

## PREMENSTRUAL SYNDROME (PMS)

### What Is PMS?

It is estimated that up to 40% of women of reproductive age experience transient physical, emotional, and cognitive symptoms related to their menstrual cycle. The symptoms, mild or severe, (see below) typically occur during the one to two weeks before the menses. A woman who suffers with PMS will typically say “I feel out of control of emotions and thinking during the week before my period, then when I get my period I am myself again”, thus PMS takes a significant toll on a woman’s life, affecting relationships at home and at work. A severe form of PMS, Premenstrual Dysphoric Disorder (PMDD), occurs in up to 10% of reproductive aged women. The distinction between PMS and PMDD is in degree of severity.

<u>PMS/PMDD Symptoms</u>	
<u>Psychological Symptoms</u>	<u>Physical Symptoms</u>
<ul style="list-style-type: none"><li>▪ Depressed mood, Feeling hopeless</li><li>▪ Self-deprecating thoughts</li><li>▪ Anxiety, Tension, Feeling “keyed-up”</li><li>▪ Sudden sadness or tearfulness</li><li>▪ Anger, Irritability</li><li>▪ Increased interpersonal conflicts</li><li>▪ Feeling overwhelmed or out of control</li></ul>	<ul style="list-style-type: none"><li>▪ Difficulty concentrating</li><li>▪ Increased sleep or insomnia</li><li>▪ Easy fatigability, Lack of energy</li><li>▪ Over-eating or specific food cravings</li><li>▪ Breast tenderness</li><li>▪ Swelling, bloating, weight gain</li><li>▪ Cyclic headaches</li></ul>

### What Causes PMS?

There is little consensus on the specific cause of PMS. Clearly PMS is influenced by cyclic hormonal changes. Researchers do agree that women who suffer PMS have an increased sensitivity to the normal hormonal variations associated with the menstrual cycle. Other hormonal influences may also be involved. There is some evidence that those with PMS have a higher incidence of thyroid insufficiency. Current research implicates the neurotransmitter serotonin as being relevant to the cause and treatment of PMS. We also know there is a genetic component; PMS more commonly afflicts women whose mothers suffered PMS.

PMS can occur at any age after the onset of menstrual periods. In my practice I see the onset commonly in peri-menopause (the year’s immediately preceding menopause). I have also observed that some women who have lived with mild PMS for years will find their symptoms worsen in peri-menopause. This leads to the thought that ovarian hormonal decline may contribute to PMS. Estrogen enhances the activity of serotonin in the brain, and so can be involved in regulation of mood, emotion, and cognition. As estrogen levels decline in peri-menopause, serotonin levels may decline also, leading to mood and behavior changes for some.

Progesterone levels also decline in peri-menopause, leading some to suspect progesterone deficiency contributes to PMS. Anecdotally, there have been cases of symptom improvement with the use of progesterone treatments, though published studies do not support this notion.

## **Evaluation for PMS**

Evaluation and treatment of PMS must be individualized. Too often, women are given a “one size fits all” approach, or worse, brushed aside and not taken seriously. At Women’s Wellness Center, the first step in evaluation involves a Hormone Health Consultation. During this visit, symptoms are discussed in detail and a questionnaire is completed to assess the array and severity of symptoms. If hormone levels are required, blood tests are the best measure, and tests are often done at two separate times in the menstrual cycle. Cycle day 1-3, hormone levels reflect the lowest (baseline) values during your cycle. Cycle day 18-22, hormone levels reflect the peak post-ovulation levels. A follow up visit is scheduled to discuss treatment options based on individual lab results and symptoms, and a treatment plan may be formulated.

## **Treatment Strategies for PMS**

PMS is a complex neuro-endocrine disorder; correction may require significant attention and effort by the individual. The symptom array is not the same for every sufferer, and likewise, individuals vary widely in response to various treatments. Finding the best treatment for each woman may require some experimenting with therapies and dosages. A combination of strategies may be required to achieve optimal results. In my practice I have observed patients with mild PMS symptoms resolve with behavioral and lifestyle changes alone, and I strongly advise PMS sufferers to adopt the positive lifestyle changes listed below. For severe symptoms, medical therapy may be required. Of note, herbal remedies seem to have little impact on PMS symptoms. While there are some anecdotal reports, data on herbal treatments remains inconsistent.

