



SNS COLLEGE OF NURSING

SARAVANAMPATTI, COIMBATORE-35

DEPARTMENT OF NURSING

COURSE NAME : BSC (NURSING) I YEAR

SUBJECT : ANATOMY AND PHYSIOLOGY

UNIT V: REPRODUCTIVE SYSTEM

TOPIC : MENSTRUAL CYCLE

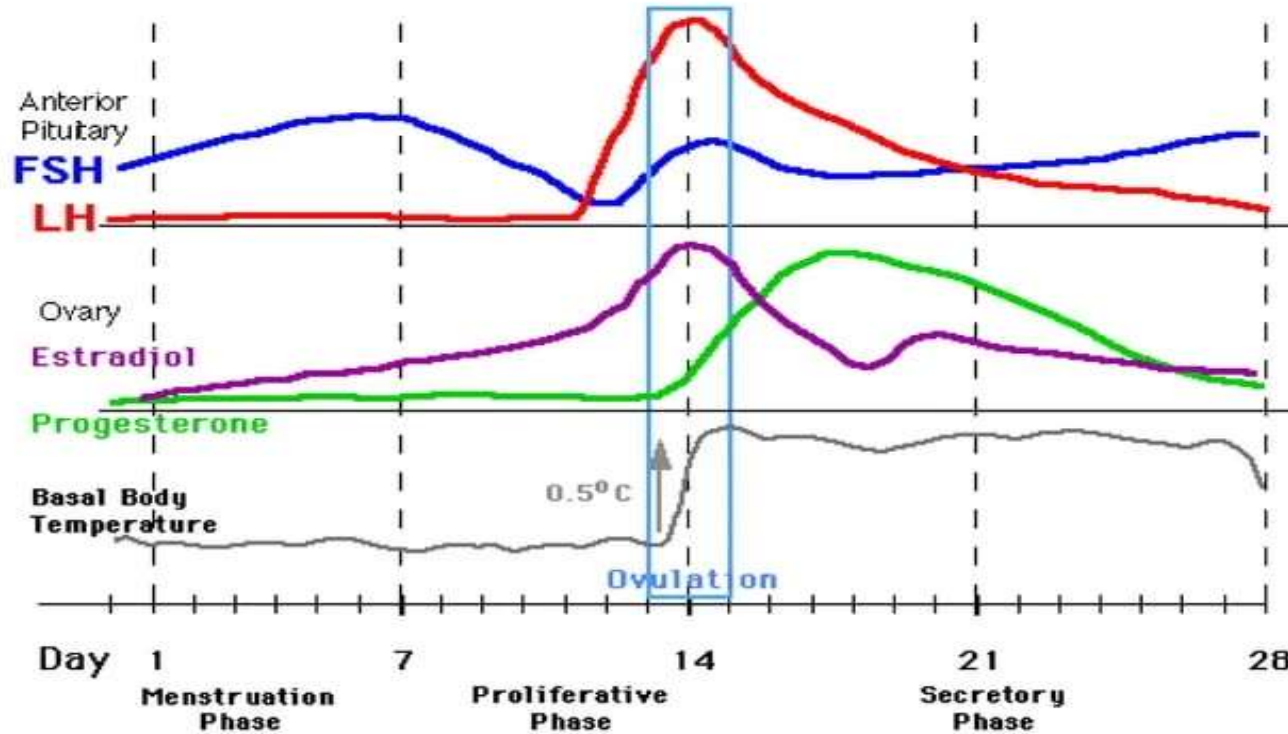


MENSTRUATION

