Premenstrual Syndrome

A Naturopathic Approach

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Introduction

You may have witnessed it either on TV or in reality: an emotionally labile woman, frantically scrounging for a tub of ice cream or chocolate, snapping at any provoking comment regarding her behaviour around “that time of the month.” Premenstrual syndrome or PMS is a term that is often humorously thrown around to refer to a woman going through what may seem like exaggerated but natural hormonal fluxes leading up to menstruation. On the contrary, PMS is an actual cyclic disorder that is not experienced by all women, but affects a large population of young and middle-aged women. It is characterized by a complex interplay of physical and emotional symptoms that occur during the luteal phase of the menstrual cycle.[1] It has been estimated that 70–90% of women of childbearing age experience PMS, and in 20–40% of these women, the symptoms are severe.[2] Although the cause of PMS is largely unknown, research has emerged demonstrating that neurohormones, neurotransmitters, and genetic factors may be involved.

A severe form of PMS, known as premenstrual dysphoric disorder or PMDD, is a cyclical disorder consisting of distressing mood or behavioural symptoms also arising during the luteal (premenstrual) phase of a woman’s ovulatory cycle. PMDD is characterized by marked irritability and dysphoria, as well as mood lability, anxiety, fatigue, change in appetite, and a sense of feeling overwhelmed.[3] Whereas PMS is perceived as a common condition experienced by a large number of women prior to menstruation, PMDD is considered to be a distinct psychiatric and medical syndrome listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM) with criteria that only 3–8% of the female population qualify as being diagnosed with.[3]
The management of PMS has been often perceived as a challenge due to both difficulties in operational diagnosis as well as the variety of symptoms.[4] Women with mild symptoms of PMS are often instructed about lifestyle changes, including healthy diet, sodium and caffeine restriction, exercise, and stress reduction.[1] Conventional therapy for PMS may include selective serotonin-reuptake inhibitors, diuretics, and anxiolytic agents.[2] Naturopathic approaches to treating PMS involves first, identifying specific causative or exacerbating lifestyle factors, and eliminating these factors. The patient can then be treated using a wide array of modalities. These modalities may include nutritional and lifestyle counselling, Traditional Chinese Medicine (TCM) and acupuncture, botanical medicine, or homeopathy, to name a few. This paper will discuss the symptoms and possible causes of PMS, as well naturopathic approaches to treating PMS.

Symptoms and Causes
Symptoms of PMS typically begin several days to two weeks prior to menses, and resolve almost abruptly at the onset of menstruation. Behavioural symptoms of PMS include fatigue, insomnia, dizziness, changes in sexual interest, and food cravings or overeating.[5] Psychologic symptoms of PMS include irritability, anger, depressed mood, crying and tearfulness, anxiety, tension, mood swings, lack of concentration, confusion, forgetfulness, restlessness, loneliness, decreased self-esteem, and tension. Physical symptoms of PMS include headaches, breast tenderness and swelling, back pain, abdominal pain and bloating, weight gain, swelling of extremities, water retention, nausea, and muscle and joint pain.[5]

Although the cause of PMS is still not well understood, possible contributing factors include serotonin and/or dopamine deficiency, and hormonal imbalances (i.e. estrogen excess and/or progesterone deficiency), or an exaggerated response to normal hormonal changes.[2] Women who suffer from PMS have been observed to crave sugar and carbohydrates prior to their menstrual period. These premenstrual cravings have been identified as a physiologic response to serotonin deficiency in the brain. This can be attributed to the fact that the consumption of carbohydrates increases the brain uptake of tryptophan, which is a precursor to serotonin, thereby increasing serotonin synthesis in the brain.[6] Eating small, frequent meals premenstrually or during the entire cycle—as opposed to an excessive consumption of carbohydrates—may help women
overcome their carbohydrate cravings. In addition, studies have found that certain lifestyle factors—such as increasing the consumption of sugar, caffeine, dairy, and alcohol—are associated with increasing prevalence and/or severity of PMS.

**Naturopathic Treatment**

**Vitex agnus-castus**

*Vitex agnus-castus,* also referred to as chasteberry, is a plant that is native to the Mediterranean region. One randomized, double-blind, placebo-controlled study observed the efficacy of administering a dry extract of *Vitex agnus-castus* to a group of women with both physical and emotional premenstrual symptoms such as irritability, mood alteration, anger, headache, breast fullness, and bloating. The study was conducted over three consecutive cycles, and found that the main variable (the change or reduction from baseline to the endpoint of the aforementioned symptoms) was greater in the active group of women who received *Vitex agnus-castus* versus the placebo control group. This study demonstrated that *Vitex agnus-castus* is an effective and well-tolerated treatment for the relief of symptoms associated with premenstrual symptoms.

