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## Exploring the menstrual irregularity: A comprehensive study on types and Norms

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### Abstract

Menstrual irregularities are a common concern among women of reproductive age, impacting their physical and emotional well-being. This review paper provides a comprehensive overview of menstrual irregularities, focusing on their causes, normal values, and classification. We elucidate the normal menstrual cycle parameters and variations, shedding light on what is considered typical for menstrual frequency and flow. To facilitate a clearer understanding, we present a detailed classification of menstrual irregularities, encompassing oligomenorrhea, menorrhagia, metrorrhagia, and more. This paper aims to serve as a valuable resource for healthcare professionals, researchers, and individuals seeking insights into the complex nature of menstrual irregularities, thereby promoting better health awareness and informed decision-making.

**Keywords:** Variations, shedding, irregularities, encompassing

### Introduction

Menstrual irregularity, a common health concern affecting individuals with a menstrual cycle, refers to any deviation from the typical pattern of menstruation<sup>[1]</sup>. Menstruation is a natural process that occurs in most females of reproductive age, marking the shedding of the uterine lining<sup>[2]</sup>. A regular menstrual cycle typically occurs every 21 to 35 days, with bleeding lasting two to seven days<sup>[3]</sup>. However, 14% to 25% of women have irregular menstrual cycles and these irregularities can manifest in different ways<sup>[4]</sup>. One of the most common menstrual irregularities is an irregular cycle length. While the average cycle is around 28 days, some individuals may experience cycles that are consistently shorter or longer<sup>[5]</sup>. Lifestyle factors such as diet<sup>[6]</sup> and Yoga<sup>[7]</sup> can influence cycle length. A shorter cycle may indicate a higher frequency of ovulation, while a longer cycle can be linked to hormonal imbalances. Stress<sup>[8]</sup> and lifestyle factors can impact menstrual regularity. Chronic stress can lead to hormonal fluctuations that affect the menstrual cycle. Rapid weight gains or loss, excessive exercise, and dietary changes can also influence the body's hormonal equilibrium<sup>[9]</sup>. These factors can lead to amenorrhea, the absence of menstruation, or oligomenorrhea, infrequent menstruation. Age is another significant determinant of menstrual regularity. Adolescents who have just begun menstruating often experience irregular cycles as their bodies adjust to the hormonal changes<sup>[10]</sup>. Likewise, perimenopausal women approaching menopause may also encounter irregularities as their ovarian function gradually declines.

### Cause of Menstrual irregularity

There are many causes of irregular periods, ranging from stress to more serious underlying medical conditions<sup>[11]</sup>.

### Normal Menstrual Cycle

The fundamental points in evaluating menstrual irregularities and determining whether they fall within normal ranges. Assessing these factors helps healthcare providers identify potential underlying causes and provides a basis for diagnosis and treatment. Normal values may vary somewhat between individuals, but they offer a general reference for typical menstrual parameters. Main points considered for menstrual irregularities, along with normal values where applicable, include:

Pregnancy
Endocrine causes
Poorly controlled diabetes mellitus
Polycystic ovary syndrome (PCOS)
Cushing disease
Thyroid dysfunction
Premature ovarian failure
Late-onset congenital adrenal hyperplasia
Acquired conditions
Stress-related hypothalamic dysfunction
Medications
Exercise-induced amenorrhea
Eating disorders (both anorexia and bulimia)
Tumours
Ovarian tumours
Adrenal tumours
Prolactinomas

**Cycle Length**

Menstrual cycles are often irregular during adolescence, particularly the interval from the first cycle to the second cycle. This point has taken to assess the duration between the start of one period and the start of the next to determine cycle regularity.

**Normal Value:** A typical menstrual cycle is 21 to 35 days.

**Bleeding Patterns**

Many medical conditions can cause abnormal uterine bleeding, characterized by unpredictable timing and variable amount of flow. To Assess the flow characteristics, including heaviness, lightness, spotting, or presence of clots bleeding pattern should be evaluated.

**Normal Value:** A normal menstrual flow is between 5- 80 ml.

**Pain and Discomfort (Dysmenorrhea)**

During your menstruation, the uterus contracts to help get rid of the lining which usually cause pain. Inquiring about the presence and severity of menstrual cramps or pain is a necessary criterion.

**Normal Value:** Mild to moderate menstrual cramps that don't interfere significantly with daily activities.

**Duration of Menstruation**

Monitoring the length of menstrual periods to ensure they fall within the normal range.

