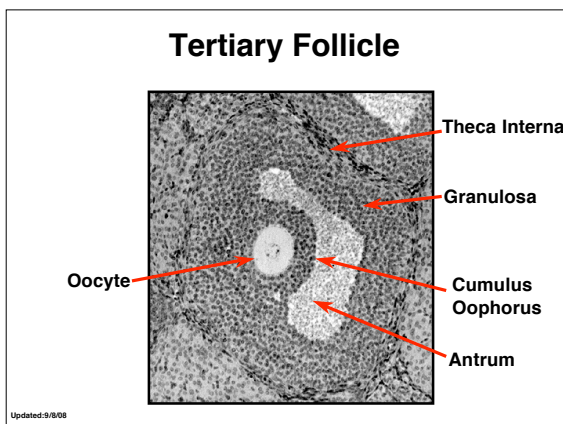
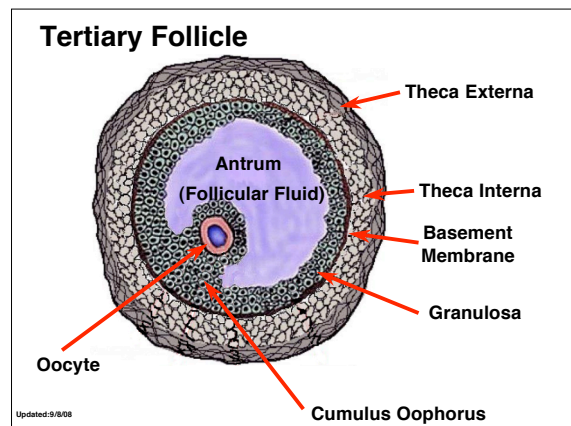
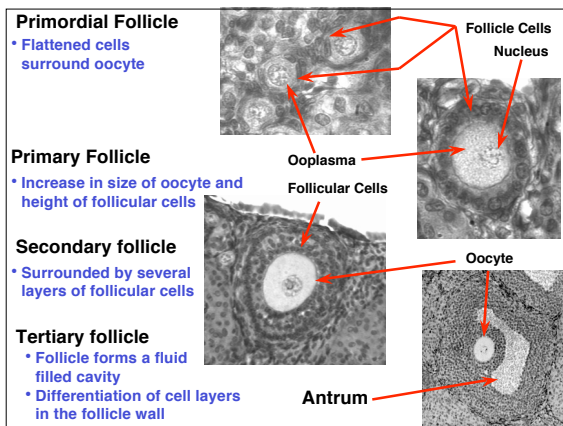
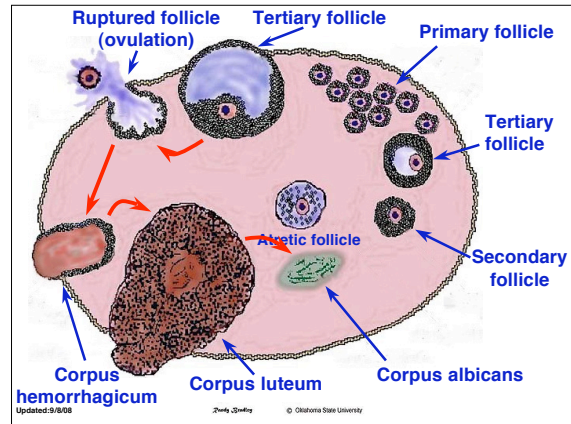
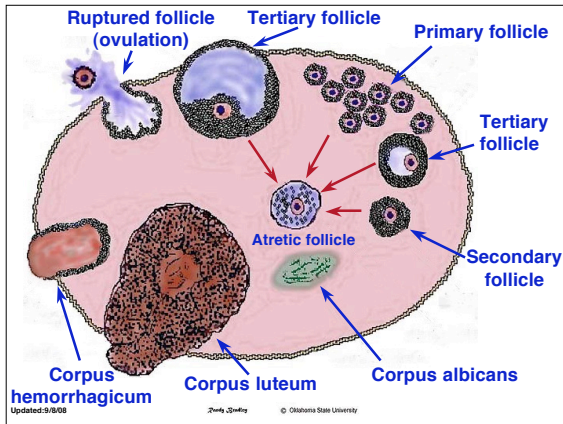
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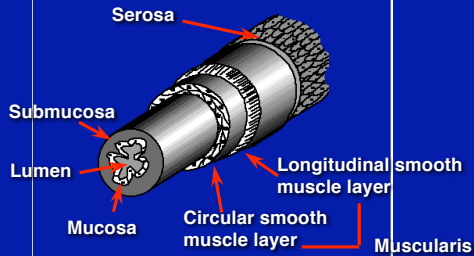
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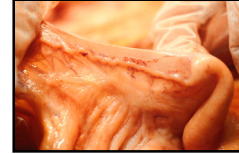
Secondary Sex Organ: A Series of Tubes to Convey the Oocyte/Embryo/Fetus to the Outside



