

# Outline

## “01.01 Menstrual Cycle”

### Overview

1. Average of a 28-day cycle in which either a period or pregnancy occur
  1. Hormones – FSH, LH, estrogen, progesterone
  2. Organs – brain, ovaries, and uterus

### Nursing Points

### General

Timeline of the menstrual cycle is as follow:

1. Pituitary gland releases FSH and LH, which stimulates follicles in ovaries to mature
  - a. Each follicle contains one ovum – “egg”
  - b. Maturing follicles secrete estrogen
2. When estrogen peaks → this begins ovulation and the brain is told to ↓ FSH and ↓ LH production
3. Ovulation – The most mature ovum bursts out of its follicle and starts traveling towards the uterus via the fallopian tube to potentially become fertilized by a sperm
4. In the ovary, the now-empty follicle, the corpus luteum, secretes progesterone
  - a. Stimulates uterine lining (endometrium) to plump with blood and nutrients to prepare for implantation of a fertilized ovum
5. If an ovum gets fertilized, it implants itself into the plump wall of the uterus.
  - a. Conception → Pregnancy
  - b. Fertilization occurs when with the sperm and ovum unite
    - i. Fertilized ovum is called a zygote
    - ii. Zygote implants approximately 6-8 days after ovulation
    - iii. Zygote matures into a blastocyst
  - c. Blastocyst causes the body to produce human chorionic gonadotropin (hCG).
    - i. hCG tells the corpus luteum to continue secreting progesterone

- ii. Maintains the pregnancy until the placenta takes over production, 2-3 months later.
- 6. If the ovum does not get fertilized, the progesterone and estrogen levels drop
  - a. This tells the uterine lining to shed, because it's not needed to support a pregnancy.
  - b. Blood, tissue, and the ovum are shed and leave the body via the vagina.
    - i. This can take up to 7 days.
    - ii. This is a period or menses.

### Assessment

1. So what are menstrual cramps?
  - a. The uterus is a muscle, which contracts to release the unused contents.
  - b. Vasoconstriction occurs during these contractions of the uterine muscle.
  - c. This causes temporary oxygen deprivation, which then causes the pain (or dysmenorrhea) associated with menses.
2. How long is the cycle?
  - a. The cycle usually occurs every 28 days on average.
  - b. Women are sometimes regular and can count out their cycle and others are irregular and don't occur at the same time every month
3. Ovarian Phases
  - a. Follicular phase
    - i. Before the egg release/Pre-Ovulation
    - ii. Starts FSH + LH secretion (follicles are maturing)
  - b. Ovulatory phase
    - i. Egg is released → follicular rupture and release of ovum
  - c. Luteal phase
    - i. Egg has been released
    - ii. Corpus luteum secretes progesterone and continues to if pregnancy occurs
4. Uterine Phases


  
 AGUINALDO
   
 RECRUITMENT

a. Menstrual phase (4-6 days)

- i. Starts with menstruation → ends with ↑ FSH, starting a new cycle (all if pregnancy did not occur)
- ii. Endometrial tissue is shed, “self cleaning”

Therapeutic Management

1. This is a normal process, no treatment is required
2. NSAIDs can be used to manage pain
3. Eat complex carbohydrates and avoid high sugar items
4. Exercise

Nursing Concepts

1. Reproduction
2. Comfort

Patient Education

1. Use contraception if pregnancy is not desired
2. Diet and medication education to aid in dysmenorrhea
3. Ensure proper hygiene during menses to avoid UTI

