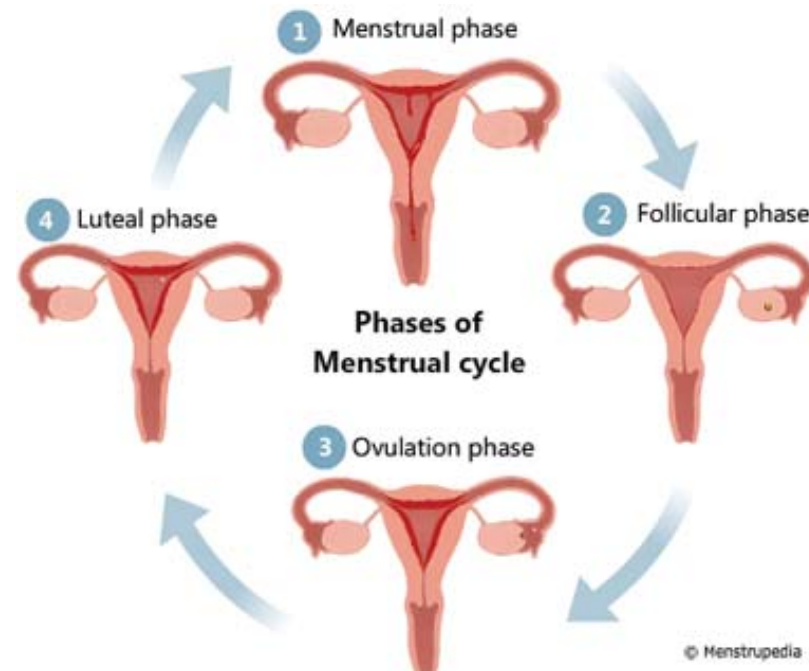


Menstruation

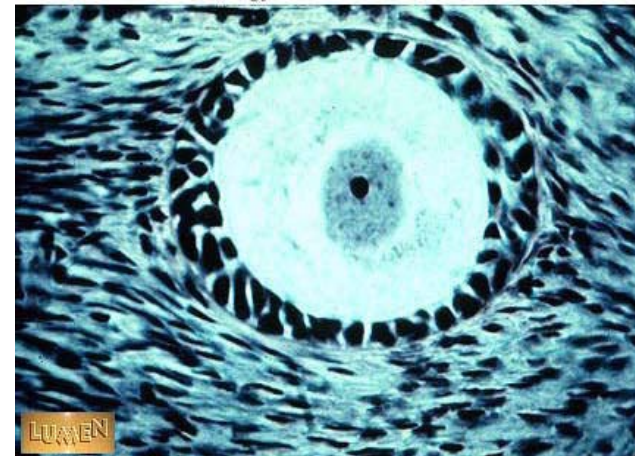
- **IF fertilization does NOT take place**
- **Menstrual cycle** – a series of changes that help prepare the uterus for a possible pregnancy
 - controlled by hormones
 - Ovaries
 - pituitary
 - 4 stages