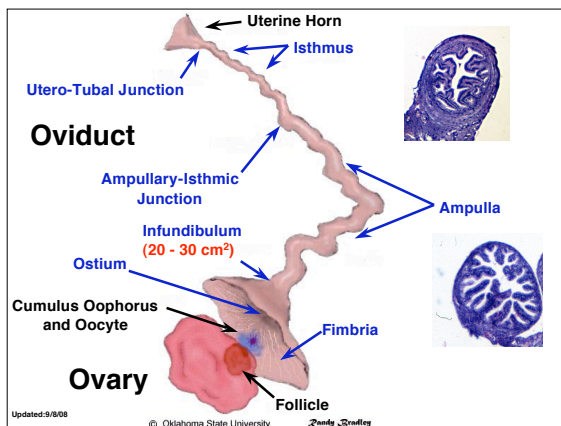
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Functions of Oviduct

- Gamete Transport
 - » Sperm
 - » Oocyte
- Supports early embryo development
- Transport of embryo to uterus



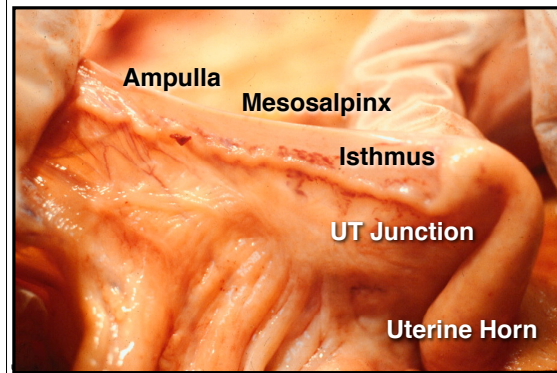
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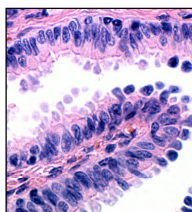
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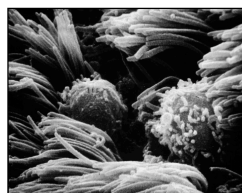
Oviduct



Oviduct Histology



- Mucosa**
- Ciliated Columnar
 - Nonciliated Columnar



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Functions of the Uterus

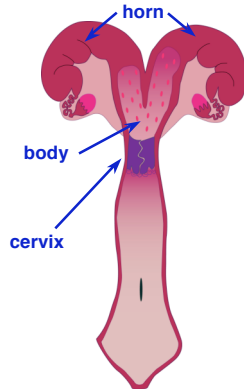
- Muscle contractions
 - » Transport sperm
 - » Expel fetus and placenta
- Absorption and phagocytosis
- Partially prepares sperm for fertilization
 - » capacitation
- Provides environment for embryo and fetal growth
- Hormone production
 - » Prostaglandin F2α production

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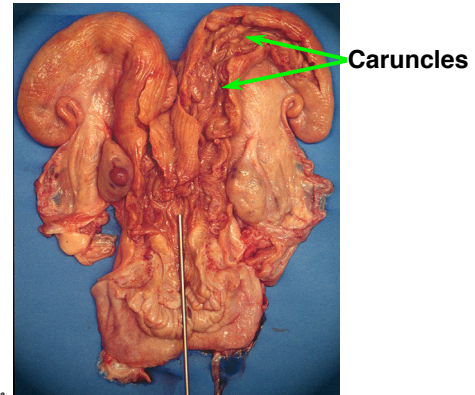
Uterus (bovine)

- **Bicornuate**

- » poorly to moderately developed uterine horns
- » uterine body
- » one cervix

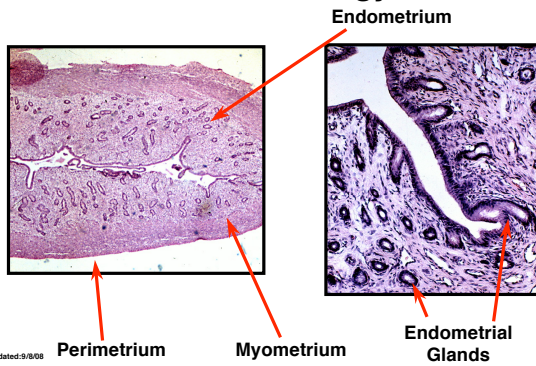


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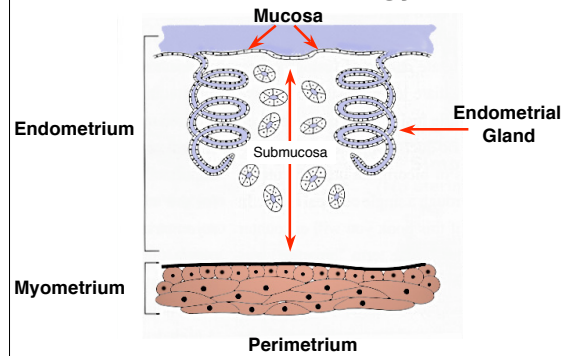
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Uterine Histology