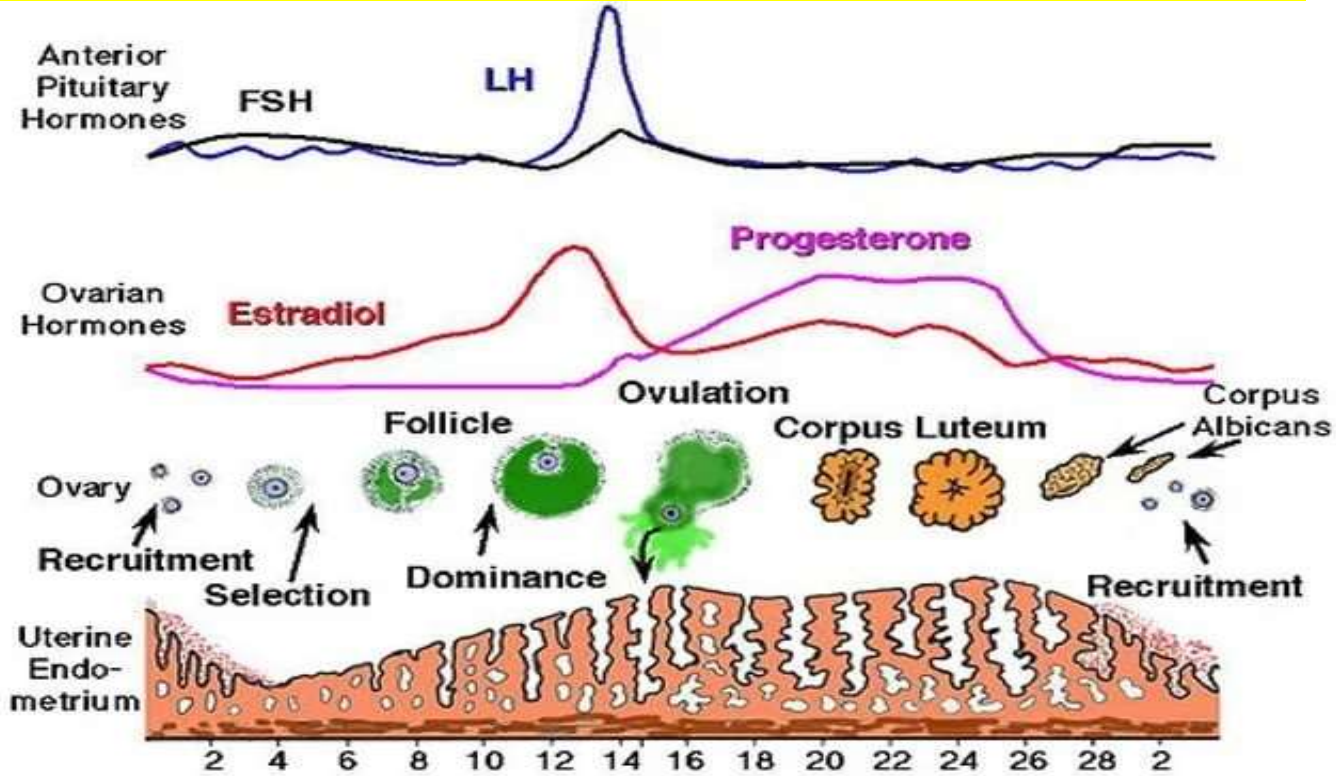


- Periodic discharge of blood and cellular debris from the female genital tract is termed menstruation.
- Cyclical changes occurring from one menstruation to the next comprises a menstrual cycle.
- The duration of menstrual cycle is about 28 ± 4 days.

