THE NATURAL MANAGEMENT OF PREMENSTRUAL SYNDROME

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The Premenstrual Syndrome (PMS) is a recurrent, variable cluster of troublesome physical and emotional symptoms that develop during the 7-14 days before the onset of menses and subside when menstruation occurs. Approximately one-third of all premenopausal women are affected, primarily those 25-40 years of age. In about 10% of affected women, the syndrome may be recurrent and severe.[1]

Symptoms can be classified as:

- Behavioral (nervousness, anxiety, irritability, mood swings, fatigue, lethargy, depression)
- Gastrointestinal (abdominal bloating, diarrhea and/or constipation, appetite changes with cravings for such things as sugar, salt or chocolate)
- Reproductive Tissue (breast tenderness and swelling, uterine cramping, altered libido)
- Other (headache, backache, acne, ankle and finger swelling)[2]

Although not every woman experiences all the symptoms or signs at one time, many consistently complain of bloating, breast pain, ankle swelling, a sense of increased weight, skin disorders, irritability, aggressiveness, depression, libido changes, lethargy and food cravings.[1]

Causative Factors

One of the underlying factors that has been linked to PMS is an elevated estrogen to progesterone ratio five to ten days prior to menses. This can arise from excess estrogen synthesis, decreased estrogen clearance (liver detoxification of circulating estrogen) or reduced secretion of progesterone from the corpus luteum. (After ovulation the corpus luteum is formed in the ovaries, which secretes progesterone. If fertilization does not take place, the corpus luteum shrinks and progesterone secretion drops off until approximately day 14 of the next menstrual cycle, when a new corpus luteum is formed in the ovaries.)[3,4,5]

Typically, this derangement is caused by a combined mild estrogen excess and mild progesterone deficiency.[2]

Evidence exists to show that an elevated estrogen to progesterone ratio is associated with a decline in brain endorphin levels, which in all likelihood, is a contributing factor to mood swings in the premenstrual syndrome. Brain endorphin levels are known to increase the feeling of psychological well being. [6,4]

Elevated estrogen levels are also known to adversely affect Vitamin B6 status. Vitamin B6 levels are often low in depressed patients, especially women taking estrogens (birth control pills or estrogen replacement therapy).[7,8]

At the same time, studies reveal that Vitamin B6 supplementation can improve many symptoms of PMS.[9,10]

Excess estrogen may also give rise to elevated levels of prolactin hormone, which is implicated in breast pain and fibrocystic breast disease.[11,12]

Elevated estrogen levels may also result in higher levels of aldosterone, which is the hormone that increases sodium and water retention.[2] Thus, an elevated estrogen to progesterone ratio has been shown to alter endorphin, neurotransmitter (brain chemicals) prolactin and aldosterone levels, which contribute to many of the psychological and physical symptoms of PMS.[2]

Correcting the Estrogen to Progesterone Ratio Naturally

A number of dietary, lifestyle and supplementation practices have been shown to improve the estrogen to progesterone ratio and provide relief to women who suffer from PMS:

A. A low fat, high fiber diet can help reduce circulating estrogen levels. Vegetarian women, who are known to have higher intakes of fiber excrete two to three times more estrogen in their feces and have fifty percent lower levels of free estrogen in their blood than omnivores.[13,14] Other studies reveal that when women lowered their fat intake from 40 percent to 25 percent of their total calories and increase their fiber consumption from 12 gms to 40 gms per day, there was a 36 percent reduction in blood estrogen levels. A low fat diet alone has also been shown to relieve PMS symptoms.[15, 16, 17]

B. Exercise has also been shown to have a favorable modifying influence on PMS frequency and severity. Several studies demonstrate that women who engage in regular exercise programs do not suffer from PMS nearly as often as sedentary women. In addition to lowering free-estrogen blood levels, exercise also raises brain endorphin levels, improving mood and reducing anxiety and feelings of depression.[18,19,20]

C. Specific dietary supplements have proven value in normalizing the estrogen to progesterone ratio and markedly improving PMS frequency and severity:

- Black Cohosh – contains triterpene or saponin compounds that serve as a natural building block of progesterone synthesis. It is the only known natural substance that can raise blood progesterone levels. Additionally, black cohosh triterpenes help to block the effects of excess estrogen on breast tissue and the uterus, toning down the PMS-promoting impact on these tissues. Studies on women with PMS reveal that the standardized grade of black cohosh can improve PMS symptoms when taken at a daily dosage of 40 or 80 mg, twice daily (std to 2.5% triterpene content).[21,22]

