



Association of
Reproductive
Health
Professionals

*A Quick Reference Guide
for Clinicians®*

Managing Premenstrual Symptoms

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Using This Guide

It is estimated that 75–85% of menstruating women experience some uncomfortable symptoms during the premenstrual phase of their cycles.¹ Many women experience premenstrual symptoms that do not require specific treatment. In contrast, the symptoms of premenstrual disorders interfere with normal functioning and have a significant negative effect on a woman's quality of life.

Despite increasing attention and awareness of premenstrual disorders, they are notoriously underrecognized. Many women delay seeking treatment and thus go undiagnosed for years. Yet the degree and prevalence of disability of premenstrual disorders equal that associated with many widely recognized conditions.² Overall, women with premenstrual disorders represent a largely uncared-for group for whom the evidence for conventional therapy is sparse and controversial.³ Treatment options vary and produce overall response rates of less than 60%.²

The key to effective management of premenstrual disorders is time, patience, and knowledge of various treatments that have proven to be effective. This *Quick Reference Guide for Clinicians*[®] has been designed to help health care providers to recognize premenstrual disorders and apply evidence-based management strategies. Also provided are clinical management alternatives and patient education information and resources.

The practical steps outlined here will equip clinicians with the tools necessary to accurately and appropriately diagnose, treat, and counsel women dealing with premenstrual disorders. The information provided in this guide will help providers to reduce patients' uncertainty regarding treatment options and to be more effective in offering positive treatment strategies for women presenting with these symptoms.

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Definitions

Despite the familiarity of premenstrual symptoms to many women, there is no clear consensus on the definition of premenstrual disorders. Rather, these conditions make up a continuum of disorders that are defined according to the nature and severity of their symptoms.¹

- **Premenstrual molimina** are the symptoms, sensations, feelings, and observations, such as bloating, headaches, nausea, ovulatory pain, and breast tenderness, that many women experience during the premenstrual phase of their cycles. These symptoms are minor, do not cause functional impairment, and are minimally distressing. They predict impending ovulation and subsequent menstruation. If they occur within 3 days of the onset of menses and do not represent a patient's chief presenting complaint, they are considered to be a normal part of a woman's menstrual cycle.
- **Premenstrual syndrome (PMS)** is a term coined in 1931 to describe a constellation of physical and emotional symptoms unique to women during their childbearing years.² Premenstrual symptoms in general are often described or referred to as PMS.³ Accepted definitions of the disorder require that symptoms must occur only during the luteal phase to be considered PMS.
- **Premenstrual dysphoric disorder (PMDD)** is defined by diagnostic criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*.⁴ Both PMS and PMDD produce symptoms that are associated with the ovarian cycle of a woman of reproductive age. These disorders represent abnormal responses to normal endocrine changes associated with ovulation. The symptoms of these disorders may continue to occur during a woman's menstrual cycle until she reaches

The National Library of Medicine's Medical Subject Headings (MeSH) terminology defines PMS as follows: "A combination of distressing physical, psychological, or behavioral changes that occur during the luteal phase of the menstrual cycle. Symptoms of PMS are diverse (such as pain, water retention, anxiety, cravings, and depression) and they diminish markedly 2–3 days after the initiation of menses."

menopause. (See “Signs and Symptoms” on page 6 for the DSM criteria required for a diagnosis of PMDD.)

In contrast to psychiatrists and other mental health professionals, most obstetrician/gynecologists (ob/gyns) and other women’s health care providers do not distinguish between PMS and PMDD. The approaches to diagnosis and management of these disorders are therefore addressed together in this guide.

