**The Menstrual Cycle**

**Menstruation**

While the ovum and travels through the fallopian tube, estrogen is released that causes the endometrium (decidua functionalis ) to thicken to preparation for the embryo. If egg is not fertilized when it reaches the uterus or if it fails to implant into the endometrium , progesterone and estrogen drop and the endometrium breaks down along with the unfertilized egg.The arteries of the uterus constrict to cut off blood flow to the endometrium. The lack of blood flow causes cell death in the endometrium and the eventual shedding of tissue in a process known as menstruation. In a normal menstrual cycle, this shedding begins around day 28 and continues into the first few days of the new reproductive cycle.The menstrual cycle lasts usually 28 days .It is controlled by the endocrine system.1st half of cycle (days 1-14) pituitary hormone stimulates the egg to mature inside the ovary.At the middle of the cycle (day 14) the level of **LH** hormone rises and ovulation occurs. If fertilizing was occur the fertilized ovum travels through the fallopian tubes and takes 7 days to reach uterus.As egg is traveling, progesterone increases to maintain the growth of the endometrium. Menstrual cycle takes about 28 days on average, but may be as short as 24 days or as long as 36 days for some women.

**MENSTRUAL CYCLE**

**MENSTRUAL PHASE(1-5DAYS):**

1-Estrogen and progesterone levels decrease.

2-Follicle stimulating hormone (FSH) levels rise and steady levels of Lutenizing Hormone (LH)initiate estrogen secretion by the ovary.

3-Menstrual flow begins.

**PROLIFERATIVE PHASE (6-13DAYS):**

1-Estrogen production increases ,leading to proliferation of endometrium and myometrium in preparation for possible implantation .

2-Follicle secretes estradiol.

3-FSH stimulating graafian follicle .

4-FSH production decreases before ovulation (approximately day 14) .

**SECRETORY PHASE(LUTEAL PHASE(14-25DAYS):**

1-Corpus luteum forms under the influence of LH.

2-Endometrium is prepared for implantation of fertilized ovum.

**ISCHEMIC PHASE(26-28DAYS):**

1-Corpus luteum degenerates if conception does not occur.

2-Estrogen and progesterone levels are decline if conception does not occur.

**Around day 28**

* Progesterone has finished it’s role
* If fertilization occurs then progesterone will remain high and the decidua functionalis will remain.
* If there is no fertilization ,,progesterone levels drop
* Feedback mechanisms further lower progesterone and the spiral arteries begin to recoil..decidua functionalis becomes ischemic and slough off that is menstrual cycle.

**MENSTRUAL DISORDERS**

* Amenorrhea: absence or suppression of the menstrual discharge.
* Menorrhagia: an excessive profuse menstrual flow.
* Dysmenorrheal: painful menstruation.
* Oligomenorrhea: low of menstruation
* Premenstrual syndrome
* Endometriosis

**Factors that affect menstruation**

* Diet, stress, illness, travel, exercise, weight gain/loss
* Every woman’s cycle is different
* Common to experience cramps, PMS symptoms

heating pad, warm bath, exercise, dietary changes

* Menstruation occurs until approx. 45 y. when menopause occurs: ovaries slow down production of hormone production and no longer release mature eggs, gradually menstruation stops and the woman is no longer fertile.