*Review Article*

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# Womens Mental Health and Menstruation

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**Abstract**

***Introduction:*** Premenstrual syndrome refers to a wide range of physical or emotional symptoms that most often occur about 5 to 11 days before starting of menstrual cycle, and PMDD are more severe than symptoms seen in premenstrual syndrome (PMS). Premenstrual dysphoric disorder mostly affects 5% of childbearing age women's. Causes The exact cause of PMDD is still unclear but Hormonal changes in the course of the menstrual cycle may play a role. A brain chemical called serotonin, levels change in the course of the menstrual cycle may also play a role in PMDD. ***Identification:*** As per DSM-V Diagnostic Criteria at least five symptoms must be present in the final week before the onset of menses, start to improve within a few days after the onset of menses, and become minimal or absent in the week post menses. Confirmation is done by prospectively daily ratings during minimum two symptomatic cycles, and not attributable to other physiological effects of a substance or medical condition. ***Comorbidity:*** A major depressive episode is the most frequently reported previous disorder in individuals presenting with premenstrual dysphoric disorder.***Treatment:*** Lifestyle changes may helpful to relieve symptoms of PMS and PMDD in many women, but doctor may prescribe one or more medications if symptoms is severe, these is based on severity of premenstrual symptoms. Antidepressants drug such as citalopram and fluoxetine which slow the reuptake of serotonin are effective for PMDD in many women's. Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen or naproxen sodium can ease cramping and breast discomfort. Diuretics When exercise and limiting salt intake aren't enough to reduce the weight gain, swelling and bloating, it can help to shed excess fluid through kidneys which can help ease some of the PMS symptoms. ***Recommendations:*** There is need for community awareness activates for early identification and prevention of premenstrual syndrome and premenstrual dysphoric disorder there is need to teach self-evaluation technique to women under age of 18-45 years. ***Conclusion:*** Based on the review, the following conclusions were drawn: There is need to teach self-evaluation technique, there is need to assess knowledge attitude and practices of women about premenstrual syndrome and premenstrual dysphoric disorder. There is need to organise tanning program for women under age of 18-45 years. This review give basis for adding this valuable topic in women's health program run by state or central government.

**Keyword:** PMS; PMDD; Mental health in menstruation; Mood swing in menstruation: Lifestyle change in PMS.

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## Introduction

Women's who feels irritability, depression, or anxiety in the week or two week before starting of her menstruation, it is not a normal but it can be women's health problem. This symptoms usually go away 2 to 3 days after starting of menses. Women are having symptoms of irritability, depression, or anxiety need medicine or other type of treatment to reduce symptoms because it can be Premenstrual syndrome or premenstrual dysphoric disorder.

Premenstrual syndrome refers to a wide range of physical or emotional symptoms that most often occur about 5 to 11 days before starting of menstrual cycle. In most of cases, the symptoms of PMS stop shortly after menstruation starts(1) and symptoms of PMDD are more severe than symptoms seen in premenstrual syndrome (PMS). Premenstrual dysphoric disorder mostly affects 5% of childbearing age women's. Women's between 20 and 40 percent experiences moderate to severe form of premenstrual symptoms (PMS) and between these 3-8 percent experience symptoms which affects functioning in normal daily life, this is premenstrual dysphoric disorder (PMDD).[2]

The difference between PMDD and premenstrual syndrome (PMS) is that the symptoms of PMDD are severe and debilitating. Premenstrual dysphoric disorder involves a set of physical and psychological symptoms that affects functioning of daily living and threaten the individual's mental wellbeing.[2]

The symptoms of PMDD disrupt normal daily functioning, and they require medical treatment. Symptoms are most commonly experienced during the second half of the menstrual cycle. The condition can affect relationships and disrupt routines at home and work.[2]

## Causes

The exact cause of PMDD is still unclear but Hormonal changes in the course of the menstrual cycle may play a role.[1]

A brain chemical called serotonin, levels change in the course of the menstrual cycle may also play a role in PMDD, and some women may be more susceptible to these changes. It may be an abnormal reaction to normal hormone changes which occurs in each menstrual cycle. Serotonin deficiency can occur due to these hormonal changes. Serotonin presents naturally in the brain and intestines which narrows blood vessels and can affect mood and cause physical symptoms.[3]

Serotonergic, noradrenergic and dopaminergic pathways is affected by fluctuations in circulating oestrogen and progesterone and recent data suggests that women with premenstrual mood disorders have abnormal serotonin neurotransmission, along with a lower density of serotonin transporter receptors, which is thought to be associated with symptoms such as irritability, depressed mood and carbohydrate craving.