Epidemiology of Premenstrual Disorders: Fast Facts

- An estimated 43–55 million women experience some uncomfortable symptoms during the premenstrual phase of their cycles.⁵
- The lifetime prevalence of PMS is estimated to be approximately 13–18% of women of reproductive age.⁶
- PMS affects women throughout the reproductive years:
 - Occurs most often in women in their late 20s to early 40s.⁷
 - Also significant in adolescents.⁸
 - Average age of onset is 26 years.⁹
- PMS occurs more often in women who:⁷
 - Have had at least one child.
 - Have a family history of depression.
 - Have a history of postpartum depression or mood disorder.
- PMS symptoms tend to worsen over the course of the reproductive years.⁹
- Approximately 12–25 million women have premenstrual symptoms that interfere with their daily lives:⁵
 - About 20–40% of women who have physical changes with menstruation experience symptoms of PMS.^{10,11}
 - About 3–9% of women of reproductive age meet the criteria for PMDD.⁶
 - Approximately 2–5 million women have severe PMDD symptoms.^{12,13}

Etiology of Premenstrual Disorders^{14,15}

Although the etiology of premenstrual disorders is unclear, hypotheses abound and include the following:

- Allergies
- Catecholamine alterations
- Endorphin withdrawal
- Fluid retention
- Hormonal alterations (high estrogen, falling estrogen, changes in estrogen-progesterone ratio, excess prolactin)
- Hypoglycemia
- Increased adrenal activity
- Increased aldosterone activity
- Increased renin-angiotensin activity
- Nutritional deficiencies
- Prostaglandin impact
- Psychological or psychogenic effects

Additionally, there may be a concomitant overlay of other disorders such as stress, posttraumatic stress, anxiety disorder, and depression.

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Signs and Symptoms

Symptoms of both PMS and PMDD occur during the luteal phase of the menstrual cycle (days 14–28 in a 28-day cycle) and notably subside within 2–3 days after menses begins. Some women experience positive symptoms, such as a sense of well-being, in the luteal phase of their cycles. More often, negative symptoms undermine a woman's ability to function across multiple settings, including work, school, and home.¹

Premenstrual Syndrome

Although more than 200 symptoms have been associated with PMS, common symptoms include the following:²

Physiological symptoms:	Behavioral symptoms:	Psychological symptoms:
Abdominal bloating	Aggression	Anger
Back pain	Changes in sexual interest	Anxiety
Breast pain, tenderness, and/or swelling	Dizziness	Confusion
Headache	Fatigue	Crying and tearfulness
Muscle aches	Food cravings or overeating	Decreased self-esteem
Weight gain	Insomnia	Depressed mood
		Difficulty concentrating
		Forgetfulness
		Irritability
		Loneliness
		Mood swings
		Restlessness
		Tension

The American College of Obstetricians and Gynecologists (ACOG) has developed the following diagnostic criteria for the diagnosis of PMS:³

ACOG Diagnostic Criteria for PMS

Patient reports at least **one** of each of the following affective and somatic symptoms during the 5 days before menses. Symptoms must appear in three consecutive menstrual cycles:

Affective: Depression, angry outbursts, irritability, anxiety, confusion, social withdrawal

Somatic: Breast tenderness, abdominal bloating, headache, swelling of extremities

Symptoms must also meet the following criteria:

- Be relieved within 4 days of the onset of menses, without recurrence until at least cycle day 13
- Be present in the absence of any pharmacologic therapy, hormone ingestion, or drug or alcohol use
- Be causing identifiable dysfunction in social or economic performance
- Occur reproducibly during two cycles of prospective recording

Premenstrual Dysphoric Disorder

Reproductive health professionals generally view PMDD as a particularly severe form of PMS with pronounced psychological and emotional symptoms.⁴ Unlike mental health professionals, most obstetrician/gynecologists (ob/gyns) do not distinguish between PMS and PMDD. The DSM criteria for the diagnosis of PMDD is listed in the chart on page 8.⁵

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DSM Criteria for Premenstrual Dysphoric Disorder⁵