## **PMS Treatment: Lifestyle Solutions**

### **1. Nutrition Recommendations**

- Adopt a low-glycemic mediterranean diet. This means cutting back on refined flour and sugar in the diet, increasing consumption of vegetables and fruits, replacing unhealthy fats with olive oil and other healthy fats, and limiting meat consumption to mostly fish and lean meats. Also, stay away from processed foods such as hot dogs, beef jerky, and cured meats. Read on our website *Healthy Eating for Life* for more details on this nutrient-rich way of eating (go to [womenswellnessnow.com/Patient Education/Nutrition](http://womenswellnessnow.com/Patient Education/Nutrition)).
- Eliminate Trans-fats (hydrogenated or partially hydrogenated oils) from your diet. Read labels! These are unnatural man-made fats that become incorporated into cell membranes and impair the cell’s ability to function optimally. Consider these substances poison to your body.
- Eliminate high-fructose corn syrup from your diet. Read labels! This ingredient is a marker for foods of minimal nutritional value.
- Do not skip meals. Space meals appropriately with more frequent, smaller meals and protein-rich snacks to prevent wide fluctuations in blood sugar.

### **2. Dietary Supplements**

The supplements listed below have been shown to improve PMS symptoms. These should be taken daily, not just in the premenstrual week.

- Calcium: 1000 – 1400 mg per day. Calcium not only improves PMS, but is recommended for all women for bone health, as well. Food Sources of calcium: milk, soy milk, cheeses, dairy products, and broccoli.
- Magnesium: Up to 600 mg per day. Keep in mind that magnesium can cause diarrhea - the dose may be decreased if necessary. For those who tend to have constipation, magnesium may promote regularity. Magnesium Oxide is the easiest to find, least expensive formulation of Magnesium. It has been said that some other forms are absorbed into your body more effectively, but I do not believe it makes much difference which formulation you choose. Some of the studies showing benefit of Magnesium treatment of PMS used Magnesium Oxide, so even though absorption may be low, it has been shown to be effective. Food sources of magnesium: artichokes, avocados, spinach, beans, almonds, cashews, pine nuts, whole grains.
- Fish Oil: 1000mg daily. Fish oil capsules contain healthy Omega-3 fats DHA and EPA, which are needed to form healthy cell membranes in the body. These substances have many benefits related to

decreasing inflammation in the body, and they also have been shown to diminish symptoms of PMS, depression, and other mood disorders.

- **Vitamin D:** 1000-2000 IU per day. Studies have shown that low vitamin D levels are associated with PMS, and that ingesting vitamin D regularly can prevent PMS. Supplementing with Vitamin D has also been shown to lower risk of heart disease, colon and breast cancer, and inflammatory disorders (including the common cold and sinusitis). I recommend it for all women, not just PMS sufferers. Food sources of vitamin D: salmon, sardines, egg yolks, and fortified foods such as milk and cereals.

### **3. Exercise**

Research has shown that regular physical exercise (30-60 minutes per day) can decrease or eliminate PMS symptoms. Sometimes that's all it takes for symptom relief. Please, give it a try. It's good for your physical *and* mental health!

### **4. Stress Management**

Perhaps we cannot always control the amount of stress in our busy lives, but we certainly can try to control how we react to stress.

- The "relaxation response" is a self-induced physiologic relaxation method that can be elicited through breathing exercises, meditation, visualization, or other techniques. Many books are available on mastering these techniques. One simple method recommended by Dr. Andrew Weil, involves a breathing exercise that goes like this: Simply take a deep breath, let it out effortlessly and then squeeze out a little more. Practice exhaling completely to promote deeper breathing, as well as reducing stress and maintaining focus.
- Schedule a massage during the week before your period. Women's Wellness Center offers massage therapy services in our Suite 340 location. Self care and a little pampering can really make a difference.
- Be proactive in scheduling your activities. If you know that you have mood instability one week prior to your period, try not to load your schedule with extra activities that may add stress.
- Allow more "me" time. You may need to evaluate priorities and re-arrange your schedule in order to accomplish some of these stress management strategies. It's OK - just do it!
- Counseling with a professional. Studies have suggested that cognitive-behavioral therapy can be helpful in reducing PMS symptoms. If you would like a consultation to determine strategies and techniques for managing stress in your life, or to discuss emotional issues that may be at play, please schedule an appointment with one of our mental health counselors at Women's Wellness Center.