There is role of GABA in the etiology of PMDD, finding suggests that women with PMDD may have a deficiency of GABAergic inhibition in their cerebellum. A study using positron emission tomography (PET) scans to assess cerebral glucose metabolism and mood in women with and without PMDD. Plasma levels of ovarian hormones did not differ between the two groups, but women with PMDD showed an increase in cerebellar activity, though those in the control group did not. This increase in activity occurred during the luteal phase and was positively correlated with worsening of mood.[4]

### *Risk and Prognostic Factors*

*Environmental:* Stress, history of interpersonal trauma, seasonal changes, and socio cultural aspects of female sexual behavior in general, and female gender role in particular associated with the expression of premenstrualdysphoric disorder.

*Genetic and Physiological:* Heritability of premenstrual dysphoric disorder is unknown, however, for premenstrual symptoms, estimates for heritability range between 30% and80%, with the most stable component of premenstrual symptoms estimated to be about50% heritable.

*Course Modifiers:* Fewer premenstrual complaints found in Women using oral contraceptives than women not using oral contraceptives.

## Identification

As per DSM-V Diagnostic Criteria at least five symptoms must be present in the final week before the onset of menses, start to improve within a few days after the onset of menses, and become minimal or absent in the week post menses

One or more symptoms must be present for diagnosing PMDD:

1. Feeling affective lability such as mood swings, feeling of suddenly sad or tearful, or increased sensitivity to rejection.
2. Feeling of irritability or anger or increased interpersonal conflicts.

3. Feeling of depressed mood, hopelessness, or self-deprecating thoughts.
4. Feelings of anxiety, tension, and/or being keyed up or on edge.
5. Decreasing interest in dailyactivities such as work, school, friends, and hobbies.
6. Feeling difficulty in concentration.
7. Lethargy, easy fatigability, or marked lack of energy.
8. Feeling change in appetite; overeating; or specific food cravings.
9. Sleep disturbance such as Hypersomnia or insomnia.
10. A sense of being overwhelmed or out of control.
11. Feeling of breast tenderness or swelling, joint or muscle pain, a sensation of "bloating," or weight gain.

Confirmation is done by prospectively daily ratings during minimum two symptomatic cycles, and not attributable to other physiological effects of a substance or medical condition.

Delusions and hallucinations also found in the late luteal phase but are rare.[5] It has been considered that some of suicidal risk also found in premenstrual phase.[5]

A number of scales, including the Daily Rating of Severity of Problems and the Visual Analogue Scales for Premenstrual Mood Symptoms, have undergone validation and are commonly used in clinical trials for premenstrual dysphoric disorder. The Premenstrual Tension Syndrome Rating Scale has aself-report and an observer version, both of which have been validated and used widely to measure illness severity in women who have premenstrual dysphoric disorder.[5]

### *Comorbidity*

A major depressive episode is the most frequently reported previous disorder in individuals presenting with premenstrual dysphoric disorder.[5]

A wide range of medical (e.g., migraine, asthma, allergies, seizure disorders) or other mental disorders (e.g., depressive and bipolar disorders, anxiety disorders, bulimia nervosa, substance use disorders) may worsen in the premenstrual phase; however, the absence of a symptom-free period during the postmenstrual interval obviates a diagnosis of premenstrual dysphoric disorder.[5]

### *Treatment*

Lifestyle changes may helpful to relieve symptoms of PMS in many women, but doctor may prescribe one or more medications if symptoms is severe, these is based on severity of premenstrual symptoms.