- A. In most menstrual cycles during the past year, five (or more) of the following symptoms were present for most of the time during the last week of the luteal phase, began to remit within a few days after the onset of the follicular phase, and were absent in the week postmenses, with at least one of the symptoms being 1, 2, 3, or 4:
1. Markedly depressed mood, feelings of hopelessness, or self-deprecating thoughts
 2. Marked anxiety, tension, feelings of being “keyed up” or “on the edge”
 3. Marked affective lability (e.g., feeling suddenly sad or tearful or increased sensitivity to rejection)
 4. Persistent and marked anger or irritability or increased interpersonal conflicts
 5. Decreased interest in usual activities (e.g., work, school, friends, hobbies)
 6. Subjective sense of difficulty in concentrating
 7. Lethargy, easy fatigability, or marked lack of energy
 8. Marked change in appetite, overeating, or specific food cravings
 9. Hypersomnia or insomnia
 10. A subjective sense of being overwhelmed or out of control
 11. Other physical symptoms, such as breast tenderness or swelling, headaches, joint or muscle pain, a sensation of “bloating,” weight gain
- B. The disturbance markedly interferes with work or school or with usual social activities and relationships with others (e.g., avoidance of social activities, decreased productivity and efficiency at work or school)
- C. The disturbance is not merely an exacerbation of the symptoms of another disorder, such as Major Depressive Disorder, Panic Disorder, Dysthymic Disorder, or a Personality Disorder (although it may be superimposed on any of these disorders).
- D. Criteria A, B, and C must be confirmed by prospective daily ratings during at least two consecutive somatic cycles. (The diagnosis may be made provisionally prior to this confirmation.)

Diagnostic Approach

Changing and inconsistent diagnostic criteria for premenstrual disorders over the past few decades can make the diagnosis of PMS/PMDD a challenge. Patients should be counseled that it may take some time to complete the diagnostic process. They should be assured that various treatments can be tried until an effective and suitable approach is found.¹ Immediate measures should be recommended to the patient to ameliorate symptoms while a definitive diagnosis is being sought. These include lifestyle modifications such as stress reduction, exercise, dietary changes, supplements, and psychosocial support.^{2,3}

The Multiple-Visit Diagnostic Process

Diagnosis is best approached as a multiple-visit process.⁴ In general, the diagnosis of PMS is one of exclusion, and it is important to differentiate it from other conditions sharing similar characteristics. Almost two-thirds of women with PMS symptoms have a psychiatric disorder as well, thus complicating the evaluation of premenstrual symptoms.

To meet the criteria for PMS or PMDD, symptoms must:

- Occur in the luteal phase of the menstrual cycle and resolve within a few days of the start of menstruation
- Create problems or impairment for the patient
- Not be better explained by another diagnosis

Obtaining prospective charting information for a 2-month period represents the best way to diagnose both PMS and PMDD.⁴ A symptom chart such as that shown in Figure 1 on pages 14 and 15 is provided to the patient, who marks the occurrence and severity of symptoms on each day of at least two consecutive months. The clinician can then assess the pattern of symptoms in relation to the entire cycle. A clear pattern of symptoms that occur throughout the entire luteal phase and stop within 3 days of the onset of menses is diagnostic of PMS.

Table 1. Differential Diagnosis of Premenstrual Disorders^{4,6}

Angina
Asthma
Chronic fatigue syndrome
Cyclic mastalgia
Diabetes
Endometriosis
Genital herpes
Irritable bowel syndrome
Menstrual-associated migraine
Premenstrual molimina
Psychiatric disorders:
▪ Anxiety
▪ Bipolar disorder
▪ Depression
▪ Personality disorder
▪ Posttraumatic stress disorder
Raynaud phenomenon
Seizure disorders
Substance use disorders
Thyroid disorders

Visit 1

During the first visit, a history of menstrual symptoms and the presenting complaint should be elicited from the patient and a differential diagnosis developed (Table 1).

- A complete medical history should include menstrual history, history of gynecologic conditions (e.g., endometriosis, surgery), and obstetric history.

- Treatment or psychotherapy for mental health problems, particularly mood disorders (anxiety, depression), should also be recorded and a psychiatric or psychotherapeutic referral considered as warranted.
- Laboratory tests should be conducted to aid in the differential diagnosis:⁶
 - Chemistry profile to assess electrolyte disturbances
 - Complete blood cell count to rule out anemia
 - Thyroid-stimulating hormone level to rule out thyroid disorders

The affective symptoms of PMDD in particular may closely resemble those of premenstrual exacerbations of psychiatric disorders, especially depression and anxiety. If the patient reports no symptom-free period, it may be appropriate to refer her to a mental health professional.⁶

At the end of the first visit, the patient should be instructed in the use of a daily symptom rating chart (see “The Charting Interval” and Figure 1) and counseled about lifestyle changes, such as diet, exercise, and sleep habits that may ameliorate some symptoms until the next visit. A follow-up visit should be scheduled for 6–8 weeks.

