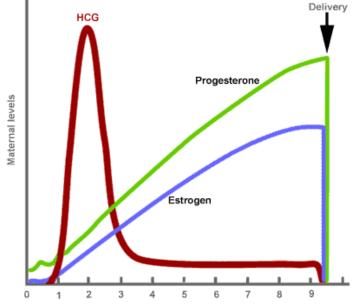


- Pregnancy:
  - It is characterized by steadily increasing levels of estrogen and progesterone (why?)
    - ✓ Maintaining endometrium.
    - ✓ Stimulating development of breasts.
  - Fertilization:
    - ✓ If there is fertilization, corpus luteum degeneration will not occur due to secretion of human Chorionic Gonadotropin (hCG) from the placenta.
  - First trimester (first 3 months of pregnancy):
    - ✓ Corpus luteum is responsible for the production of estradiol and progesterone.
  - Second and third trimesters (months: 4-9):
    - ✓ Progesterone is produced by the placenta (as it is formed in the  $4^{th}$  month).
    - ✓ Fetal adrenal gland synthesizes dehydroepiandrosterone-sulfate (DHEA-S) which is then hydroxylated in the fetal liver. These intermediates are transferred to the placenta where anyzmes remove sulfate and aromatize to estrogens (estriol).
  - Parturition (عملية الولادة):
    - ✓ Near term, the estrogen/ progesterone ratio increases, which makes the uterus more sensitive to contractile stimuli.
  - Lactation:
    - ✓ Estrogens and progesterone stimulate the growth and development of breasts throughout pregnancy.
    - ✓ Estrogen stimulates prolactin secretion but it blocks the action of prolactin on the breast.
    - ✓ Lactation is maintained by suckling which stimulates both oxytocin and prolactin secretion.
    - ✓ Ovulation is suppressed as long as lactation continues because prolactin has the following effects:
      - ✤ Inhibits hypothalamic GnRH secretion → consequently inhibits LH and FSH secretion.



Months after beginning of last menstrual period