Stages of the Menstrual Cycle

Dr. C. Chatterjee

Each month during the years between puberty and menopause, a woman's body goes through a number of changes to get it ready for a possible pregnancy. This series of hormone-driven events is called the menstrual cycle.

During each menstrual cycle, an egg develops and is released from the <u>ovaries</u>. The lining of the <u>uterus</u> builds up. If a pregnancy doesn't happen, the uterine lining sheds during a menstrual period. Then the cycle starts again. A woman's menstrual cycle is divided into four phases:

- menstrual phase
- follicular phase
- ovulation phase
- luteal phase

Menstrual phase(1-5 days)

The menstrual phase is the first stage of the menstrual cycle. This phase starts when an egg from the previous cycle isn't fertilized. Because pregnancy hasn't taken place, levels of the hormones estrogen and progesterone drop. The thickened endometrium lining of uterus is shed off through your vagina along with a combination of blood, mucus and tissue from the uterus. Menstrual phase lasts for 3 to 5 days.

Follicular phase (1-14 days)

The follicular phase starts on the first day of period (so there is some overlap with the menstrual phase) and ends till ovulation. It starts when the hypothalamus sends a signal to pituitary gland to release <u>follicle-stimulating hormone (FSH)</u>. This hormone stimulates ovaries to produce around 5 to 20 small follicles. Each follicle contains an immature egg. Only the healthiest egg will eventually mature. The rest of the follicles will be reabsorbed into body. The maturing follicle sets off a surge in estrogen that thickens the lining of uterus. This creates a nutrient-rich environment.

Ovulation phase(14th day)

The release of the mature egg happens on about day 14 as a result of a surge in LH and FSH over the previous day. After release, the egg enters the fallopian tube where fertilization may take place, if sperm are present. If the egg is not fertilized, it disintegrates after about 24 hours. Once the egg is released, the follicle seals over and this is called the corpus luteum.

Luteal phase (15-28 days)

After the release of the egg, levels of FSH and LH decrease. The corpus luteum produces progesterone. If fertilization has occurred, the corpus luteum continues to produce progesterone which prevents the endometrial lining from being shed. If fertilization has not occurred, the corpus luteum disintegrates which causes progesterone levels to drop and signals the endometrial lining to begin shedding.