The Charting Interval

In the interim between the first and second visits, the patient should keep a daily record of her symptoms and try the nonpharmacologic measures decided upon at the first visit.

Prospective charting of symptoms has been found to be an effective and accurate approach to the diagnosis of premenstrual disorders for a variety of reasons:

- DSM-IV criteria require prospective information for a diagnosis of PMDD. More than half of women who present with “severe premenstrual symptoms” are found not to have a luteal-phase pattern according to prospective charting.⁴
- Self-help strategies such as lifestyle changes can be initiated and evaluated during the charting period. Deferring pharmacologic treatment during this interval allows these measures to be objectively evaluated.

- Many women benefit from charting by gaining the ability to see their individual menstrual patterns and plan their activities around the most difficult phases of their cycles.

The Second Visit

At the second visit, the laboratory test results and the patient's daily charting should be reviewed. A diagnosis of PMS or PMDD requires the symptoms to occur throughout the luteal phase of the menstrual cycle and to abate with the onset of menses.

Most ob/gyns do not distinguish between PMS and PMDD. Patients whose mental and emotional symptoms are not responsive to the treatment approaches described here should be referred for psychiatric evaluation.

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Treatment

More than 80 different therapies have been suggested for the treatment of PMS/PMDD, resulting in much conflicting information and many unwarranted claims of effectiveness. No single intervention is effective for all women, and there is a substantial placebo response with many therapies.¹ It may take time and several attempts to determine the safest and most effective treatment for an individual patient.

Treatment of PMS/PMDD is best approached in a stepwise fashion, beginning with lifestyle modifications and progressing to nutritional supplementation, nonpharmacologic therapy, and nonprescription and prescription medications. Conservative treatment has proved beneficial in many women and should be considered first-line therapy in women with mild symptoms and adjunctive therapy in all others.

Table 2 on page 16 shows a hierarchical approach to the treatment of PMS/PMDD that matches the aggressiveness of the approach to the severity of symptoms. Selection of therapy can also be matched to the nature of the symptoms. For instance, women with a PMS diagnosis presenting with bloating and breast tenderness as her key symptoms (Level 2) may be prescribed spironolactone, if there are no contraindications, to minimize this specific symptom.

Treatment must be individualized and often requires a combination of approaches. Long-term treatment of PMS/PMDD is typically required, as evidence indicates that symptoms return when treatment is discontinued.³

Lifestyle Changes

Treatment of mild premenstrual disorders begins with 2–3 months of lifestyle changes during the same time the woman is charting her symptoms. Based on medical history, the modifications listed in Table 2 can be suggested.

Pharmacologic Treatment

Selective Serotonin Reuptake Inhibitors

Selective serotonin reuptake inhibitors (SSRIs) should be considered first-line therapy for the pharmacologic treatment of severe premenstrual symptoms.²² An estimated 60% of women respond to

Figure 1: Menstrual Symptoms Chart

List the symptoms you have in the left column. Circle the dates of your menstrual period.

Fill in the boxes on the days your symptoms occur. Indicate severity by filling in the boxes as shown: Mild

Month: _____

Symptoms	Day of the month													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Month: _____

Symptoms	Day of the month													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

Month: _____

Symptoms	Day of the month													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

This chart may be downloaded at www.arhp.org/menstru

Figure 1: Menstrual Symptoms Chart

Record the dates of your menstrual period.

Indicate severity by filling in the boxes as shown: Mild Moderate Severe

Day of the month																	
14	15	16	17	18	19	20	21	22	23	24	25	26	27	27	29	30	31

Day of the month																	
14	15	16	17	18	19	20	21	22	23	24	25	26	27	27	29	30	31

Day of the month																	
14	15	16	17	18	19	20	21	22	23	24	25	26	27	27	29	30	31

may be downloaded at www.arhp.org/menstrualsymptomschart

Table 2. Hierarchical Approach to the Treatment of PMS and PMDD²

Move to the next level if the chosen approach is ineffective for two to four cycles.