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Uterine Histology

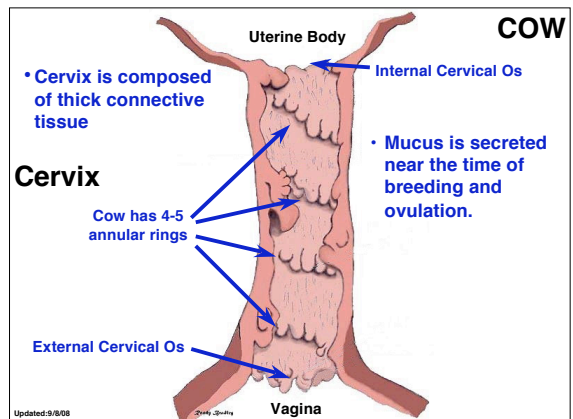


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Functions of the Cervix

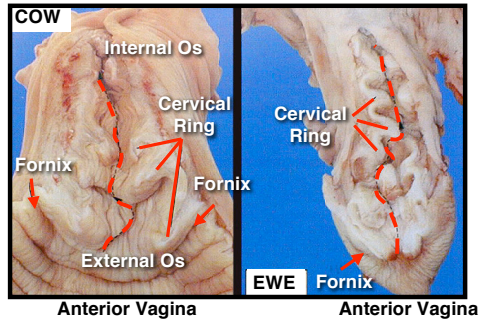
- Transport of sperm
- Barrier to sperm (species dependent)
- Reservoir for sperm
- Blocking bacterial invasion during pregnancy
- Birth canal

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Cervix



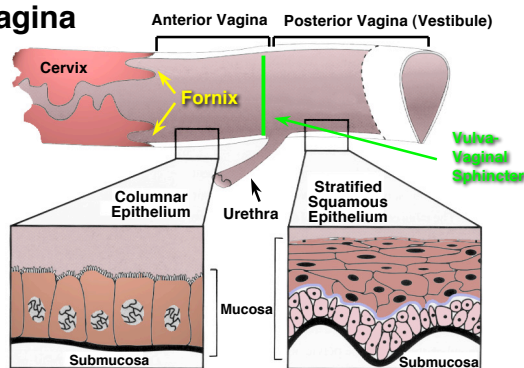
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Functions of the Vagina

- Copulatory organ
- Glands secrete lubrication
- Birth canal
- Glands secrete pheromones

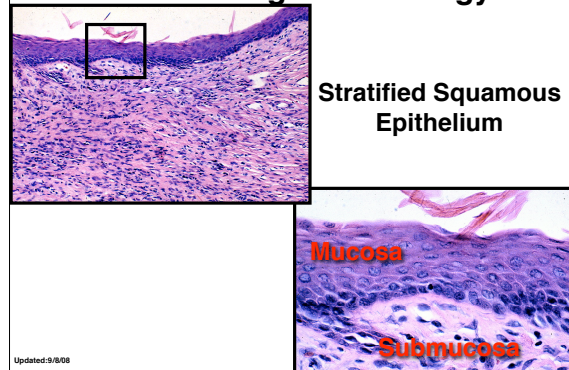
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Vagina



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Posterior Vaginal Histology



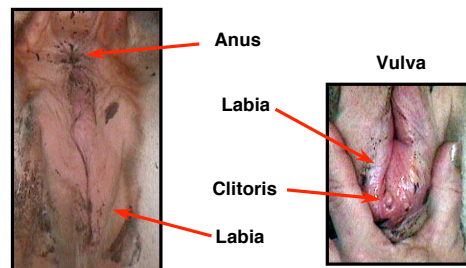
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Function of External Genitalia

- Labia
 - » Closes entrance to vagina
- Clitoris
 - » Female sensory organ

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External Genitalia of the Cow



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Phenomena For Fertility

- vagina dentata - a vagina with teeth
- female bedbug - no vagina
- hysterectomy - if woman went to long without becoming pregnant then uterus would wonder in body causing hysteria and other distresses
- hyena - clitoris is very large and looks like the male penis; female also has a false scrotum (labia); female is the dominate sex and produces more testosterone than male

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