**Normal Value:** Typical menstrual periods last 2 to 7 days.

**Types of menstrual irregularities**

Menstrual irregularities encompass a variety of disruptions to the typical menstrual cycle. These irregularities can manifest in different forms, each with its own characteristics and underlying causes. These are some of the most common types of menstrual irregularities, each with its own set of causes and potential consequences. Here are some common types of menstrual irregularities and their descriptions:

**Amenorrhea**

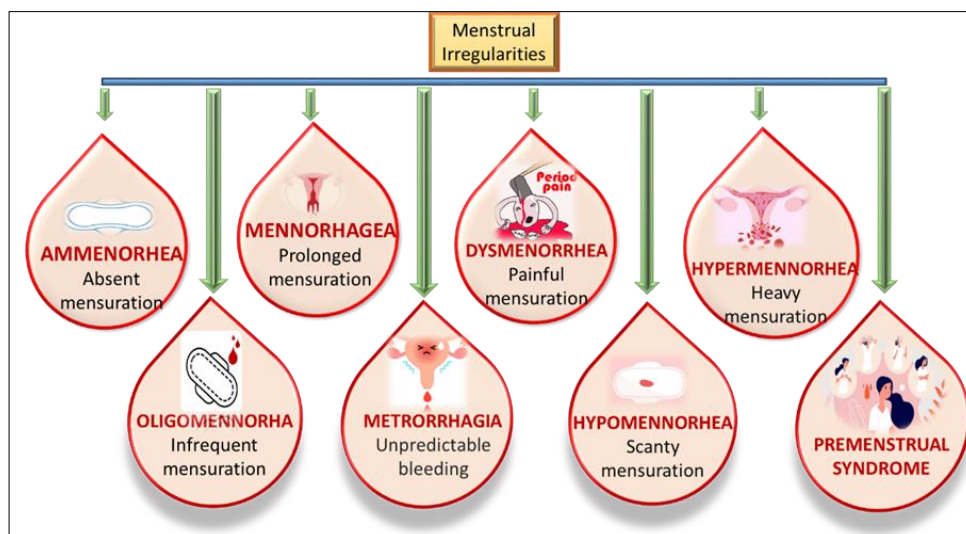
Amenorrhea refers to the absence of menstrual periods. [12] There are two main types: primary amenorrhea (absence of menstruation by age 16) and secondary amenorrhea (cessation of menstruation for at least 3 months in women who previously had regular periods).

**Causes:** Pregnancy, extreme weight loss, obesity, polycystic ovary syndrome (PCOS), hormonal imbalances, stress, excessive exercise, and certain medical conditions can lead to amenorrhea.

**Oligomenorrhea**

Oligomenorrhea is characterized by infrequent, irregular menstruation with longer-than-normal gaps between periods [13].

**Causes:** Oligomenorrhea can be due to hormonal imbalances, such as PCOS, or it may be common in adolescence as the menstrual cycle is establishing regularity.



**Menorrhagia**

Menorrhagia involves abnormally heavy or prolonged menstrual bleeding, often with blood clots. This condition can lead to anemia and significant discomfort [14].

**Causes:** Uterine fibroids, hormonal imbalances, endometriosis, adenomyosis, and certain medical conditions can cause menorrhagia.

### Metrorrhagia

Metrorrhagia is characterized by irregular, unpredictable bleeding episodes between regular menstrual cycles <sup>[15]</sup>.

**Causes:** Hormonal imbalances, uterine polyps, and certain infections can contribute to metrorrhagia.

### Dysmenorrhea

Dysmenorrhea refers to severe menstrual cramps and pain that can occur before or during menstruation. It can be associated with other menstrual irregularities <sup>[16]</sup>.

**Causes:** Contractions of the uterine muscles, often due to prostaglandin release, are responsible for dysmenorrhea. It can be associated with various underlying conditions.

### Hypo menorrhoea

Hypo menorrhoea is characterized by unusually light menstrual bleeding or very short periods substantially less than 30 ml per menstrual cycle <sup>[17]</sup>.

**Causes:** Hypo menorrhoea can result from hormonal imbalances, low body weight, or certain medical conditions.

### Hypermenorrhoea

Hypermenorrhoea is characterized by unusually heavy menstrual bleeding hypermenorrhoea refer to an increase in the amount of menstrual flow to 90 ml or more.

### Premenstrual Syndrome (PMS)

PMS involves a combination of emotional and physical symptoms that occur in the days leading up to menstruation. <sup>[18]</sup> These symptoms can vary in intensity and may include mood swings, bloating, breast tenderness, and fatigue.

**Causes:** Hormonal fluctuations, particularly changes in estrogen and progesterone levels, are thought to play a role in PMS.

### Conclusion

In conclusion, menstrual irregularity is a prevalent and diverse health concern affecting individuals of reproductive age. It encompasses a wide range of deviations from the typical menstrual cycle, including irregular cycle length, abnormal bleeding patterns, and associated symptoms like pain and PMS. While many cases of irregular menstruation are related to lifestyle factors, hormonal imbalances, or age-related changes, it is crucial to differentiate between physiological and pathological irregularities to ensure appropriate treatment. Seeking medical advice and understanding the underlying causes of menstrual irregularity are essential steps in managing this common health issue and promoting overall well-being.

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