Level 1. PMS, mild to moderate:

- Lifestyle: Aerobic exercise, nutritional changes (reduction of caffeine, salt, alcohol; increase in complex carbohydrates)
- Nonprescription drugs:
 - Calcium, 1,000 g or magnesium 400 g, once daily
 - Chaste tree extract (*Vitex agnus-castus*) 30-40 mg daily
- Relaxation therapy
- Cognitive behavioral therapy

Level 2. PMS with physical problems predominating:

- Spironolactone, 25 mg daily, for breast tenderness and bloating
- OCs (regular or long cycle) or MPA for breast and abdominal pain
- NSAIDs during the luteal phase

Level 3. PMS or PMDD with mood symptoms predominating:

- SSRIs* on symptom days only
- Continuous SSRIs*
- Buspirone during the luteal phase

Level 4. PMDD not responsive to therapy for Levels 1–3:

- Continuous high-dose progestin (e.g., oral MPA, 20–30 mg daily; DMPA, 150 mg every 3 months; Yaz[®])
- GnRH (usual dose) with add-back estrogen/progestin if continued beyond 6 months

* If initial SSRI is ineffective or not tolerated, try at least two additional types of SSRIs (including venlafaxine) before abandoning this type of agent.

GnRH = gonadotropin-releasing hormone; MPA = medroxyprogesterone acetate; DMPA = depo-medroxyprogesterone acetate; NSAID = nonsteroidal anti-inflammatory drug; OC = oral contraceptive; PMS = premenstrual syndrome; PMDD = premenstrual dysphoric disorder; SSRI = selective serotonin reuptake inhibitor.

Table 3. Lifestyle Modifications for Mild PMS⁴⁻²¹

Dietary

- Eat frequent and smaller portions of foods high in complex carbohydrates
- Reduce:
 - Salt
 - Sugar
 - Caffeine
 - Dairy products (or take lactase enzymes)
 - Alcohol

Nutritional Supplementation

- Vitamin B₆, up to 100 mg per day (limited benefit)
- Vitamin E, up to 600 IU per day (limited benefit)
- Calcium carbonate, 1,200 mg per day, with vitamin D, 400 IU per day for absorption, in divided doses*
- Magnesium, up to 500 mg per day

Behavioral

- Patient education/counseling about PMS/PMDD (See Appendix A for patient resources.)
- Regular aerobic exercise (20–30 minutes, 3 times per week)
- Yoga
- Relaxation and stress management
- Anger management
- Self-help support groups
- Individual and couples therapy
- Cognitive-behavioral therapy*
- Smoking cessation
- Regular sleep
- Light therapy

Nonprescription Medications

- NSAIDs (naproxen, mefenamic acid, ibuprofen, etc.) in doses commonly used in the treatment of menstrual cramps

*Evidence based

this class of drugs.¹⁵ SSRIs have been shown to be effective for both PMS and PMDD⁹ and to be equally efficacious for the treatment of physical, behavioral, and psychological symptoms.²³

Safety and Side Effects

The long-term safety of SSRIs has been demonstrated based on their widespread use in treating depression.¹ More recently, this class of drugs has had labeling changes to reflect the increased risk of suicidal thinking and behavior in young adults.^{22,23}

Side effects of SSRIs include the following:

- Anxiety
- Sedation
- Insomnia
- Decreased libido
- Gastrointestinal disturbances (including nausea and indigestion)
- Fatigue
- Headache
- Dry mouth
- Dizziness
- Tremor
- Sweating
- Weight gain

These side effects are generally manageable and may be reduced or eliminated by dose modification and use during the luteal phase only. There is no addictive potential and no tolerance with extended use of SSRIs. SSRIs are classified as Pregnancy Category C.

Orgasmic dysfunction (normal libido and arousal with delayed or absent orgasm) is the most problematic side effect of this class of drugs, reported in up to 80% of patients taking SSRIs continuously and for long duration.²⁴ Sexual dysfunction can be managed by the following:³

- Taking a watch and wait approach, as it may resolve on its own
- Reducing the dose

- Taking drug holidays
- Substituting another SSRI agent
- Augmenting treatment with various agents (such as bupropion)

Women who have been counseled to anticipate that it may be more difficult to achieve orgasm when using SSRIs and other serotonergic agents may be best equipped to manage this common side effect, often through communication with their partner. Many women experiencing relief of their PMS/PMDD symptoms may be so pleased with their improvement on SSRIs that they are willing to tolerate or adapt to the sexual dysfunction associated with use of this class of medications.

