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Premenstrual Syndrome

Description

- Premenstrual syndrome (PMS) is characterized by a variety of physiological and emotional disturbances that develop before the onset of menstruation. The syndrome is not well defined and symptoms may be quite different in different women. There are more than 150 symptoms that have been attributed to PMS. Some of these include nervous tension, mood swings, depression, insomnia, headaches, water retention, weight gain, breast soreness, and changes in eating patterns.¹

Causes

- The causes of PMS are not clear, but the disorder probably results from a complex interaction between hormones, neurotransmitters and dietary factors. There are several lifestyle factors that can increase the severity of symptoms, these include stress, poor dietary habits, sedentary lifestyle, excessive consumption of sugar and fat, and consumption of alcohol and caffeine.²

At Risk

- Women are at a higher risk of suffering from PMS when they consume a nutritionally poor diet, mainly consisting of refined and convenience foods that are low in the B vitamins, trace minerals, vitamin A, iron, manganese, magnesium, and zinc.³⁴

Prevention and Management

- Regular exercise, stress management, and adequate sleep are important in the prevention and treatment of PMS.¹
- In general, a low fat, high fiber, nutrient dense diet should be consumed. A multi-vitamin mineral supplement, regular exercise, stress management, avoidance of alcohol, caffeine, tobacco and adequate amounts of sleep are important in the prevention and treatment of PMS.¹
- Vitamin B6: Needed for function of neurotransmitter/hormones that regulate nerve function, mood, water balance, memory and sleep as well as for regulation of magnesium levels in the blood.^{5,6}
- Magnesium: Low blood levels of this mineral have been found in women suffering from PMS. Several symptoms related to PMS such as headache, dizziness, and cravings for sweets are reduced or eliminated when magnesium intake is increased.^{7,8}
- Vitamin E: May help reduce breast tenderness during PMS.⁹

Abstracts

London RS, Murphy L, Kitlowski KE, Reynolds MA Efficacy of alpha-tocopherol in the treatment of the premenstrual syndrome. *J Reprod Med* 1987 Jun;32 (6):400-404.

In a preliminary study, alpha-tocopherol supplementation was effective in reducing specific symptoms of the premenstrual syndrome (PMS). To confirm these findings, we performed a randomized, double-blind study using d, alpha-tocopherol and placebo in a carefully screened population of women with PMS. Standardized PMS questionnaires were administered in the luteal phase of the menstrual cycle to all subjects, before and after daily treatment with 400 IU d, alpha-tocopherol or placebo for three cycles. Of the 46 subjects enrolled, 41 completed the clinical trial. A significant improvement in certain affective and physical symptoms was noted in subjects treated with d, alpha-tocopherol.

London RS, Sundaram GS, Murphy L, Goldstein PJ. The effect of alpha-tocopherol on premenstrual symptomatology: a double-blind study. *J Am Coll Nutr*

1983;2(2):115-122. In a double-blind, randomized dose-response study, 75 women with benign breast disease were administered a written questionnaire in which they scored the severity of premenstrual syndrome (PMS) symptoms before and after two months of treatment with placebo or alpha-tocopherol (150, 300, or 600 IU/day). Controlling for age and pretreatment scores, alpha-tocopherol had a significantly greater effect than placebo, improving three of the four classes of PMS symptoms. These findings suggest that vitamin E supplementation may be of value in women with severe PMS symptoms.

London RS, Bradley L, Chiamori NY. Effect of a nutritional supplement on premenstrual symptomatology in women with premenstrual syndrome: a double-blind longitudinal study. *J Am Coll Nutr* 1991 Oct;10(5):494-499.

To assess the effectiveness of a vitamin/mineral supplement in controlling symptoms of premenstrual syndrome (PMS), we conducted a double-blind randomized study on 44 women with PMS. Subjects were carefully screened and excluded if underlying physical or psychopathological conditions were noted. Follicular and luteal testing with a menstrual symptom questionnaire, subdividing PMS into four subgroups, was completed for 1 month prior to treatment and for three menstrual cycles during treatment. Subjects were randomly assigned to receive either placebo or six or 12 tablets of the supplement a day for three menstrual cycles. All subjects had significant differences in severity of symptoms between the follicular and luteal phase of the control cycle. Comparing pre- vs posttreatment luteal phase scores, significant placebo effects were noted for two PMS subgroups. Significant treatment effects were noted in three subgroups for the six-tablet group and in all four subgroups for the 12-tablet group. These results suggest that this nutritional supplement may play a role in the management of women with PMS.

Stewart A Clinical and biochemical effects of nutritional supplementation on the premenstrual syndrome. *J Reprod Med* 1987 Jun;32(6):435-441.

Many different treatments have been suggested for the premenstrual syndrome (PMS), including such nutritional supplements as vitamins, minerals and essential fatty acids. There is little agreement about the causes or treatments of the syndrome. The effect of a nutritional supplement, at high and low dosage, on premenstrual symptoms was assessed in a double-blind, placebo-controlled study. Also, the nutritional state of 11 women with PMS was evaluated. There was laboratory evidence of significant deficiencies in vitamin B6 and magnesium; other deficiencies occurred frequently, also. The multivitamin/multimineral supplement was shown to correct some of these deficiencies and, at the appropriate dosage, to improve the symptoms of premenstrual tension.

Goei GS, Abraham GE. Effect of a nutritional supplement, optivite, on symptoms of

premenstrual tension. J Reprod Med 1983 Aug;28(8):527-531. Using a menstrual symptom questionnaire (MSQ) to assess the presence and severity of premenstrual tension (PMT), we evaluated the effect of a nutritional supplement, Optivite, on PMT symptoms in 31 patients for the week after the period (F) and the week before it (L). The total MSQ scores decreased significantly in all patients after Optivite administration at a daily dose of 3-12 tablets for one to six menstrual cycles. The mean +/- S.E. total MSQ scores were F = 8.1 +/- 1.8 and L = 31.5 +/- 2.1 for control cycles and F = 2.3 +/- 0.72 and L = 10.3 +/- 1.4 for treated cycles. The best responses were observed in patients taking 6-12 tablets/day for three or more cycles. If these results can be confirmed by well-controlled studies, this simple and safe nutritional approach can be recommended in the initial management of PMT.

References

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- ⁹ London RS, Sundaram GS, Murphy L, Goldstein PJ. Evaluation and treatment of breast symptoms in patients with the premenstrual syndrome. J Reprod Med 1993 Aug;28 (8): 503-508.