**Calcium**

Calcium is one of the most important minerals in our body, and plays a role in strengthening bones and teeth. Among the theories that have emerged for the causes of PMS, there has been growing evidence that disturbances in calcium regulation may contribute to the pathophysiologic symptoms of PMS. One study observed the effects of calcium supplementation in a group of healthy premenopausal women with cyclically recurring PMS symptoms. Participants were randomly assigned to receive either 1200 mg of elemental calcium per day in the form of calcium carbonate or a placebo for three menstrual cycles. The core symptoms that were rated and scored included negative effect, water retention, food cravings, and pain. This study found that by the third treatment cycle, calcium effectively resulted in an overall 48% reduction in total symptom scores from baseline, compared with a 30% reduction in the placebo control group.

**Evening Primrose Oil (EPO)**

Women with PMS have been found to have a defect in the fatty acid conversion of linoleic acid to *gamma*-linolenic acid (GLA), which is involved in the biosynthesis of
Prostaglandins are involved in bodily functions such as regulation of the central nervous system, fluid balance, gastrointestinal function, uterine contractility, and abnormalities of prostaglandin metabolism, which might play a significant role in the pathogenesis of PMS. Evening primrose oil contains preformed GLA, hence the ingestion of EPO can help to bypass the abnormalities in prostaglandin synthesis. One study demonstrated the effects of treatment with EPO when a group of women were randomly assigned to receive, in a double-blind fashion, 4 g/d of EPO or placebo for three months. The study found that significantly more women in the EPO group experienced complete or nearly complete relief of symptoms when compared to the placebo group.

**Vitamin B₆ (Pyridoxine)**

Vitamin B₆ or pyridoxine is a water-soluble vitamin which has been found to help relieve symptoms of PMS. In addition to reducing certain adverse effects brought on by estrogen excess, B₆ may help to increase the concentrations of serotonin, dopamine, and progesterone, which are hormones thought to be low in women with PMS. Premenstrual symptoms that have been found to respond to vitamin B₆ include swelling of extremities or edema, bloating, headache, breast pain, depression, irritability, and possibly acne flares.

**Vitamin E**

Vitamin E refers to a group of eight naturally occurring, fat-soluble compounds with antioxidant activity which include alpha-, beta-, gamma-, and delta-tocopherol as well as alpha-, beta-, gamma-, and delta-tocotrienol. The alpha-tocopherol form has been found to have the highest biological activity of all of the tocopherols, and it is also the only form of vitamin E that is officially recognized as capable of meeting human requirements. As mentioned before, vitamin E is an antioxidant that protects the body from damage caused by free radicals. In addition, vitamin E functions to stabilize cell membrane, inhibit platelet aggregation, and has an anti-inflammatory effect. In one double-blind study, 75 women with fibrocystic breast changes randomly received vitamin E or placebo for two months. The study found that premenstrual anxiety, depression, and sugar cravings improved significantly in the vitamin E group compared to the placebo group. Thus, taking vitamin E orally can help reduce certain PMS symptoms such as anxiety, sugar cravings, and depression.

**Magnesium**

The adult human body has been found to contain 21–28 g of magnesium, 60% of which is found in bones, 38–39% in cells, and 1–2% in serum and other extracellular fluids. Magnesium is the second most abundant cation in soft tissue, after potassium. Reduced magnesium levels have been reported in women affected by PMS. This could partly be due to the low dietary intake of magnesium by women who have PMS.
Furthermore, certain symptoms of PMS are similar to those found in magnesium deficiency, such as anxiety, depression, irritability, and headaches.[2] Thus, magnesium deficiency should be either ruled out as a possible separate condition, or determined to be a concomitant condition in women experiencing these symptoms. One study found that the combination of magnesium and vitamin B₆ improved PMS symptoms more effectively than treatment with either of these nutrients alone.[2] This could be attributed to the fact that vitamin B₆ increases the intracellular uptake of magnesium and vice versa.[14] Another study found that oral magnesium supplementation affects premenstrual symptoms, while increasing the intracellular concentration of the cation.[4]

**Conclusion**

Premenstrual syndrome or PMS is a common condition experienced by women throughout their menstruating years. A variety of different factors have been identified as contributing to the occurrence and degree of PMS experienced, which may be unique to each woman. Identification of these factors can therefore help mitigate the symptoms associated with PMS. Naturopathic medicine can play a role in treating women with PMS, by first identifying causative or exacerbating factors and treating them accordingly, using modalities such as nutritional counselling, traditional Chinese medicine (TCM) and acupuncture, botanical medicine, and homeopathy. The aforementioned natural interventions are not comprehensive in the treatment of PMS. Always consult with a naturopathic doctor to determine what treatment is appropriate for you.

**References**