## **PMS Treatment: Pharmacologic Solutions**

### **1. Medications to Improve Hormone Balance**

When it comes to pharmacologic treatment of PMS, correcting hormone imbalance is sometimes the best place to begin.

- Oral Contraceptives: These synthetic hormone medications will suppress ovarian production of estrogen and progesterone, and replace them with a steady balanced level of estrogen and progestin throughout the cycle, eliminating the highs and lows that PMS sufferers tend not to tolerate. This simple treatment works wonders for some PMS-sufferers, and offers the benefit of contraception as well.
- Bio-identical Estrogen and/or Progesterone: Bio-identical means these are hormones identical to those produced by the ovaries. This treatment can be particularly helpful for women who are peri-menopausal, since declining ovarian hormone levels may be associated with PMS symptoms. Using bio-identical hormone therapy will not provide contraception, and will not suppress ovarian production of estrogen and progesterone.
- Suppression of Ovarian Hormone Production: This can be accomplished with a hormonal treatment called Leuprolide Acetate (Lupron). A once-a-month injection will cause the ovaries to cease producing cyclic hormones. Since this results in menopausal symptoms, bio-identical estrogen and progesterone can be given in a non-cyclic fashion, to avoid the fluctuating levels experienced in natural cycles. This method is usually considered a last resort due to the expense of Lupron.

- Thyroid Hormone Supplementation: Low thyroid hormone may contribute to some PMS symptoms, such as mood problems, swelling, fatigue, and difficulty concentrating. Replacement of deficient thyroid hormone may help in these cases.

## **2. Medications to Improve Neurotransmitter Balance**

- SSRIs: These are the Selective Serotonin Reuptake Inhibitors. Examples are Prozac, Sarafem, Zoloft, Paxil, Lexapro, Celexa, and Effexor. These are commonly known as anti-depressant medications, but do not let that deter you from trying this excellent treatment for PMS symptoms. These compounds act locally at neurons of the brain to enhance levels of the neurotransmitter serotonin, improving a variety of mood disorders including PMS, depression, anxiety, and panic disorder.
  - Side effects are usually minimal. Some women may experience nervousness, nausea, fatigue, or dysphoria (feeling “weird”). Some experience a decrease in ability to orgasm and/or decrease in libido when taking SSRIs. Sexual and other side effects certainly do not occur with all users, and are more common with higher doses.
  - While high doses of SSRIs are sometimes necessary for treatment of depression, most women find the lowest dose adequate to relieve PMS symptoms.
  - Using SSRI medication during only the second half of the menstrual cycle (during the 2 weeks after ovulation) seems to work as well as using daily – so potential side effects are minimized.
- Wellbutrin (Bupropion): This medication enhances brain levels of dopamine, a neurotransmitter that happens to be important for normal sexual functioning. While SSRIs have a better track record for relieving PMS symptoms, Wellbutrin can be useful for treating a particular side effect of SSRIs - diminished orgasm and/or libido. The reason SSRIs can cause sexual side effects for some users is that improving serotonin activity with the SSRI may lead to a relative deficiency of dopamine, thus affecting sexual function. For many PMS-sufferers, adding Wellbutrin results in excellent symptom control (attributed to SSRI), while eliminating the sexual side effects (thanks to Wellbutrin). This is often an excellent combination approach for treating PMS.

## **3. Spironolactone - Diuretic Therapy**

For women who experience the physical symptoms of bloating and fluid retention, diuretic therapy during the premenstrual week can be useful. Spironolactone is a mild diuretic that has been shown to improve PMS by reducing mood irritability, depression, swelling and breast tenderness, and cravings for sweets. It is also effective for treating hormonal acne, a common premenstrual complaint.

## **Conclusion**

With focused attention on lifestyle and with the help of some pharmacologic treatments, most PMS sufferers will enjoy significant improvement or even complete relief of symptoms, bringing improved quality of life to themselves, as well as to their families, friends, coworkers, pets.... 😊