Dosing

Unlike the use of SSRIs to treat depression, which may take 4–8 weeks to show efficacy, SSRIs used to treat PMS may reduce symptoms in a matter of days, and usually within 4 weeks after the start of treatment.²³ For this reason, intermittent dosing with these medications can be used in some patients, thereby reducing prescription costs and side effects and increasing compliance. Other women prefer the simplicity of continuous daily dosing.

Table 4. Serotonergic Agents: Dosage and Administration for Treating Premenstrual Disorders

Agent	Dose*
SSRIs:	
Fluoxetine (Prozac, Sarafem)**	20 mg/day
Sertraline (Zoloft)**	50–150 mg/day
Paroxetine (Paxil)**	10–30 mg/day
Citalopram (Celexa)	5–20 mg/day
Fluvoxamine (Luvox)	50–100 mg/day
Others:	
Venlafaxine XR (Effexor ²⁵)	75–112.5 mg/day
Clomipramine	25–75 mg/day

* Consider starting women at lower doses to reduce side effects and improve adherence.
 ** Approved for the treatment of PMDD by the U.S. Food and Drug Administration.

The doses of SSRIs needed to treat PMS are typically lower than those used to treat depression and anxiety.²³ Table 4 shows the recommended doses of various SSRIs for the treatment of premenstrual disorders. Intermittent treatment is recommended, either during the luteal phase or on symptom days only.²

Other Serotonergic Agents

Agents such as venlafaxine and clomipramine are also often used to treat PMDD.²⁵ These agents inhibit the serotonin transporter as well as the uptake of norepinephrine and may be beneficial for some women who do not respond to or tolerate the “pure” SSRIs.^{2,15} Adding bupropion (a nonserotonergic agent) to a serotonergic antidepressant can boost antidepressant efficacy without increasing side effects such as orgasmic dysfunction. Nonserotonergic antidepressants, however, have not specifically been found to be effective in treating PMS.²

Oral Contraceptives

The use of oral contraceptives (OCs) reduces dysmenorrhea, intensity and duration of menstrual flow. Because premenstrual symptoms occur almost exclusively in ovulatory cycles, inhibiting ovulation could be expected to reduce or eliminate these symptoms.²⁶ Hormonal contraceptives that suppress ovulation, including the pill, patch, vaginal ring, and depot-medroxyprogesterone acetate (DMPA) injections, offer effective relief from premenstrual symptoms for many women.

Because women using OCs for PMS often experience symptoms during the hormone-free interval, the selected treatment strategy should minimize or eliminate the hormone-free interval. Women may use monophasic OCs continuously, omitting the 7-day inert pills and starting a second pack immediately after the last active pill of their current pack. This regimen is safe and can be used indefinitely. Extended-regimen OCs, which are packaged with 84 days of active treatment with a 7-day pill-free interval (e.g., Seasonale®, Seasonique®), or continuous OC regimens (Lybrel®) may decrease hormone withdrawal symptoms, which include menstrually related headaches, cyclic mood swings, pelvic pain, and dysmenorrhea. Unscheduled bleeding is common during extended or continuous use of OCs. Provided that the patient has used OC tablets for a minimum of the last 21 days, taking a 3-day break from OC use and then resuming their use can reduce future

episodes of unscheduled bleeding.²⁷ Monthly OCs with a reduced hormone-free interval (Mircette®, LoEstrin 24®, YAZ®) may also have advantages over traditional 21/7 OC formulations in treating premenstrual symptoms.

Until recently, only limited data have assessed the efficacy of OCs in the treatment of PMS, and the few randomized trials have published conflicting results. However, two recently published multicenter randomized trials found that women's PMDD symptoms were significantly reduced with a combination OC formulation (24 tablets containing drospirenone and ethinyl estradiol followed by 4 hormonally inert tablets).^{27,28} Drospirenone is a spironolactone antagonist that binds to the androgen receptor. This OC formulation had a greater impact on physical symptoms than placebo but also significantly improved mood symptoms. On the basis of these landmark trials, this 24/4 OC formulation with drospirenone (YAZ®), has received FDA approval for the treatment of PMDD, and also represents an OC formulation that clinicians and women may choose when PMS or other premenstrual symptoms are present.