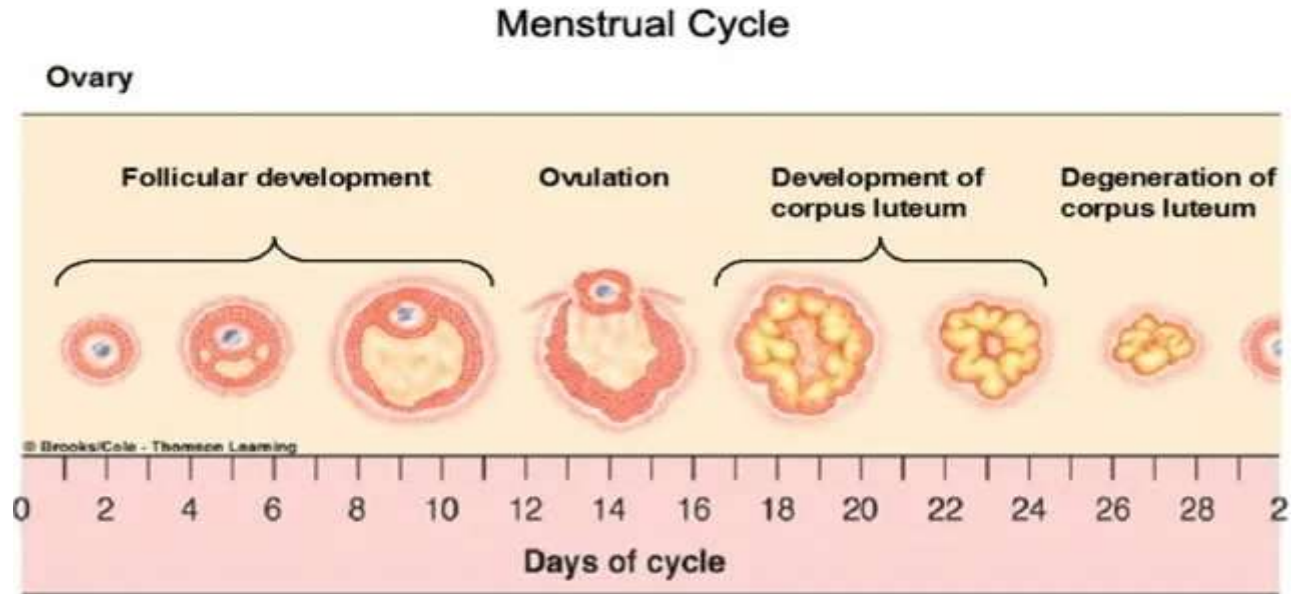
LEVELS OF HORMONES



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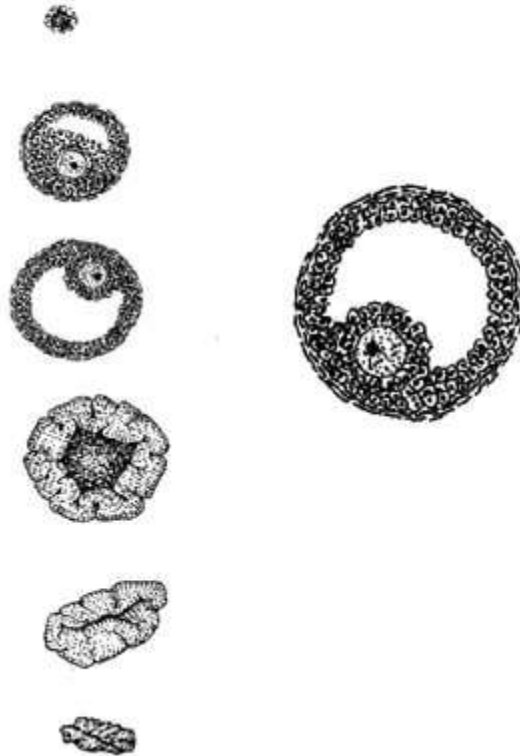


