

Hormones in the Female Reproduction System

EQ: How do hormones balance through the female menstrual cycle?

- I. Main Structures
 - a. Uterus
 - b. Fallopian Tubes
 - c. Vagina
 - d. Cervix
 - e. Ovary
 - i. this is where the eggs are produced through cell division (MEIOSIS)
 - ii. each ovary takes turns releasing eggs every month, twins occur if two eggs are released
 - iii. Ovaries secrete both estrogen and progesterone.
- II. Female Sex Hormones
 - a. GnRH from the hypothalamus stimulates Anterior Pituitary Gland to produce FSH and LH
 - b. Female Menstrual Cycle
 - c. Female Hormone Functions
 - i. Estrogen
 1. Growth of ovary/follicles
 2. Primes smooth muscle and epithelium of repro tract
 3. In Puberty – Breast growth
 4. Female fat deposition
 5. Bone growth
 6. Stimulates Prolactin
 7. Protects against Atherosclerosis
 - ii. Progesterone
 1. Affects endometrium
 2. Induces thick, sticky cervical mucus
 3. Decreases smooth muscle contractions of repro tract
 4. Stimulates breast growth
 5. Inhibits prolactin (in breast tissue)
- III. Fertilization - normally occurs in the Fallopian Tubes
 - a. The fertilized egg (zygote) implants in the uterus
 - b. The **uterus** consists of a body and a cervix
 - i. The cervix protrudes into the vagina.
 - ii. The uterus maintains an environment for accepting a fertilized egg.
 - iii. If no fertilized egg reaches the uterus, the lining is shed monthly in a process known as menstruation
- IV. Female Reproductive Health
 - a. Women should receive an annual PAP test.
 - b. A doctor removes cells from around the cervix and a lab checks them for abnormalities.
- V. Menopause (~2 year process)
- VI. Female Reproductive Anatomy
 - a.