If PMS or PMDD is diagnosed in a patient who is already using OCs, premenstrual symptoms may be reduced by switching to a formulation with a reduced hormone-free interval, to an extended continuous OC formulation, or to one that contains the progestin drospirenone.

Other Pharmacologic Agents

Other medications have been used to treat the symptoms of PMS/PMDD with various levels of success (Table 5 on page 22).

Complementary and Alternative Options

Many women use complementary and alternative (CAM) therapies to treat the symptoms of PMS. Clinicians should routinely ask patients about their use of vitamins, minerals, herbs, and supplements, as well as other therapies they have tried.^{15,30} Although often difficult to evaluate, the use of some CAM therapies may be evidence based, and patients often report relief of symptoms with their use. Patients should be counseled about the potential for side effects and drug interactions.

Table 5. Other Pharmacologic Agents for the Treatment of PMS/PMDD ¹⁵			
Agent	Type/Class	Effective for Symptoms	Notes
Alprazolam	Gamma-aminobutyric acid (GABA) agonist; benzodiazepine	Tension Anxiety Irritability Hostility	Addictive and sedating. Reserved for intermittent use as a second-line agent.
Bupirone	Partial serotonin agonist	Anxiety	No addictive potential.
Bromocriptine	Dopamine agonist; lowers prolactin levels	Breast tenderness	Side effects may include dizziness and nausea.
Danazol	Weak synthetic androgen; inhibits luteinizing hormone (LH) and follicle-stimulating hormone (FSH), suppressing ovarian steroid production		Side effects limit use: amenorrhea, weight gain, acne, fluid retention, hirsutism, hot flashes, vaginal dryness, emotional lability
Gonadotropin-releasing hormone agonists	Reduce LH and FSH Inhibits ovulation		Creates "pharmacologic menopause" Reserved for women who do not respond to other treatments Add-back estrogen/progestin needed if continued >6 months
NSAIDs	Anti-inflammatory	Dysmenorrhea	Also reduce menstrual flow
Spironolactone	Potassium-sparing diuretic; anti-mineralocorticoid and anti-androgenic properties	Bloating Swelling Breast tenderness Acne	Not highly effective Side effects: lethargy, headache, irregular menses; monitor serum potassium levels

Two herbal supplements have shown some evidence of effectiveness in treating PMS when taken during cycle days 17–28 (Table 6).^{2,4} Evening primrose oil is the most widely studied product; it is thought to provide a precursor for prostaglandin synthesis, but the bulk of scientific evidence does not support its usefulness.²² Chaste tree extract, from the berries of the chaste tree (*Vitex agnus-castus*), is thought to work as a dopamine agonist, inhibiting prolactin production and possibly reducing the symptoms of breast engorgement.^{2,30,31}

Patients should be advised not to take herbal preparations randomly or without consultation.

A few studies have examined the use of other forms of alternative therapies for the treatment of PMS/PMDD. Other alternative therapies women may want to explore include the following:^{15,30}

Table 6. Herbal Supplements Used for the Treatment of PMS/PMDD^{2,4,15,32}

Product	Notes
Evening primrose oil	500 mg per day to 1,000 mg t.i.d. Most studied, but no safety data
Chaste tree extract (<i>Vitex agnus-castus</i>)	30–40 mg/day Few adverse effects, but no safety data Shown to be inferior to fluoxetine
St. John’s wort	No controlled trials evaluating use for PMS Possible drug interactions Long-term effects unknown
Natural progesterone	Shown to be ineffective in controlled trials
Gingko	No controlled trials Potential for drug interactions
Kava	No controlled trials Potential for hepatotoxicity
Dong quai	No controlled trials Unsafe in pregnancy Contains coumarin derivative—should not be used by patients on anticoagulants
Black cohosh	Stimulates estrogen receptors Used to treat anxiety, breast pain No controlled trials or safety data

- Acupressure and acupuncture
- Chiropractic and massage therapy
- Homeopathic remedies
- Hypnosis
- Light therapy
- Reflexology³¹
- Vaginal biofeedback³⁴

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Patient Counseling

Although a primary care clinician is often the first point of contact for many women seeking treatment for premenstrual disorders, women's health practitioners may be more prepared to deal with this complex syndrome. Clinicians should refer women with premenstrual emotional and behavioral symptoms that do not respond to the measures highlighted in this guide for psychiatric evaluation and treatment.

