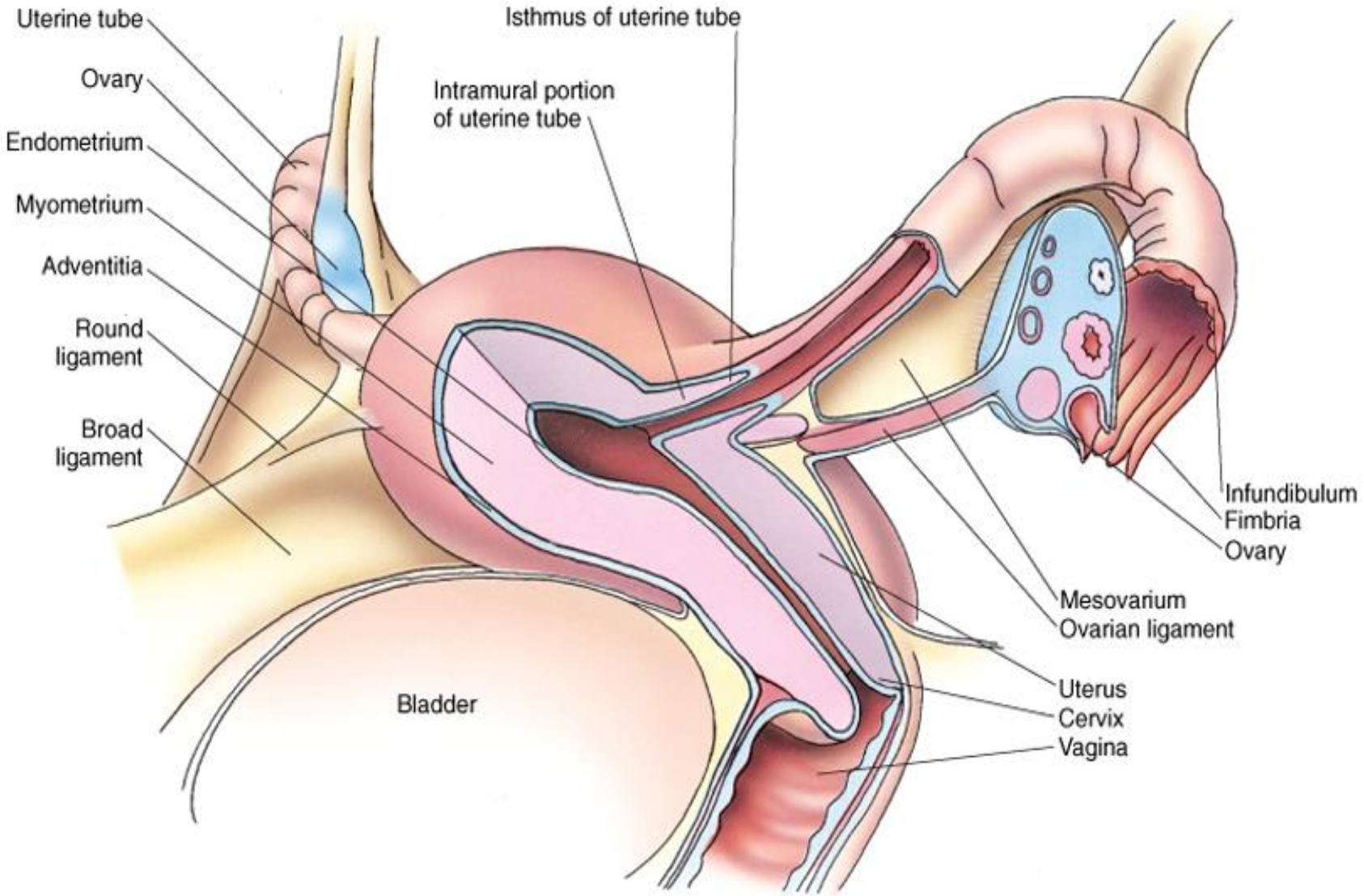
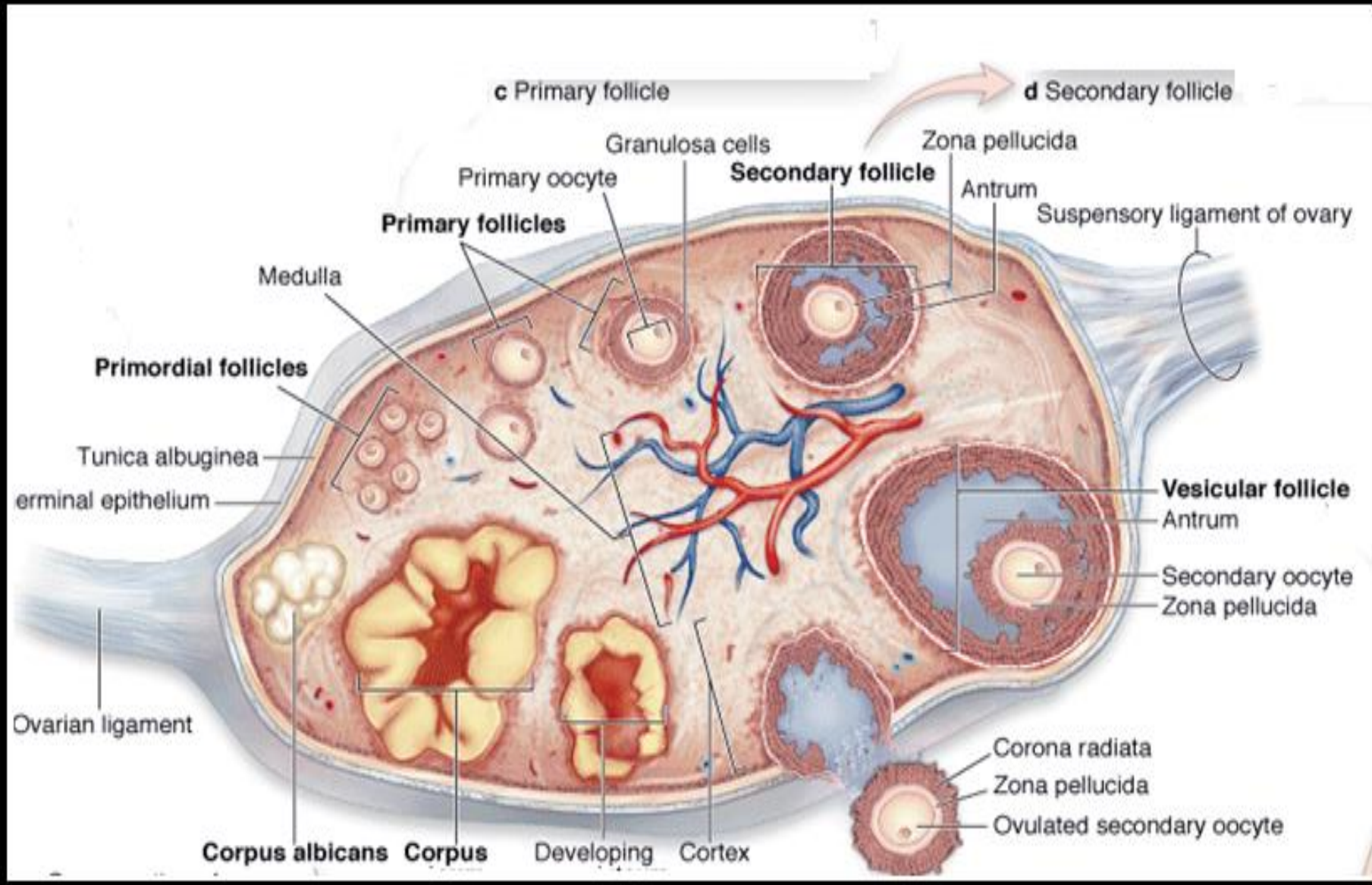
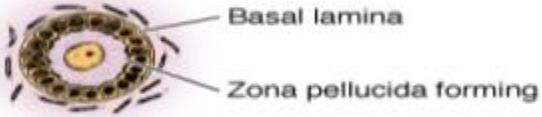
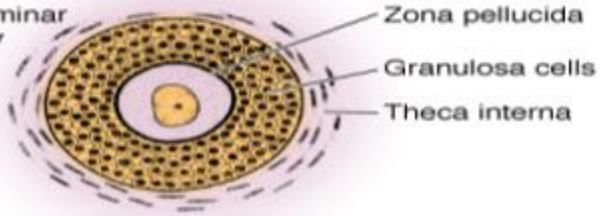
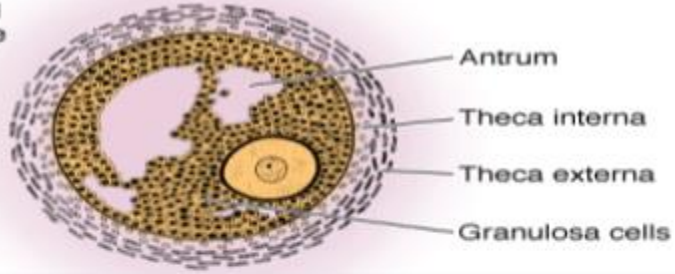
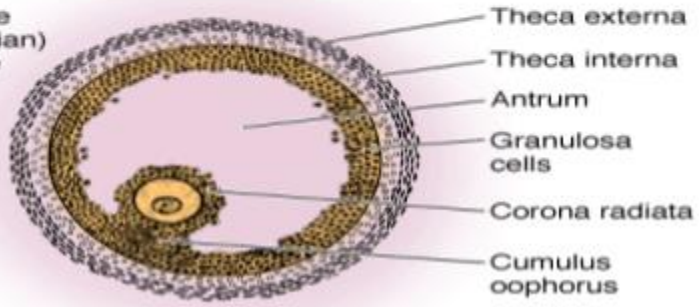

بسم الله الرحمن الرحيم


لا إله إلا الله محمد رسول الله

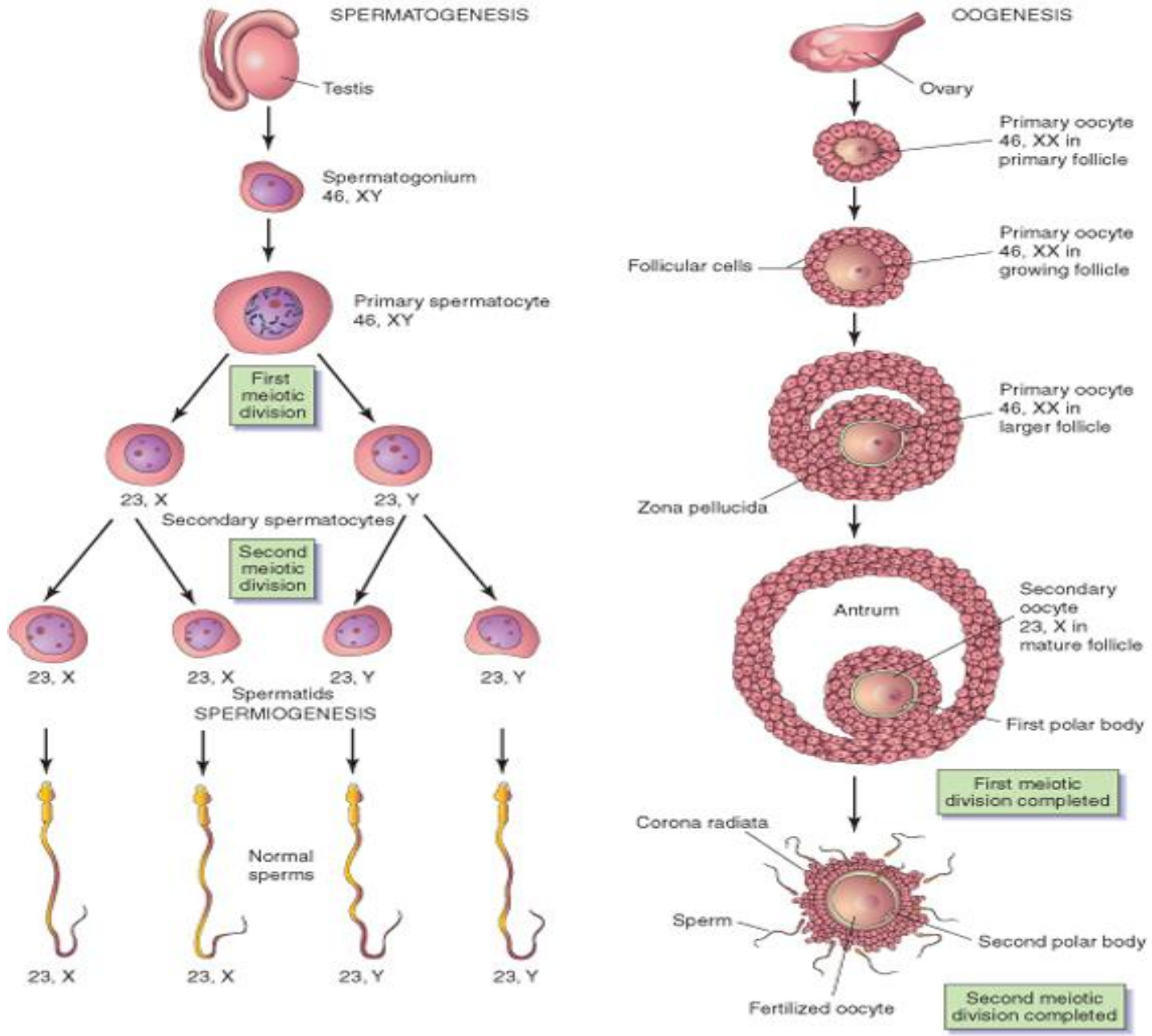
FEMALE REPRODUCTIVE CYCLES


Uterine tube
Ovary
Endometrium
Myometrium
Adventitia
Round ligament
Broad ligament
Isthmus of uterine tube
Intramural portion of uterine tube
Bladder
Infundibulum
Fimbria
Ovary
Mesovarium
Ovarian ligament
Uterus
Cervix
Vagina


c Primary follicle
d Secondary follicle
Granulosa cells
Zona pellucida
Primary oocyte
Secondary follicle
Antrum
Suspensory ligament of ovary
Primary follicles
Medulla
Primordial follicles
Tunica albuginea
erminal epithelium
Vesicular follicle
Antrum
Secondary oocyte
Zona pellucida
Ovarian ligament
Corona radiata
Zona pellucida
Ovulated secondary oocyte
Corpus albicans
Corpus
Developing
Cortex

OVARIAN FOLLICLES	OVUM
Primordial follicle 	PRIMARY OOCYTE
Unilaminar primary follicle 	PRIMARY OOCYTE
Multilaminar primary follicle 	PRIMARY OOCYTE
Antral follicle 	PRIMARY OOCYTE
Mature (graafian) follicle 	SECONDARY OOCYTE 90 Days

NORMAL GAMETOGENESIS




Infant
I can also cry, dont you challange me
IZOD
MyKidSite.com

1. FSH:
    a. Formation of mature follicle
    b. Production of estrogen by the follicular cells.
2. LH:

a. Ovulation

b. Stimulates the follicular cells and corpus luteum to Produce progesterone.

- Hypothalamus produce Gn R Hormone.
- Act on pituitary gland to produce FSH and LH
- **Primary follicle need not the FSH**
- Graafian follicle need FSH
- FSH causes Granulosa and theca cells to produce estrogen

Estrogen causes

- Uterus >>>>>>> Endometrium proliferation
- Cervical>>>>>>> Secretion dilution
- Pituitary>>>>>>> LH

Luteinizing Harmon causes

1. Completion of Meiosis I and start Meiosis II
2. Progesterone come from stroma of follicle
3. Delivery of ovum

Ovulation: **Under effects od FSH and LH Graafian follicle grow to become 1 inch.**

1. **Under sudden raise of LH, the collagenase dissolve the collagen fibers surrounding the follicles to rupture the follicle.**
2. **Prostaglandin stimulate the muscle of ovary muscle contraction to deliver the ovum along with granulosa cells to form corona radiate.**

Corpus luteum

1. The remaining cells along with **theca interna** form a yellow body called corpus luteum.
2. It secrete **progesterone** which effect the uterus to change the endometrium into secretory phase.
3. If no pregnancy it **degenerates after 2 weeks** which lead to changes in endometrium and menstruation phase starts.
4. If pregnancy it develops further to secrete hormones required for pregnancy for **4 months**.

- If fertilization does not occur, the corpus luteum forms a mass of fibrotic scar tissue,

  the corpus albicans.
- If fertilization, the degeneration of the corpus luteum is prevented by (hCG). The corpus luteum continues to grow and forms the

  corpus luteum of pregnancy.
- Yellowish luteal cells continue to secrete progesterone until the end of the fourth month;
- Thereafter, it regresses to form
- **Corpus Albicans of pregnancy**. when placenta start producing progesterone.

Uterus

Wall uterus has endometrium, myometrium and perimetrium. Phases of uterus endometrium

1. **Follicular or proliferative phase**

Under the effects of estrogen and go side by side with follicular growth.

2. **Secretory phase or progestational**

This phase is starts after 3 days of ovulation.

3. **Menstrual phase**:

If fertilization does not occur. Compact and sponge layer is shaded away.

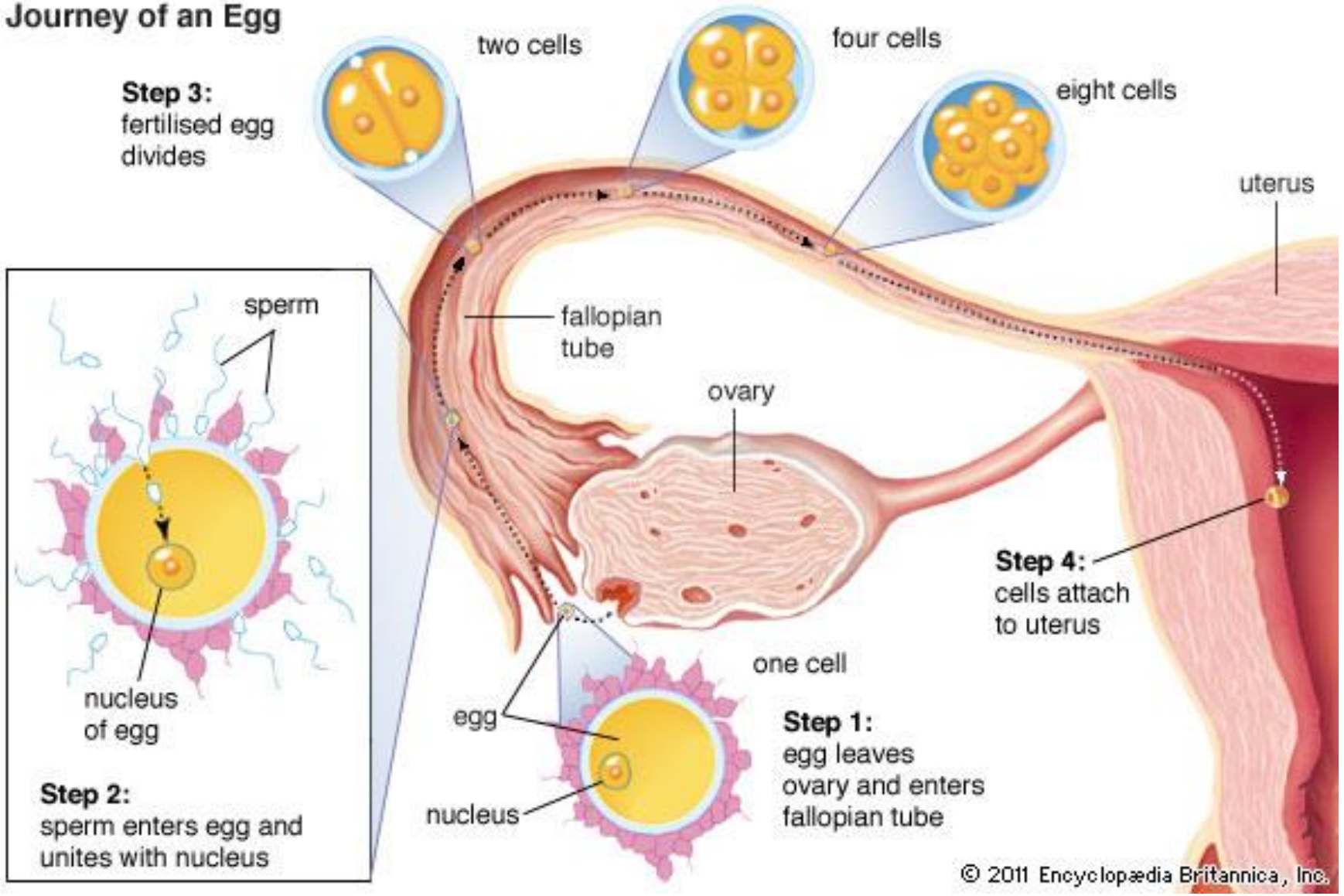
Endometium has three layers , The compact, spongy and basal layers. Site of implantation is anterior or posterior wall of body of uterus.

MENSTRUAL PHASE

Venous spaces are filled with blood.

The arteries bleed and superficial layers of endometrium breaks into pieces to pass away for 3 days.

The basal layer remains for future use.


Journey of an Egg
Step 3:
fertilised egg
divides
two cells
four cells
eight cells
uterus
sperm
fallopian
tube
ovary
Step 4:
cells attach
to uterus
one cell
egg
nucleus
nucleus
of egg
Step 1:
egg leaves
ovary and enters
fallopian tube
Step 2:
sperm enters egg and
unites with nucleus
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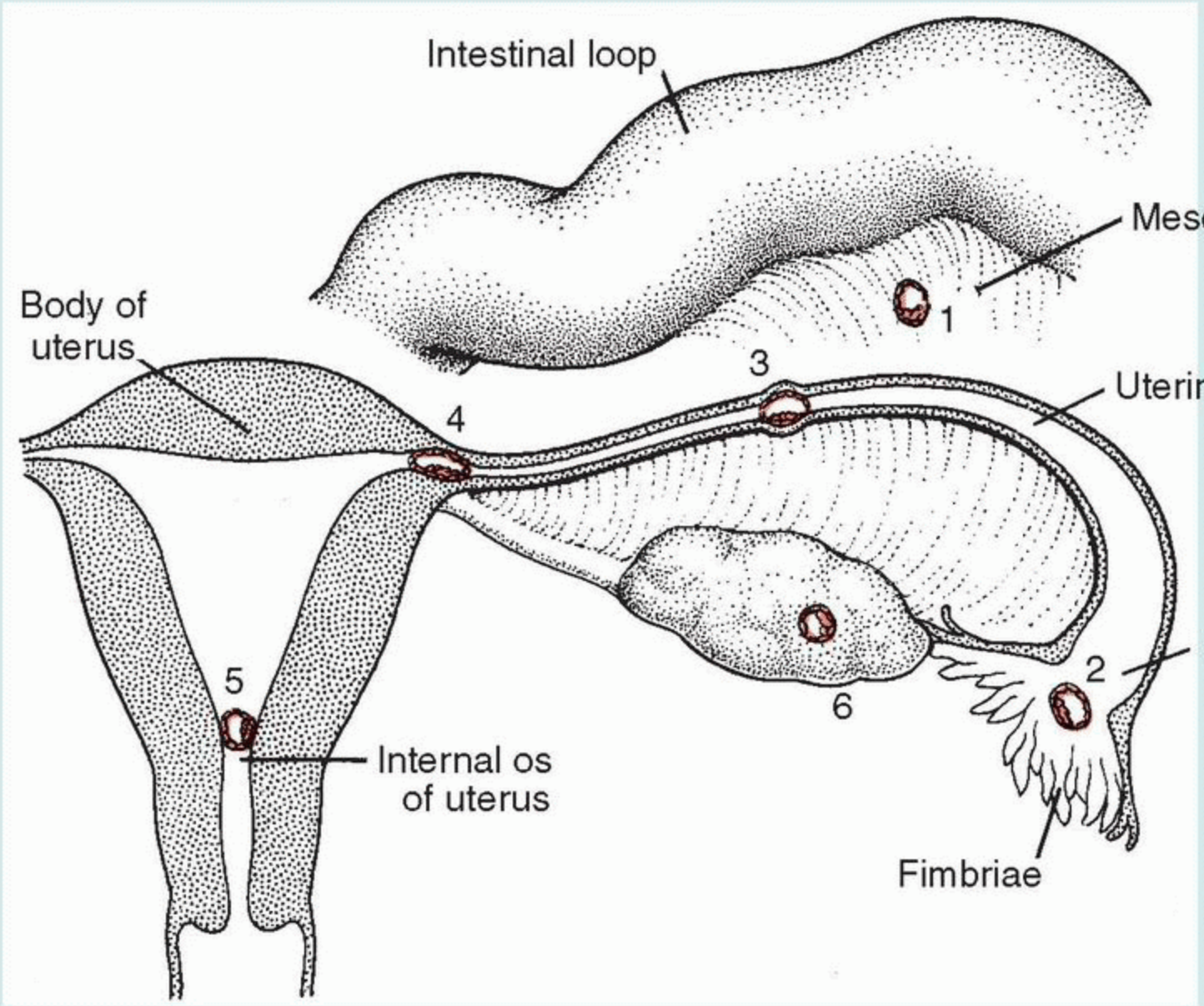
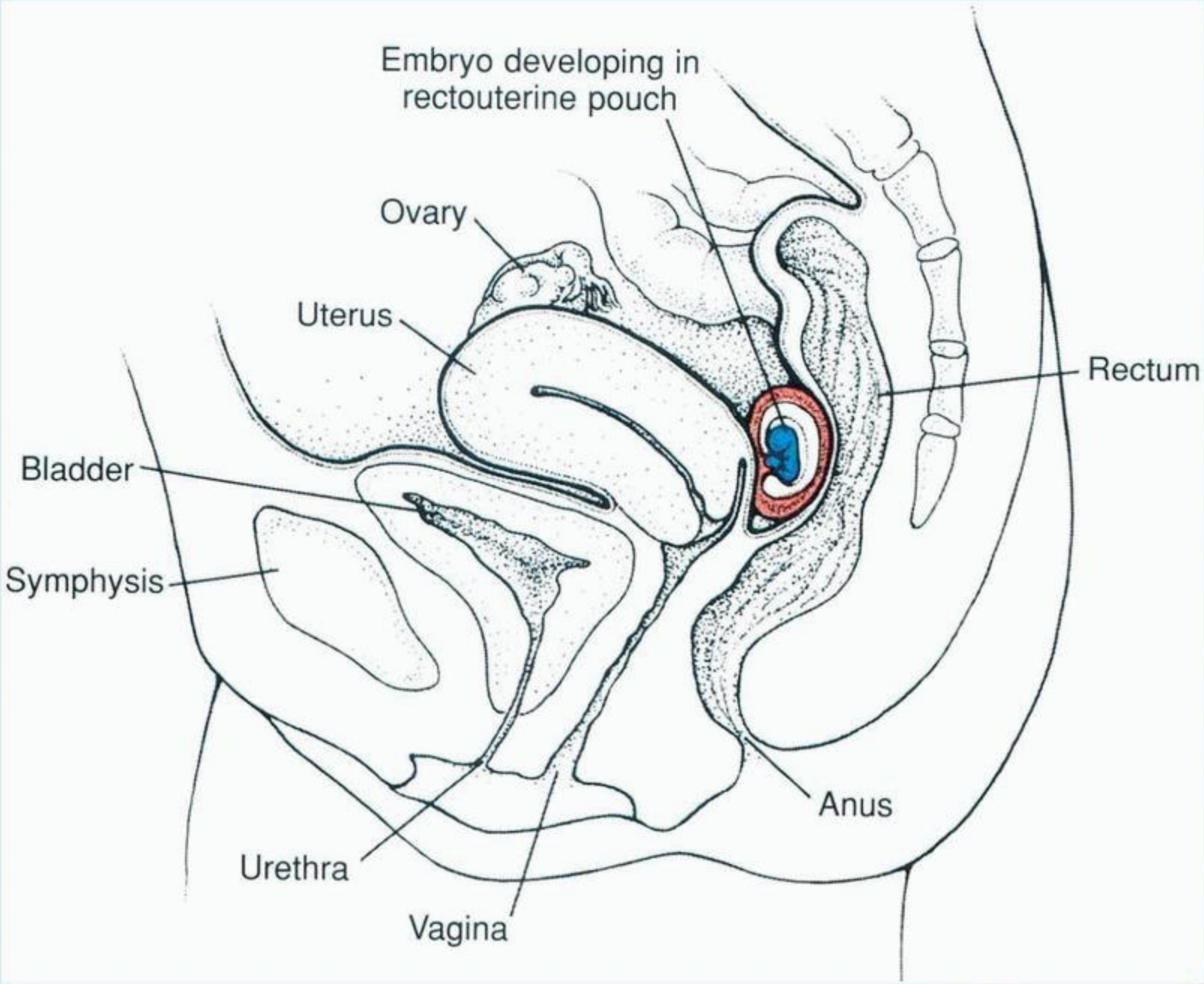
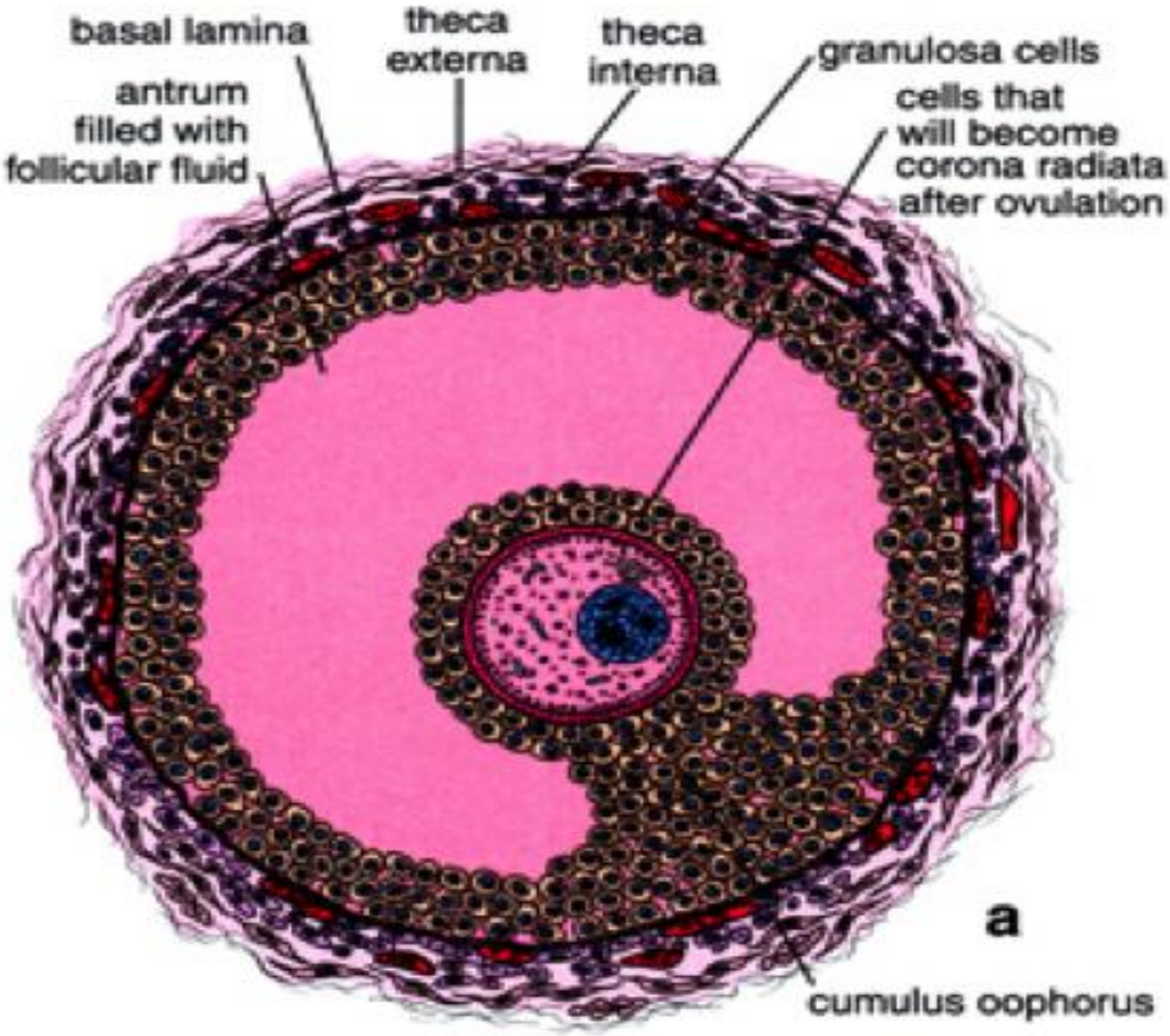
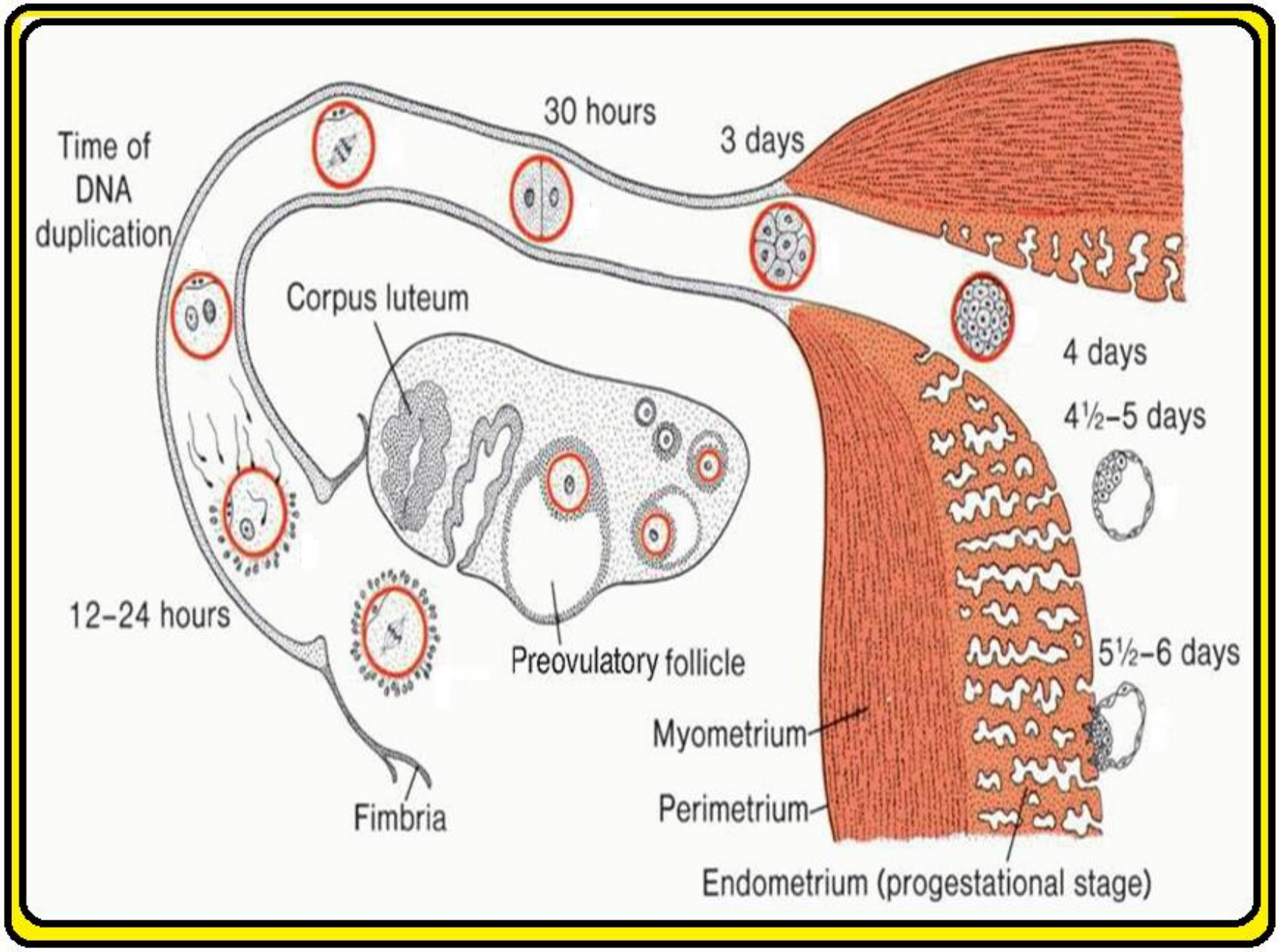
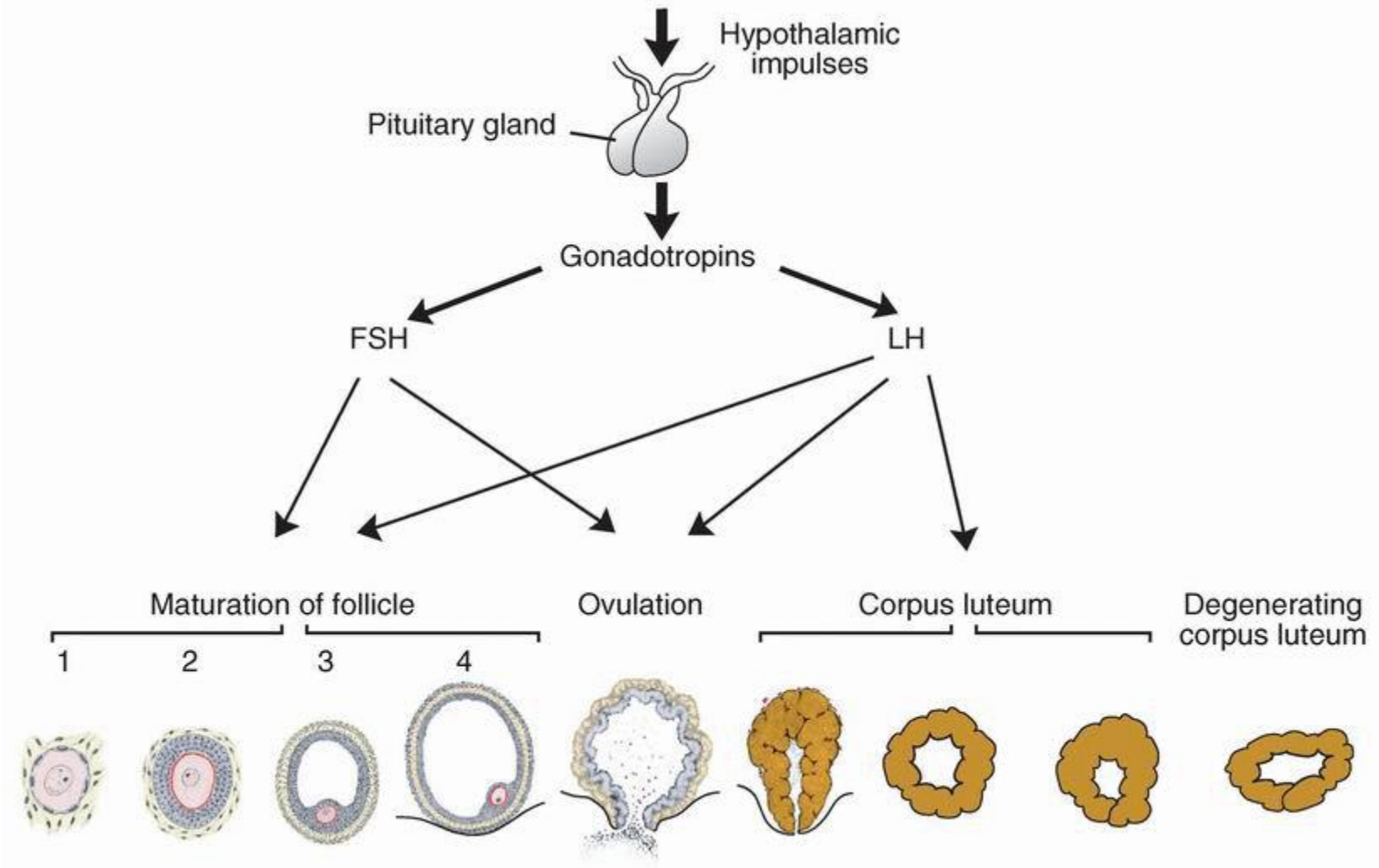

Intestinal loop
Mesentery
Body of uterus
1
2
3
4
5
6
Uterine tube
Ampulla
Internal os of uterus
Fimbriae

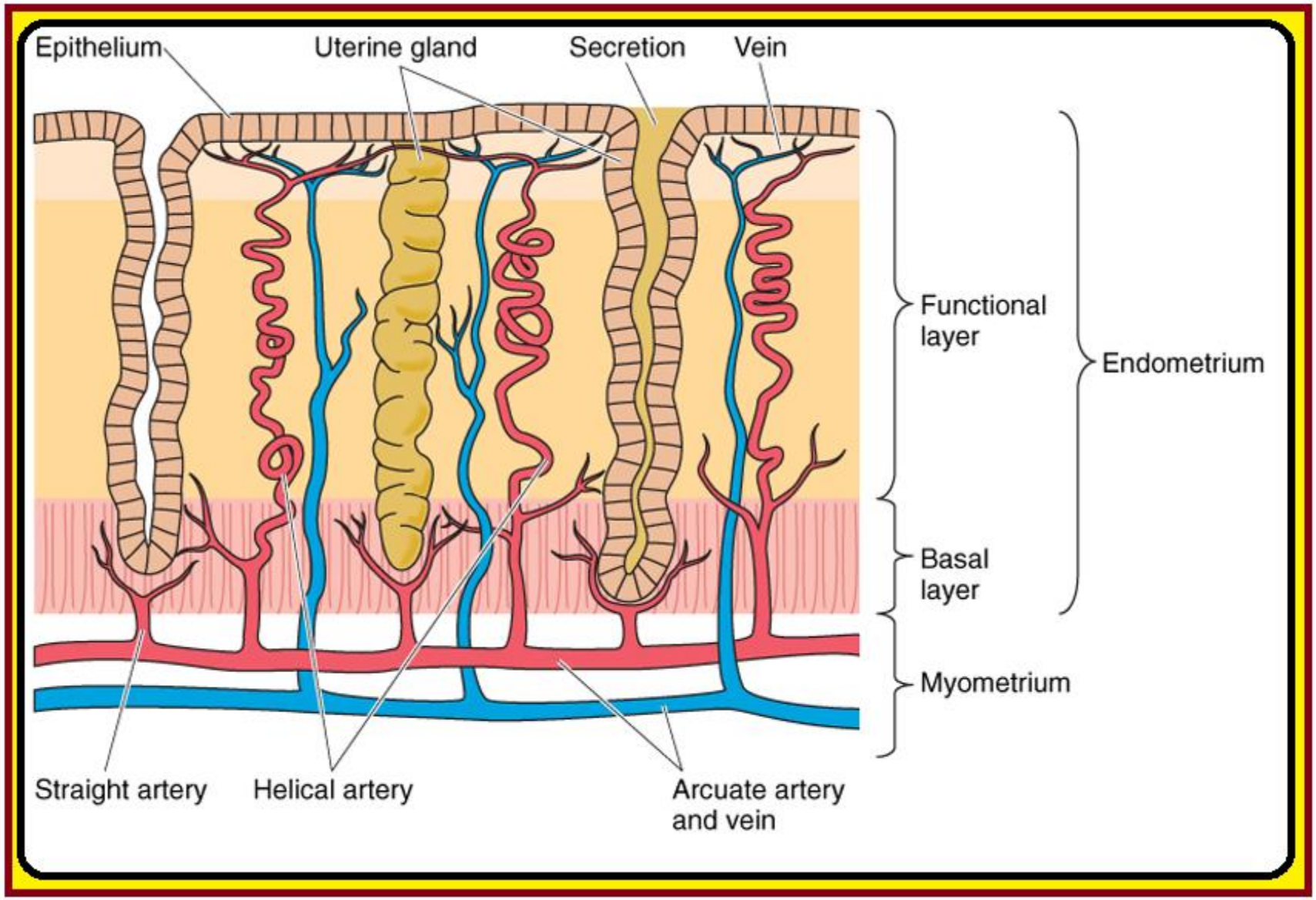

Embryo developing in rectouterine pouch
Ovary
Uterus
Rectum
Bladder
Symphysis
Anus
Urethra
Vagina

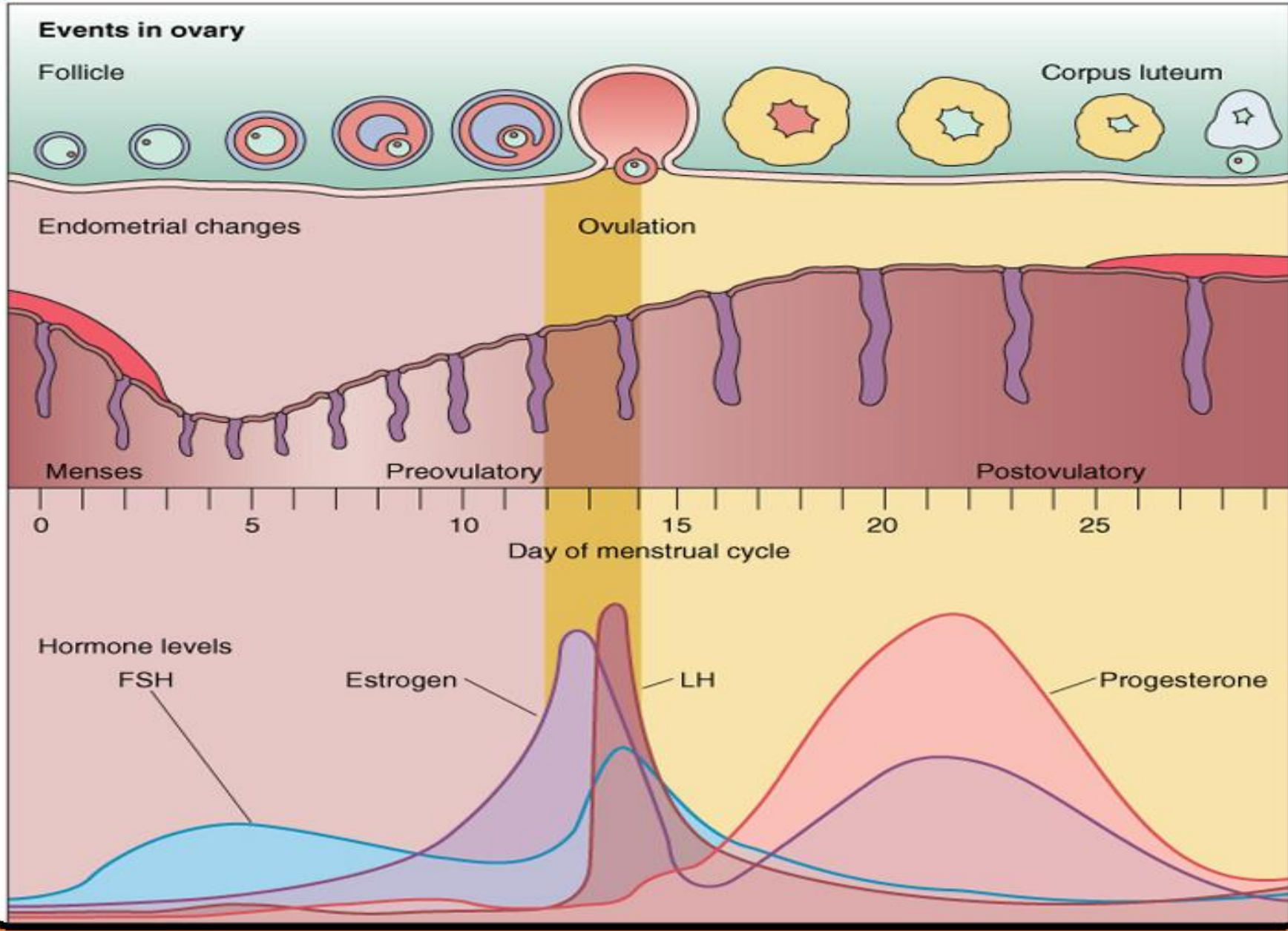


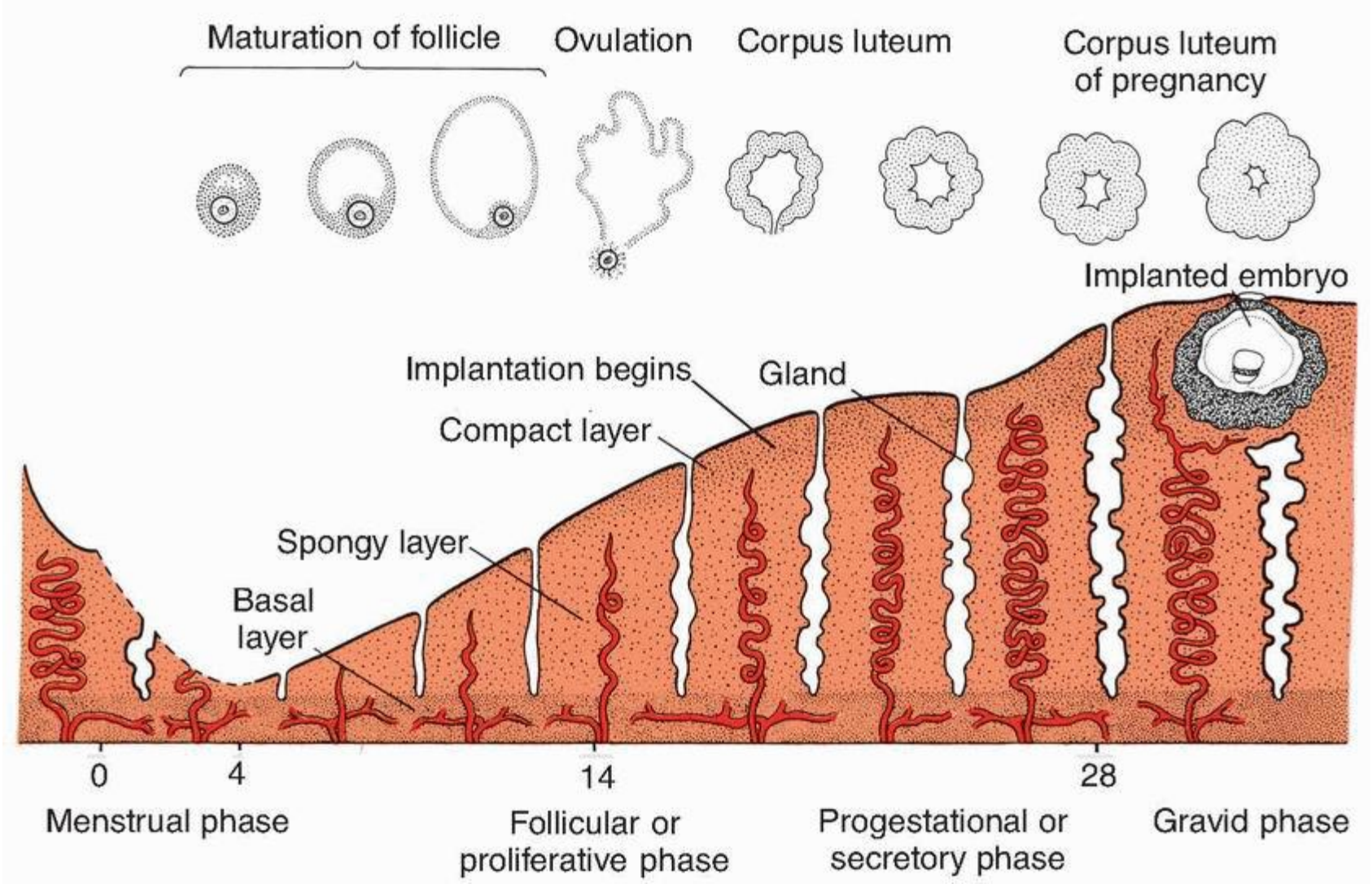
MATURE GRAAFIAN FOLLICLE

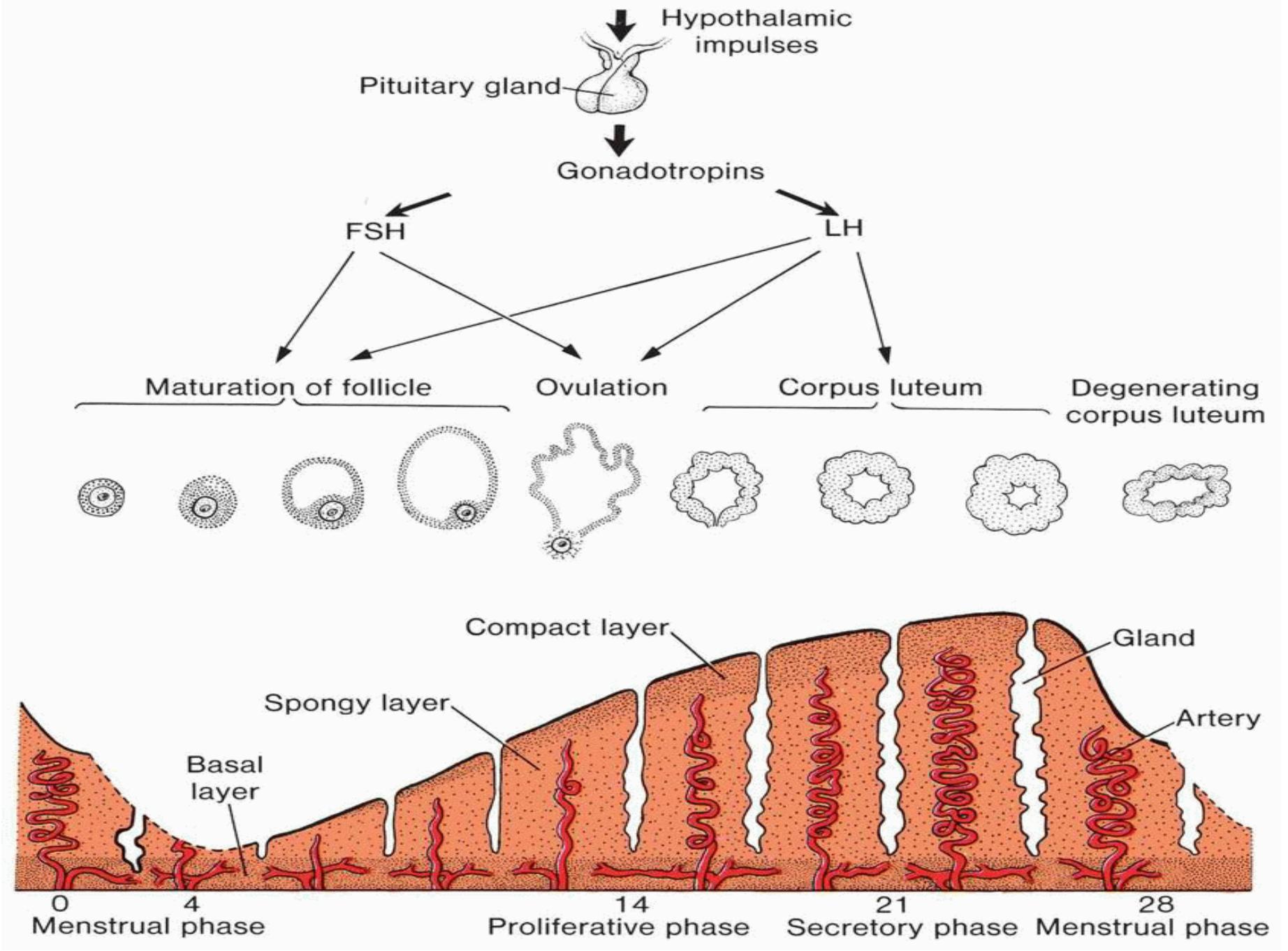

Time of DNA duplication
30 hours
3 days
Corpus luteum
4 days
4½–5 days
12–24 hours
Preovulatory follicle
5½–6 days
Myometrium
Perimetrium
Fimbria
Endometrium (progestational stage)


Hypothalamic impulses
Pituitary gland
Gonadotropins
FSH
LH
Maturation of follicle
1
2
3
4
Ovulation
Corpus luteum
Degenerating corpus luteum

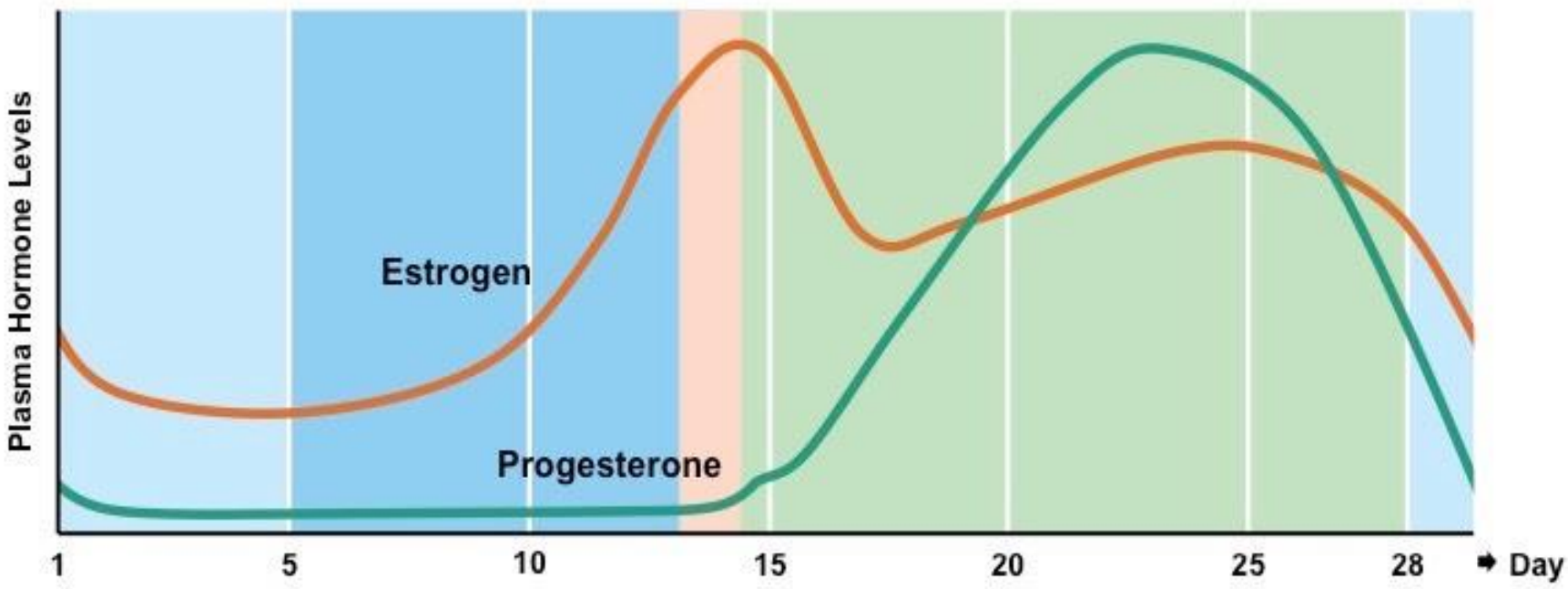

Epithelium
Uterine gland
Secretion
Vein
Functional layer
Endometrium
Basal layer
Myometrium
Straight artery
Helical artery
Arcuate artery and vein


Events in ovary
Follicle
Corpus luteum
Endometrial changes
Ovulation
Menses
Preovulatory
Postovulatory
0
5
10
15
20
25
Day of menstrual cycle
Hormone levels
FSH
Estrogen
LH
Progesterone


Maturation of follicle
Ovulation
Corpus luteum
Corpus luteum of pregnancy
Implanted embryo
Implantation begins
Gland
Compact layer
Spongy layer
Basal layer
0
4
14
28
Menstrual phase
Follicular or proliferative phase
Progestational or secretory phase
Gravid phase


Hypothalamic impulses
Pituitary gland
Gonadotropins
FSH
LH
Maturation of follicle
Ovulation
Corpus luteum
Degenerating corpus luteum
Compact layer
Gland
Spongy layer
Artery
Basal layer
0
4
14
21
28
Menstrual phase
Proliferative phase
Secretory phase
Menstrual phase

OVARIAN HORMONE LEVELS



Follicular phase

- Estrogen levels rise as estrogen is produced by developing follicles (progesterone not produced)

Ovulation

- Estrogen levels drop upon ovulation (follicle is ruptured, cannot produce estrogen)

Luteal phase

- Progesterone levels rise with the development of the corpus luteum (estrogen levels also rise)

Menstruation

- When the corpus luteum degenerates, estrogen and progesterone levels fall

THANKS