MENSTRUAL CYCLE

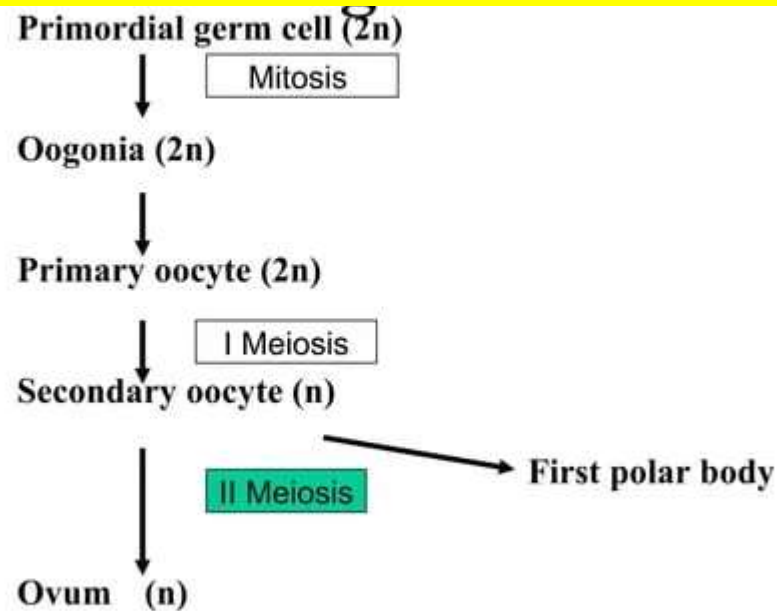


FOLLICLE DEVELOPMENT

↓
PRIMORDIAL FOLLICLE
↓
PRIMARY FOLLICLE
↓
GRAFFIAN FOLLICLE
↓
MATURE FOLLICLE
↓
CORPUS LUTEUM



GAMETOGENESIS





PHASES OF MENSTRUATION

- 1)Proliferative phase
- 2)Secretory phase
- 3)Menstrual phase



MENSTRUAL PHASE

- It lasts for about 3 – 5 days.
- If the ovum is not fertilized, corpus luteum regresses from 24th day of the cycle.
- This causes a decrease in estrogen and progesterone levels.
- It results in shrinkage of endometrium, coiling and spasm of arteries leading to focal necrosis of the endometrium.
- The necrosed endometrium is shed along with blood and other secretions.



PROLIFERATIVE PHASE



(follicular phase)

- Proliferative phase starts at the end of menstrual phase. Its duration is about 10 days.
- At the beginning of this phase most of the endometrium has been desquamated.
- Later endometrium starts healing and then proliferates rapidly from 5th –14th day of menstrual cycle.



PROLIFERATIVE PHASE



(follicular phase)

- This proliferation occurs under the influence of estrogen. There is growth of simple tubular glands and blood vessels.
- Endometrium increases in thickness to about 3 – 5mm.
- The endometrial glands produce a thick mucus.
- At the end of proliferative phase ovulation occurs.



SECRETORY PHASE

(luteal phase)

- This phase lasts for about 14 days.
- It starts after ovulation and extends upto the next menstrual phase.
- Endometrium thickens upto 6 mm.
- Glands become bigger, tortuous and filled with secretions.
- Stromal cells proliferate, spiral arteries become more coiled and dilated.
- This is caused due to the action of progesterone and estrogen on uterine endometrium



ACCELERATED GROWTH

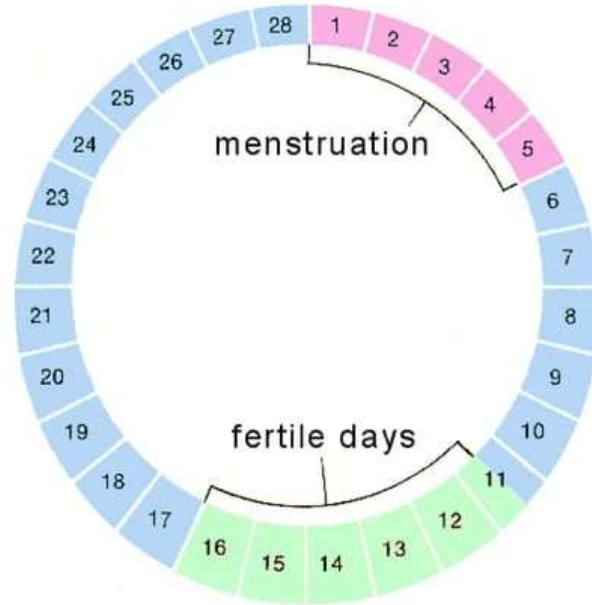
- More of estrogen is secreted into the follicle.
- Stimulates granulosa cells to form increased number of FSH receptors
- This makes granulosa cells more sensitive to FSH.
- FSH and estrogen promote LH receptors on granulosa cell leading to rapid increase in follicular secretion.
- Estrogen and LH cause proliferation of thecal cells and increase their secretion.



LH SURGE AND OVULATION

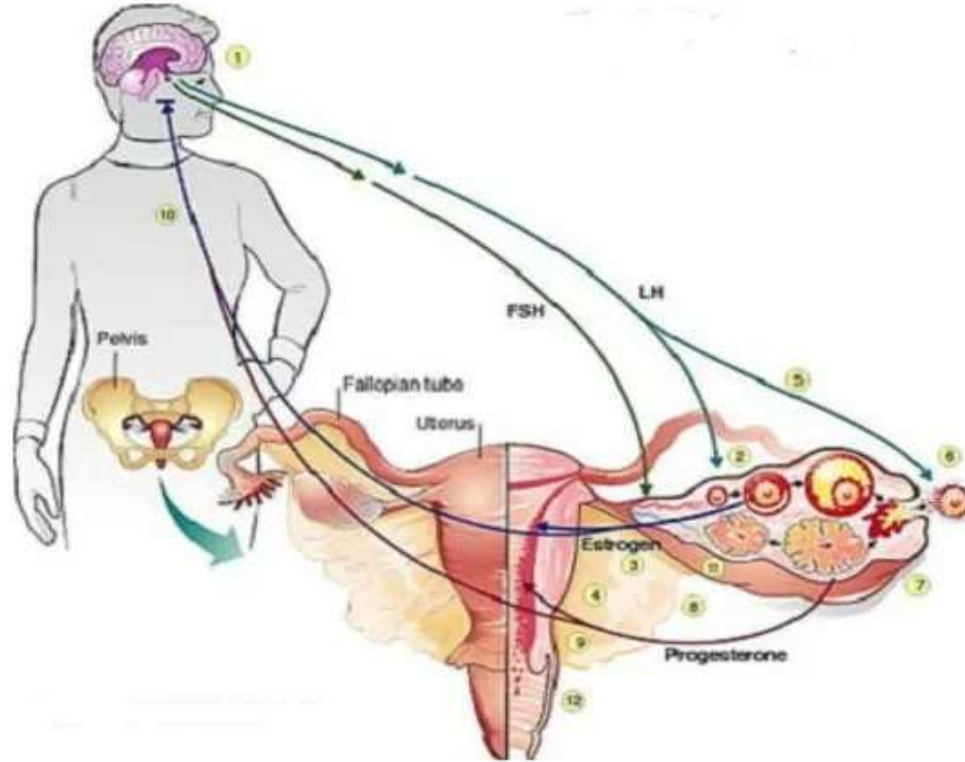
- LH surge
- Release of follicular steroid hormone
- Release of proteolytic enzyme and prostaglandin
- Release of plasma into the follicle
- Weakened wall of follicle
- Degeneration of stigma + swelling of follicle
- Rupture of follicle → expulsion of ovum

MENSTRUAL CALENDAR



Menstrual cycle of 28 days

MENSTRUAL CYCLE -CONTROL





PHYSIOLOGICAL CHANGES

OTHER CHANGES

BREAST

VAGINA

CERVIX

BODY FLUIDS

BASAL BODY TEMPERATURE



PHYSIOLOGICAL CHANGES

MENARCHE	MENOPAUSE
It is the first menstrual period or start of menstruation in human females.	It is the end of menstrual period or menstruation in human females.
It occurs at around 11-16 years of age.	It occurs at around 45-50 years of age.
It marks the beginning of reproductive phase of a female.	It marks the end of reproductive phase of a female.
There is elevated level of oestrogen.	There is decline in the level of oestrogen.
Symptoms such as irritability, moodiness, acne, irregularity in periods are seen.	Symptoms such as bloating, lack of sleep, weight gain, hair loss and skin dryness are seen.



THANK
You