*Antidepressants:* Serotonin reuptake inhibitors - Antidepressants drug such as citalopram and fluoxetine which slow the reuptake of serotonin are effective for PMDD in many women's, Serotonin and norepinephrine reuptake inhibitor (SNRI) such as venlafaxine and a tricyclicantidepressant which has a strong effect on serotonin such as clomipramine is used in treatment of PMDD.

Studies report suggests that between 60% to 90% women with PMDD respond to treatment with drugs that block reuptake of serotonin, compared with 30% to 40% of those who take a placebo.[6] The decision about initiation and course of treatment depends on the type of symptoms.[6] Intermittent dosing is sufficient for treating irritability or mood, but daily medication may be necessary to control somatic symptoms such as fatigue and physical discomfort.[6]

Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen or naproxen sodium can ease cramping and breast discomfort.

*Diuretics:* When exercise and limiting salt intake aren't enough to reduce the weight gain, swelling and bloating, taking water pills (diuretics) such as Spironolactone (Aldactone) can help to shed excess fluid through kidneys which can help ease some of the PMS symptoms.[7]

Hormonal Interventions: Oral Contraceptives, Suppression of ovulation which eliminates premenstrual symptomatology are the principle in hormone treatment of PMS and PMDD, Oral contraceptive showing greater efficacy in addition of the novel progestin drospirenone which is distinct from the progestins used in other oral contraceptives and is chemically related to a diuretic spironolactone, that is sometimes used to treat fluid retention in women with premenstrual symptoms. While oral contraceptives are typically used in a cyclic manner with twenty one days of active pills followed by seven days of placebo, preliminary research suggests that continuous treatment with oral contraceptives (OCP) may have greater efficacy for treating PMS symptoms.[8]

Weighing the risks and benefits of starting a hormonal intervention is important. Some women are not good candidates for treatment with OCPs, especially if there is a history of blood clot, stroke, or migraine, 35 years or older age, smoker. Additionally, women with a history of depression

should consult with their doctor before taking an OCP and should remain vigilant for any mood changes that occur once they initiates treatment. A recent study found that women on OCP were twice as likely to attempt or complete suicide compared to women who were not on OCP.[9]

*Leuprolide:* leuprolideis a gonadotropin-releasing hormone (GnRH) agonistswhich suppress ovarian function, reduces premenstrual symptoms, this result has been found in most studies, but it causes falling of oestrogen to menopausal levels thus associated with side effects like a hot flashes and vaginal dryness, as well as increased risk of osteoporosis.

Danazol, It is a synthetic androgen, when given in doses high enough to inhibit ovulation are effective in PMS/PMDD. However, this medication is associated with significant androgenic side effects, including acne, unwanted hair growth (hirsutism) and weight gain.[3]

### *Lifestyle changes*

Lifestyle changes are always worth the effort.

*Diet:* The usual dietary advice given to women with mild or even moderate premenstrual symptoms.

- Eat smaller, more-frequent meals to reduce bloating and the sensation of fullness.
- Limiting salt and salty foods intake, it reduces bloating and fluid retention.
- Choose high-protein foods or complex carbohydrates to raise levels of tryptophan, tryptophan is a precursor of serotonin and other neurotransmitters.
- Choose foods rich in calcium. If not able to tolerate dairy products or are not available adequate calcium in diet, a daily calcium supplement may help.
- Avoid caffeine and alcohol.
- Take Vitamin B6, magnesium supplements.

*Aerobic exercise:* a wealth of evidence concludes that aerobic physical activity, such as walking, swimming, or cycling, tends to improve mood and energy levels(6).Practice progressive muscle relaxation or deep-breathing exercises to help reduce headaches, anxiety or trouble sleeping (insomnia), yoga or massage to relax and relieve stress.

*Herbal remedies:* Some women report relief of PMS symptoms with the use of herbs, such as ginkgo, ginger, chasteberry (Vitex agnus), evening primrose oil and St. John's wort. However, few scientific studies have found that any herbs are effective for relief of PMS symptoms.[7] Herbal remedies also aren't regulated by the Food and Drug Administration, so there's no record of product safety or effectiveness. Consultation with doctor before taking any herbal products is helpful.

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