

Estrous Cycle:

What is the difference between estrus and estrous?

Estrous: The reproductive cycle defined as the period of estrus to the next

Estrus: Period of sexual receptivity “heat”

What are the different phases of the estrous cycle?

Follicular phase- 20% of the cycle

Luteal Phase- 80% of the cycle

What are the two stages in the Follicular Phase?

Proestrus & Estrus

What are the two stages in the Luteal Phase?

Metestrus & Diestrus

Types of Estrous Cyclicity	Definition	Species
Polyestrus	Female displays estrous cycles uniformly distributed throughout the year without any seasonal influence	Cow, sow, and queen
Seasonally Polyestrus	A period of anestrus induced by length of day	Mare(long days), ewe(short days)
Monoestrus	Female displays only one period of sexual receptivity	Bitch
Anestrus	When a female does not display estrus (standing heat)	(pregnancy, poor nutrition, lactation)

What are some reasons why a female may not be cycling?

- Prepubertal
- Congenital
- Nutritional
- Postpartum
- Seasonal
- PREGNANT

What is the dominant structure and hormone of the Luteal Phase?

- CL (progesterone)

What is the dominant structure and hormone of the Follicular Phase?

- Follicle (Estrogen)

What is the purpose of FSH and LH relative to the estrous cycle?

- LH: causes ovulation of a dominant follicle
- FSH: stimulates follicle growth

What is the purpose of Estrogen and Progesterone relative to the estrous cycle?

- Progesterone: maintains pregnancy
- Estrogen: brings on standing heat

Stage	Main Hormone and Dominant Structure
Proestrus	<ul style="list-style-type: none"> - Estrogen increasing - Maturing Antral follicles
Estrus	<ul style="list-style-type: none"> - Peak Estrogen - Antral Follicle
Metestrus	<ul style="list-style-type: none"> - Both Estrogen and Progesterone are low - Progesterone increases near end - Follicle -> CL
Diestrus	<ul style="list-style-type: none"> - Peak Progesterone - CL

What happens in the Proestrus stage?

- begins when progesterone declines due to luteolysis
- Transition period from Progesterone to Estrogen dominance
- Antral follicles mature for ovulation

What happens in the Estrus stage?

- Antral follicle ovulates
- Behavioral changes: vocalization, mounting others, standing estrus; displaying lordosis

What happens in the Metestrus stage?

- Both estrogen and progesterone are low in early stage
- Remaining follicles undergo luteinization= follicle -> CH -> CL
 - o Follicle cells transition into Luteal cells
 - Granulosa cells -> Large Luteal Cells
 - Theca cells -> Small Luteal Cells
- Progesterone secretion increases later in stage

What happens in the Diestrus stage?

- CL is fully functional
- Dominant hormone is Progesterone
- Uterus prepares for early embryonic development
- Diestrus ends when CL is destroyed
- CL -> CA

Draw the Estrous cycle:

