

Ovulatory Hormones II - Luteal Phase

The 28-day menstrual cycle can be described by the ovulatory hormones in two phases: the follicular (proliferative) phase and the luteal (secretory) phase. The follicular phase describes balance between FSH, estrogen, LH and ovulation.



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Days 15-28

Days 15-28 on February Calendar

The luteal phase usually lasts 14 days. Thus, ovulation day + 14 days (luteal phase) is the day of menstruation. In a typical 28 day menstrual cycle, days 15-28 are considered the luteal phase.

Corpus Luteum

Corpse Luge-team

After stimulating ovulation, LH causes the follicle to become the corpus luteum. This secretes progesterone.

Secretes Progesterone

Pregnant-jester

After ovulation, Progesterone is secreted by the corpus luteum. Progesterone works to stimulate secretory and vascular activity of the endometrium, preparing for implantation of an embryo.

Negative Feedback inhibits FSH and LH

Negative Feedback and inhibiting-chains on Fish and Luge

After ovulation, progesterone provides negative feedback to the anterior pituitary gland, preventing release of FSH and LH. This is to prevent the development of multiple follicles.

No pregnancy forms Corpus Albicans

No pregnancy sign with Corpse Owl-can

Nearly 14 days after ovulation, when egg fertilization does not occur, the corpus albicans is formed. The corpus luteum degenerates from macrophage breakdown, and turns into the corpus albicans, which is a mass of fibrous scar tissue. As the corpus albicans is formed, progesterone production slowly declines.

Stops Estrogen Secretion

Stop-sign with Easter-egg

Along with progesterone secretion, estrogen secretion also decreases with formation of the corpus albicans.



Endometrial Sloughing - Menses

Endometrium landslide on Man-Z's

A swift decrease in progesterone causes the new vascular in the endometrium (which forms due to progesterone) to regress. Without vascular support, along with decreasing estrogen levels, the endometrium is no longer supported and sloughs within the uterus. This endometrial sloughing and bleeding is menses.

GnRH secretion produces new follicular phase

Gonad-gopher holding New Follicle

After the onset of menorrhea, or the "period," a new follicular cycle begins (at or around day 28), beginning with GnRH causing the release of FSH and LH, stimulating new follicles to develop.