- Other botanical substances have also been shown to reduce PMS symptoms, such as Angelica Species (dong quai), Red Clover, and Licorice Root. The problem is, however, that Angelica Species and Red Clover contain coumarins and thus predispose patients to photosensitivity-induced dermatitis and internal bleeding disorders. They are both contra-indicated with concurrent use of any anti-coagulant drug and reports of bleeding disorders appear in the scientific literature in reference to the use of Angelica Species. Active ingredients in Licorice are known to cause high blood pressure as a common side effect of its use.[23,24]

  Overall, black cohosh offers a safe and effective natural approach to the treatment of PMS. It has no well-known drug-nutrient interactions with few and minimal side effects reported. Black cohosh has even been shown to provide antispasmodic and pain relief in PMS sufferers.[21]

  Chasteberry is another herbal agent that has proven value in the treatment of PMS as a further option. The usual daily dosage is 175-225 mg (std to 0.5 percent agnuside content).[25,26]

- Soy isoflavones – have been shown to tone down the effects of the body's estrogens. Soy isoflavones act as phytoestrogens (plant-based estrogens), which can attach to estrogen receptors on the breast, endometrium and other tissues. As such, they can partially block the entrance into these tissues of the body's estrogens, helping to reduce estrogen overstimulation to the breast and uterine tissues. Soy isoflavonoids also enhance estrogen detoxification by the liver and slow down the synthesis of estrogen by inhibiting estrogen

synthase enzyme (aromatase) in adipose tissue. Through these mechanisms, the ingestion of 45-75 mg per day of soy isoflavonoids has demonstrated therapeutic benefits in the management of menopausal symptoms, bone density support and modulating female reproductive health, including menstrual cycle regulation.[27,28,29,30]

- B-Vitamins – More than a dozen double-blind clinical trials suggest that Vitamin B6 supplementation is useful in the treatment of PMS. Vitamin B6 is a co-factor in estrogen detoxification in the liver, a co-factor in the synthesis of mood elevating neurotransmitters (brain chemicals) and a co-factor in the formation of anti-inflammatory prostaglandin hormones. In some of these applications, Vitamin B6 works synergistically with other B-Vitamins, such as niacin, folic acid, Vitamin B12 and Vitamin B2. Thus, it is likely best to use a B-50 complex as a more comprehensive B-Vitamin approach to the management of PMS.[9,10] Some studies suggest that Vitamin B6 taken in conjunction with 300-400 mg of magnesium per day is beneficial in PMS management.[31] Vitamin B6 works together with magnesium in many enzyme systems and thus, are considered to by synergistic nutrients with proven value in the treatment of PMS.[32]
- Vitamin E – Double-blind studies also suggest that Vitamin E supplementation at 400 I.U. per day can reduce various symptoms of PMS, including nervous tension, headache, fatigue, depression, insomnia, breast tenderness, anxiety and food cravings. Vitamin E is known to modulate prostaglandin hormone synthesis and directly affects cellular differentiation (maturation) and proliferation rates (cell division rate) of breast and other epithelial tissues.[33,34,35,36,37] Vitamin E supplementation (400-600 I.U. per day) has also been shown to help regulate circulating hormones in PMS and fibrocystic breast disease.[34,38]

Summary

In many cases, PMS can be managed naturally through dietary modification, exercise, and nutritional supplementation. Some of the recurring abdominal cramping and pain is also responsive to hands-on chiropractic care and acupuncture. With respect to dietary and supplementation practices, the following practical recommendations simplify the daily course of action to be considered by PMS sufferers:

1. Eat less animal fat.
2. Consume more grain fiber (wheat bran, psyllium) and vegetables (especially cruciferous vegetables such as cabbage, cauliflower, broccoli and brussels sprouts).
3. High Potency Multi Vitamin and Mineral – containing a B-50 complex, Vitamin E (400 I.U.) — from natural sources, Magnesium (200-300 mg), Calcium (500 mg), and all vitamins and minerals from "A to Zinc."
4. Black Cohosh – 80 mg, once or twice per day (std to 2.5 percent triterpene content)
5. Soy Extract – 500 mg per day (std to 10% isoflavones), yielding 50 mg of isoflavones
6. Supplement diet with other soy-based foods, such as soy milk, soy cheese, veggie burgers, etc.

Finally, it is beneficial to participate in an aerobic-based exercise program 3 to 6 times per week for 20-45 minutes per session (on average), and have the lower spine and pelvis checked by a Doctor of Chiropractic in cases where abdominal pain and cramping is a recurring PMS symptom. Chiropractic treatment has been shown to be successful in many cases of dysmenorrheal (cramping menstrual pain) and its associated low back pain.

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