# UNIT 12: REPRODUCTIVE SYSTEM II

**UNIT STRUCTURE**

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## 12:1 LEARNING OBJECTIVES

After going through this Unit, You will be able to

- Learn about the menstrual cycle and menstruation
- Describe the phases of the menstrual cycle and what occurs in each phase
- Explain the importance of understanding the female reproductive system
- Understand the importance of Yogic practices for women reproductive health

## 12:2 INTRODUCTION

The menstrual cycle is a hormonal and physical cycle that the body goes through in preparation for pregnancy - often occurring monthly. The menstrual cycle usually starts between the ages of 8 to 16. The beginning of the menstrual cycle often occurs after other sexual characteristics have developed, such as breasts and pubic hair. Menstrual cycles continue until menopause, which usually occurs between the ages of 45-55.

## 12.3 PHASES OF MENSTRUAL CYCLE

The phases of the menstrual cycle consist of period/menstruation, follicular phase, ovulation and luteal phase.

**Period/Menstruation**: A period or menstruation is the shedding of the lining of the uterus (womb) in response to hormonal changes. Menstrual fluid contains blood and cells from the endometrium (lining of the uterus). Generally, the bleeding during a period lasts for 2-7 days but can vary. Menstruation can also vary in colour and consistency. Periods are usually heavier over the first day or two than they are towards the end.

**Follicular Phase:**

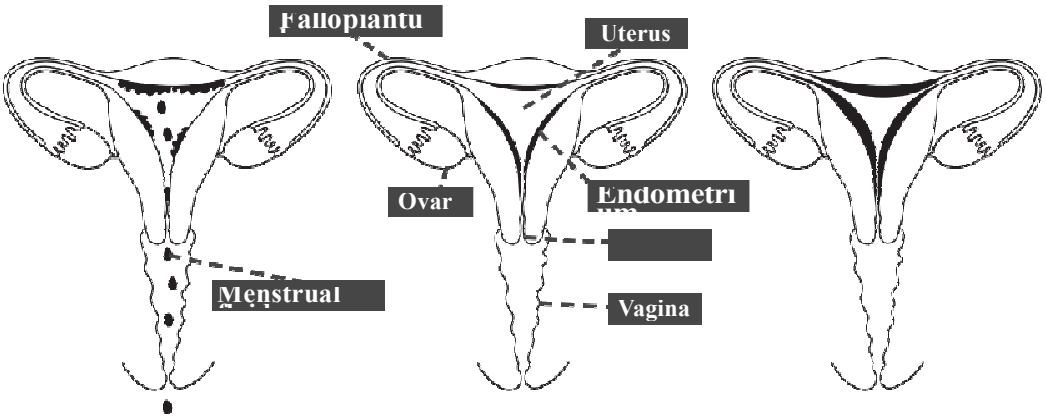
The follicular phase starts on the first day of menstruation and ends with ovulation. Following a period, two main things happen over the next two weeks: usually one egg will mature and be released and the lining of the uterus thickens in preparation for a possible pregnancy.

**Ovulation:**

Ovulation occurs around 2 weeks before the end of a menstrual cycle (generally midcycle, but this can vary). Ovulation is when a mature egg is released from an ovary and travels through the fallopian tube to the uterus. Once an egg is released, it survives for 12-24 hours. This is when an egg can be fertilized if sperm is present. Sperm could be present if the person has had unprotected vaginal intercourse with someone with a penis in the previous 5-7 days. If the egg is fertilized and implants into the uterus, then a pregnancy develops and the menstrual cycle will usually stop for the time being.

**Luteal Phase:**

The luteal phase is where the body prepares for pregnancy. The endometrium thickens making the body prepared for a fertilized egg to implant. If pregnancy doesn’t happen the lining of the uterus will shed, causing a period.




**Follicular Phase** **Ovulation** **Luteal Phase**

## 12:4 EFFECT OF YOGIC PRACTICES ON REPRODUCTIVE SYSTEM

Yogic practices have a positive impact on the reproductive system through both physical and mental pathways.

- **Hormonal regulation:**
  - Yogic practices like Pranayama and meditation help regulate stress hormones such as cortisol and adrenaline which can disrupt reproductive hormone balance.
- They enhance the functioning of the hypothalamus- pituitary-gonadal axis promoting the release of hormones critical for reproduction. (e.g. Estrogen, Progesterone, Testosterone and luteinizing hormone).

