COMBAT PREMENSTRUAL SYNDROME (PMS)

Hormones produced by the ovaries have a profound effect on mood and behaviour - not surprising since oestrogen is known to stimulate the nervous system and progesterone is a depressant with a calming effect. A proper balance of hormones is essential. Nutrition can affect the menstrual cycle in many ways. When dietary imbalances and deficiencies exist the whole system may become disturbed or more sensitive. Ensuring adequate levels of essential nutrients from the diet or through supplements is an effective way to combat PMS.

Premenstrual syndrome (PMS) describes the wide range of unpleasant and often distressing symptoms which are related to the female menstrual cycle and are experienced by many women. It is estimated that up to 40% of menstruating women may be affected. Symptoms typically occur 7-14 days before the menstrual period and persist until the onset of period. Some women experience symptoms at ovulation and these recur at the onset of period. For others, symptoms may occur at ovulation and they increase in severity at the onset of period.

The causes of PMS

Whilst the cause of PMS is not fully understood, it is observed that certain variations in hormonal levels or sensitivity to hormones play a major role. This in turn can be influenced by stress, dietary factors and nutritional status. PMS is observed to be linked to cyclical ovulation - it is not experienced by women who do not ovulate and women report well being during pregnancy. Menstruation itself is incidental as cyclic symptoms continue after hysterectomy, if ovaries are preserved. Women who suffer from severe PMS seem vulnerable to post-natal depression and are also more prone to progesterone side-effects.

The symptoms

The symptoms can effect women physically, psychologically and behaviourally. Symptoms include fatigue, headaches, painful breasts, abdominal bloating, fluid retention and weight gain, sleep problems, salt/sugar craves, eating binges, depression, irritability, aggression, mood-swings, nervousness, anxiety, decreased libido, confusion, poor memory, inability to concentrate. A symptomatic classification of PMS devised by Dr. Guy Abraham[2] subdivides PMS into four major overlapping subgroups. Patients will typically have symptoms that fit into more than one subgroup (you may wish to see your nutritionist to determine your individual subtyping).

PMS Subgroups

PMS-A: This is the most common category. The symptoms include anxiety, irritability, mood swings, nervous tension. Symptoms seem to relate to an oestrogen excess and progesterone deficiency during the luteal phase. Oestrogen appears to affect the oxidation of biogenic amines such as noradrenaline, adrenaline, dopamine and serotonin all of which have profound effects on mood and behaviour. Oestrogen is known to increase prolactin secretion, an increase in prolactin levels is known to produce symptoms similar to PMS-A and PMS-H.

PMS-C: Symptoms include increased appetite (sugar/salt craving), headaches, fatigue, dizziness, palpitations. It is observed that many of the symptoms observed are related to glucose intolerance, most likely during the late luteal phase. It is postulated that an increased cellular capacity to bind insulin may be the cause.

PMS-D: This is the least common subgroup. Symptoms include depression, crying spells, confusion, lack of concentration, insomnia. Symptoms are attributed to a decrease in oestrogen out-put in the luteal phase with an increase in adrenal androgens and/or progesterone

PMS-H: Symptoms include fluid retention, weight gain, abdominal bloating, breast swelling and tenderness. The symptoms are due to an increase in levels of aldo-sterone during the late luteal phase. This may result as a response to stress, oes-trogen excess or dopamine deficiency.

Drug Treatment

Drug usage for PMS include:
Synthetic *progestogen medications* (natural progesterone is not active when taken orally). Side effects include headaches, weight gain and decreased libido. For most women the *contraceptive pill* makes PMS worse[3], for others it may improve. The pill can aggravate migraine and increase blood pressure in sensitive women. Women who are overweight, smoke and have high blood pressure should avoid the pill. Oestrogen therapy with an oestradiol implant may be used to override the natural cycle. There may be initial side effects such as breast soreness or thrombosis and cyclical progestogen must be added to protect the uterus from malignant change. The use of

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drugs in the treatment of PMS is not without its side-effects (both short term and long term). Furthermore, when the drugs are stopped, the symptoms are likely to return, usually with a vengeance as they rarely correct the underlying reasons for PMS.

Nutritional treatment

Nutrition is known to have beneficial effects on the function of hormones or the chemistry of the brain and the nervous system. It is by far more effective and with no known side effects.

B Vitamins

B vitamins are known to be of assistance in treatment. B6 in particular has been shown to normalise oestrogen and progesterone levels as well as being able to inhibit prolactin release. It is also important in the normal functioning of the nervous system and the processing of protein rich foods. Evidence suggests that B6 is more effective when used with other B vitamins and nutrients. Improvements with B6 are seen within two weeks.

Magnesium

Abraham[4] showed that many women with PMS had mild Mg deficiency in their red blood cells, that is, intracellular levels were depressed. Calcium interferes with magnesium absorption while sugar increases the urinary excretion. The combined effect of diets high in dairy and refined sugar would contribute to decreased magnesium levels. Low levels of magnesium can lead to elevation of aldosterone levels and increased extracellular fluid volume. Magnesium has been shown to reduce nervousness, breast tenderness and fluid related weight gain.

Evening Primrose Oil

Evening primrose oil contains GLA (gamma linolenic acid) which affects hormone metabolism and promotes the synthesis of prostaglandin PGE1 in the body. This is particularly beneficial for premenstrual breast tenderness and menstrual cramps but must be used for at least 4-6 months.

Vitamin E

Vitamin E can influence the body's meta-bolism of fats with in turn influences the chemistry of the hormonal and nervous systems. Vitamin E research has shown that vitamin E reduces breast tenderness and discomfort associated with PMS as well as nervous tension, headaches, fatigue, depression, insomnia.

Dietary Guidelines

Limit the consumption of refined carbohydrates. have adequate protein in your diet, particularly from vegetarian source, such as legumes. Decrease mild and dairy products being sure to consume a diet with adequate calcium and magnesium. Decrease your intake of saturated fats. Decrease salt intake. restrict alcohol and do not smoke.

Supplement Options

B complex daily with extra B6. Vitamin C, E, magnesium, zinc, evening primrose oil or linseed oil.

Include:

PMS-A: quercetin (bioflavinoid)

PMS-C: extra evening primrose oil, chromium and hypoglycaemic diet

PMS-D: tyrosine helps in depression

PMS-H: glycyrrhiza in controlled amounts helps as it competes with aldosterone binding sites.

References:

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