Developing a treatment strategy to manage the symptoms of PMS and PMDD can be a complex and elusive process for both the clinician and the patient. Clinicians may be hampered by terms, definitions, and diagnostic criteria that continue to vary, a challenging patient evaluation, and an expanding therapeutic arsenal. Time and patience are required as different modalities, often in combination, are attempted before an effective approach is found. Treatment is highly individualized, and an empathetic approach contributes to therapeutic success.¹ An improved level of understanding of this disorder will enable clinicians to better inform and counsel their patients. Hence, education regarding available options is paramount.

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Appendix A

Patient Resources

American College of Obstetricians and Gynecologists

Patient Education Pamphlet: *Premenstrual Syndrome* (No. AP057)
www.acog.org/publications/patient_education/bp057.cfm

Association of Reproductive Health Professionals

Menstruation Resource Center: www.arhp.org/menstruationresources

National Center for Complementary and Alternative Medicine (NCCAM)

nccam.nih.gov

Part of the National Institutes of Health, NCCAM is the government's lead agency for scientific research on complementary and alternative medicine. NCCAM's website includes a searchable database of the current scientific knowledge on commonly used alternative therapies and herbal remedies: <http://nccam.nih.gov/health/bytreatment.htm>.

National Institutes of Health

"Menstruation and Premenstrual Syndrome":
<http://health.nih.gov/result.asp/436>

National Women's Health Information Center (NWHIC)

www.4woman.gov

Part of the Office of Women's Health within the U.S. Department of Health and Human Services, NWHIC offers reliable and current resources on women's health. Information on more than 800 topics pertaining to women's health is offered free of charge to the public through the NWHIC website and call center:

www.womenshealth.gov

(800) 994-9662 or 888-220-5446 (TDD)

Monday through Friday (9:00 am to 6:00 pm, Eastern time)

Appendix B

Patient Screening Test for Premenstrual Dysphoric Disorder¹

FIRST: Check all the symptoms from both the **A-List** and the **B-List** that you have on a daily basis during the week before your period starts:

A-LIST SYMPTOMS (during the week leading up to my period)

- I feel much more depressed and down in my mood.
- I feel anxious, tense, keyed up, or on edge.
- I feel hypersensitive (to rejection or criticism) or I feel very unstable and unpredictable in my emotions.
- I feel much more irritable or I get angry easily.

Number of **A-List** symptoms I checked: ____

B-LIST SYMPTOMS (during the week leading up to my period)

- I am much less interested than usual in my hobbies and daily activities.
- I find it much harder to concentrate on things.
- I feel much more tired and low in energy.
- I have a tendency to crave carbohydrates or go on eating binges.
- I find myself oversleeping or taking naps, or I'm not sleeping well at night.
- I feel or have felt very overwhelmed or out of control.
- I am very bothered by at least two of the following physical symptoms:
 - Breast tenderness or swelling
 - Increased headaches
 - Joint or muscle pain
 - Feeling "bloated"
 - Weight gain

Number of **B-List** symptoms I checked: ____

SECOND: Answer these 4 questions (circle the correct answer):

1. Does the number of **A-List** symptoms PLUS the number of **B-List** symptoms add up to 5 or more?
 YES NO
2. Is at least one of the symptoms you checked on the **A-List**?
 YES NO
3. Do most if the symptoms you checked disappear within 3 days of the start of your period?
 YES NO
4. When you are having these symptoms, do they interfere with your ability to function normally and perform your daily activities?
 YES NO

If the answer to ALL four questions is YES, then you may have PMDD. Speak with your clinician about the next step to get help with your symptoms.

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