- **Improved blood circulation:**

  Asanas such as Bhujangasana, Paschimottanasana and Sarvangasana improve blood flow to the pelvic region, nourishing reproductive organs like ovaries, uterus and testes.
- **Stress reduction:**
- Stress is a significant factor affecting reproductive health often leading to conditions like infertility or irregular menstrual cycles.

- Yoga induces relaxation by stimulating the parasympathetic relaxation by stimulating the parasympathetic nervous system and reducing anxiety which can enhance fertility and reproductive well-being.

➢ **Regulation of Menstrual cycles:**

For women, practices like Baddhakonasna, Titli asana, Vipareetakarani asana etc. help in regulating menstrual cycles and alleviating symptoms of painful menstruation or Polycystic ovary syndrome (PCOS).

➢ **Enhanced fertility:**

- Yogaimproves overall health which is a key factor in fertility. It reduces oxidative stress and inflammation, common causes of infertility.
- Pranayama like Nadi shodhan, Anulom-vilom, Bhramari help detoxify the body and maintain hormonal balance.

➢ **Alleviation of pregnancy related discomforts:**

Prenatal yoga helps reduce common pregnancy related issue such as back pain, stress etc. It prepares the body for labor and delivery by enhancing flexibility or strength.

## 12:5 LETS SUM UP

- The menstrual cycle is a series of changes in the endometrium of the uterus. Each month, the endometrium is prepared for the potential arrival of a fertilized ovum that will develop in the uterus. If an ovum is not fertilized, the outer portion of the endometrium sheds off.
- Follicular cycle: (about 14 days) between 3-30 follicles, each containing 1 ovum, begin to grow with usually 1 reaching maturity while the others breakdown
- Ovulatory phase (about 16-32 hours): The ovum is released from the follicle and enters the fallopian tube
- Luteal phase (about 14 days): The ruptured follicle forms a structure called the corpus luteum. The corpus luteum produces progesterone which helps prepare the endometrium for a fertilized egg.

- Yogic practices have a profound impact on the reproductive system, enhancing its function and overall health. This effect can be attributed to the integration of asana, pranayama and meditation which collectively improve hormonal balance, circulation and stress management.
- Hormonal balance: Yogic practices regulate endocrine glands, stabilizing hormones crucial for reproduction.
- Stress reduction: Yoga reduces stress hormones like cortisol, improving fertility and reproductive health.
- Improved circulation: Poses enhance blood flow to reproductive organs supporting their function.
- Regulated menstrual cycle; Yoga helps in maintaining regular menstrual cycles and alleviating menstrual discomfort.
- Pelvic health: Specific asanas strengthen pelvic muscles and increase flexibility,aiding fertility and recovery.

## Check Your Progress

**Q No 1:**What do you mean by Menstrual cycle?

**Q No 2:** The phases of the menstrual cycle, in the order which they occur are…….and……..

**Q No 3:** How Yogic practices benefit the reproductive system?

## 12:6 Further readings:


- Pearce,E.(1993). *Anatomy and Physiology for Nurses,* JaypeeBrothers Medical Publishers.
- Gray, H.*Anatomy of the Human Body*, Lea &Febiger, Philadelphia.
- Waugh,A. & Grant,A.(2014). *Ross & Wilson Anatomy and Physiology in health and illness,*Elsevier Health Sciences

## ✓ 12:7 Answer to check your progress:

**Ans to QNo1:** The menstrual cycle is a hormonal and physical cycle that the body goes through in preparation for pregnancy occurring monthly.

**Ans to QNO2:** Menstrual phase, Proliferative phase and secretory phase.

**Ans to Q No3:** Yoga helps regulate hormones, improve blood circulation to reproductive organs, reduce stress and enhance overall reproductive health.

## ? 12:8 Model Questions:

**A. Very short questions**

Q1:What is the average length of the menstrual cycle?

Q2:Write some asanas effective for menstrual cycle.

**B. Short questions (Answer in about 150 words)**

Q1: Write a short note on menstrual cycle.

Q2: How Yoga helps in hormonal regulation?

**C. Long questions (Answer in about 300-500 words)**

Q1: Describe the effect of Yogic practices on reproductive function.

Q2: Give a description on different phases of menstrual cycle.

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