stage 1 - Follicle stage

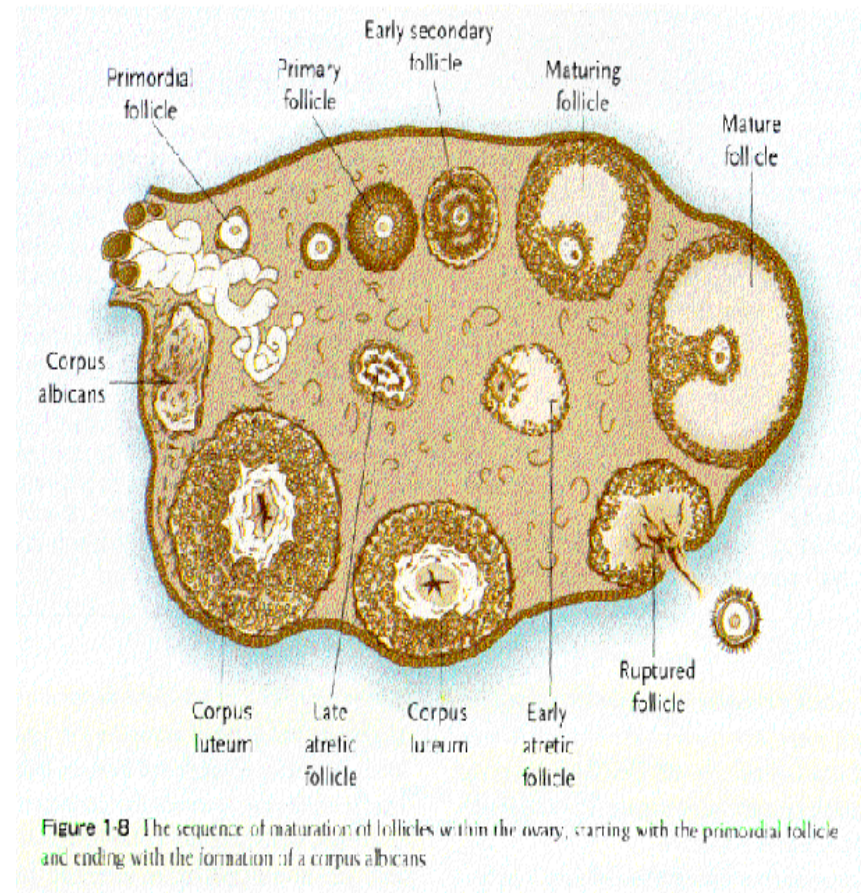
- Ovarian hormones (estrogen and progesterone) are in low concentrations
- The pituitary produces FSH which causes a follicle (egg cell capsule) to form
- As the follicle grows it makes increased amounts of estrogen
 - Estrogen has negative feedback on the pituitary to stop FSH
 - Estrogen causes the uterine lining (endometrium) to grow thicker

Histology Lab Part 21: Slide 4



Stage 2 - Ovulation

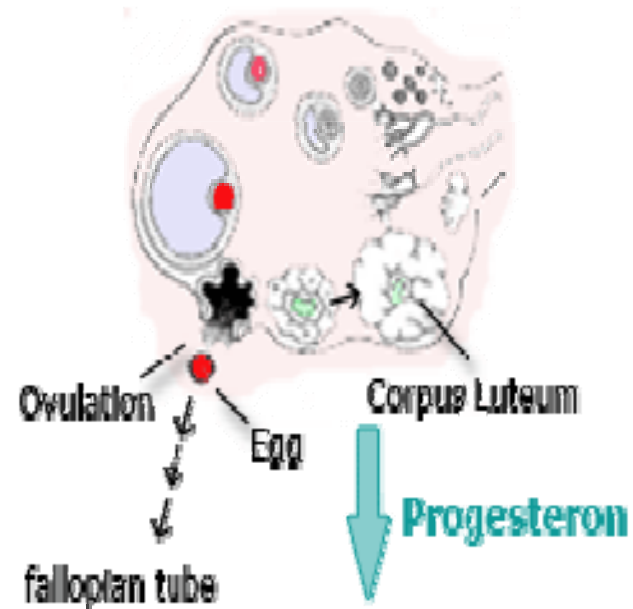
- Increased estrogen from the follicle stimulates the pituitary gland to produce LH
- The LH surge causes the follicle to rupture and the egg cell is sent to the oviduct



Stage 3 – Corpus Luteum

- The ruptured follicle heals inside the ovary forming the corpus luteum
 - Yellow body
- The corpus luteum produces progesterone
- Estrogen and progesterone maintains the added growth of the uterine lining

Ovulation inside the ovary:



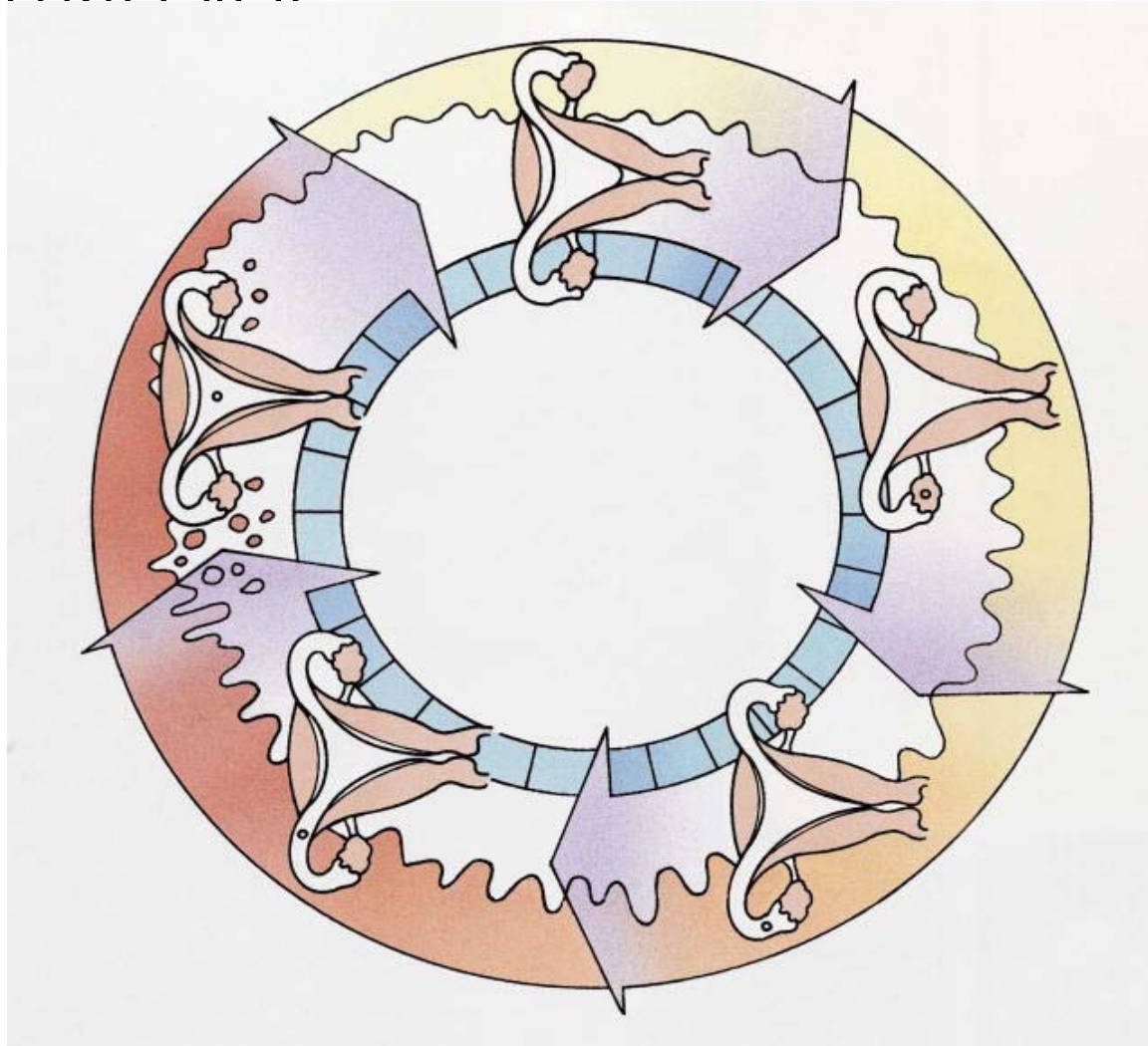
The fetus has some influence as well

- An embryo in the uterus will secrete a chemical called HCG
- HCG prevents the corpus luteum from decomposing which maintains progesterone levels
- The endometrium is not shed
 - HCG is the chemical that is detected by pregnancy tests

Stage 4 - Menstruation

- If an embryo is not present approximately 2 weeks after ovulation the corpus luteum decomposes
- Estrogen and progesterone levels decrease
- The endometrium (uterine lining) is shed and moves out through the vagina

Menstrual cycle



The Biological Events of Menstrual Cycle

(c) Changes in ovarian follicles and uterine endometrium

