

PMS

PREMENSTRUAL SYNDROME:
A SELF-HELP APPROACH



SELF HELP

pms

**PREMENSTRUAL SYNDROME:
A SELF-HELP APPROACH**

by
Vancouver Women's Health Collective

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I. PREMENSTRUAL SYNDROME

What is PMS?

Most women have noticed some physiological and psychological changes in the days preceding their menstrual periods at some point in their lives. About 40% of all menstruating women in our society have some degree of premenstrual problems each month. For most of these women the symptoms experienced, such as bloating, headaches, and irritability, are mild in form and simply signal that the menstrual flow will start within hours or days. Some of the feelings and urges experienced premenstrually – being extra sensitive, wanting to be withdrawn and alone – are probably a normal part of a woman's cycle and not symptoms of a problem. It is estimated, however, that 10% of menstruating women suffer from severe PMS. They experience severe physiological and psychological symptoms, anywhere from 2 to 14 days before the onset of menstruation – symptoms that disrupt their lives.

PMS is a complex disorder that has been linked to the cyclic hormonal activity of the hypothalamus, the pituitary, and the ovaries. These organs or glands are part of the endocrine system. They produce hormones which are released into the bloodstream and which act upon other target organs. Estrogen, for example, is a hormone secreted by the ovaries. One of the functions of estrogen is to stimulate the growth of the uterine lining during the menstrual cycle to allow for the nourishment of a fertilized egg.

No one cause of PMS has been found or conclusively proven. The symptoms often occur for the first time as a result of medical treatment. Many women have experienced the onset of PMS after stopping taking birth control pills, after having a tubal ligation or after having a hysterectomy. PMS is associated with a wide range of symptoms recurring regularly at the same phase of each menstrual cycle followed by a symptom-free phase in each cycle. Up to 150 symptoms have been noted, including irritability, anger, violence, weepiness, clumsiness, tension, headache, depression, fatigue, a feeling of being out of control, breast swelling and tenderness, abdominal bloating, weight gain, cravings for sweet or salty foods, craving for alcohol, acne, asthma and constipation. Women also report changes in their sexual energy premenstrually. Some women experience a loss of libido and others feel more sexual (although this may be in conflict with their simultaneous feelings of irritation and anger at their partners).

What PMS Is Not

Menstrual distress is a term used to describe differing problems a woman may have related to her menstrual period. Premenstrual syndrome, menstrual cramps (dysmenorrhea), endometriosis and menopausal symptoms all fall under the category of menstrual distress. The symptoms of premenstrual syndrome are separate from these other forms. Many people confuse PMS with menstrual cramps, in particular. A woman may suffer premenstrual syndrome in combination with menstrual cramps, or she may experience either condition alone, but their sources are different. For example, prostaglandins, which are hormone-like substances, have been associated with the symptoms of both dysmenorrhea and PMS, but the particular prostaglandins are different. An excess of the prostaglandin PGF_2 , which contributes to uterine contractions, has been found in women with dysmenorrhea. A deficiency of the prostaglandin PGE_1 is associated with some symptoms of PMS such as cravings for sweets, as well as headaches and irritability resulting from hypoglycemia.

The Medicalization of PMS

PMS was first mentioned in the medical literature in the 1930s, and women presumably had it before then. However, it is only in the last few years that numerous articles about PMS have appeared and that doctors have begun to take women's symptoms more seriously. There is little agreement, though, on the causes of it or how it should be treated. There are numerous theories as to its cause—ranging from an alteration in the way that the body uses glucose, to excessive estrogen and deficient progesterone levels—none of which have been convincingly demonstrated. The medical treatment that is emerging as foremost, however, is based on the theory of a deficiency of progesterone during the premenstrual phase of the cycle. The treatment relies on the administration of progesterone during this time.

It is reassuring, on the one hand, that women's symptoms are now being taken seriously by the medical profession. However, the medicalization of PMS has a profound impact on how it is being viewed, and as a result of this, on the type of treatment women are receiving.

PMS is increasingly being viewed as a 'disease' and drugs are being prescribed for it. Treating PMS as a disease is similar to the way in which pregnancy and menopause have been treated as diseases by the medical profession. The analogy of PMS to menopause is very clear. Both are being seen as deficiency diseases—menopause of estrogen, PMS of progesterone. Menopausal women were treated with estrogen before the link to

endometrial cancer was discovered. And again, we are seeing women, this time women with PMS, being treated with a drug, progesterone, without the cause of their symptoms being clearly known, and without the long term effects of the prescribed drug being known. And, as will be talked about later, there are treatments other than progesterone. These include exercise, dietary changes, especially eliminating refined sugar and flours and caffeine, frequent but small meals, increased B₆, and relaxation exercises.

Although the physical symptoms of PMS can be quite incapacitating, it is often the emotional changes that cause women to seek help. It is clear when you read the medical literature on PMS that definite assumptions have been made by physicians and researchers about what is appropriate female emotional behaviour. And some of the symptoms experienced by women having PMS are definitely seen as inappropriate, or outside the female role—especially symptoms of irritability, anger, argumentativeness, aggression or violence. One of the objectives of treatment, it seems, is for the woman to be able to carry out her female role as mother, wife or worker as competently and as cheerfully when she is premenstrual as when she isn't.

There is no doubt that some women experience these emotional states intensely and are very distressed by them. Women talk particularly about the feelings of desperation and of being out of control. The medical solution has been to treat women individually, one by one, with drugs without looking at the social context of their lives. The feelings of frustration and anger are seen as symptomatic of PMS, and as not having any base in the real lives of women and what they may be upset about. Women are taught to not feel angry, to be subordinate in their relationships to men, and to meet other people's needs first. It doesn't seem too surprising that when a hormonal shift which can affect moods is occurring in a woman's body, that some of the underlying negative feelings she has about her situation and herself may surface. A simple desire like wanting to be alone can spiral into a situation in which a woman feels frustrated, angry and guilty because her situation does not seem to allow for her needs to be met. The emotional responses of a premenstrual woman do not occur in a vacuum; they have to be seen in a social context which often intensifies them. And because women are taught to be 'nice' it is not surprising that feelings such as anger and resentment can seem overwhelming. The medical system is not addressing these issues. A self-help group for women with PMS allows women to share and validate each others' experiences. Women can share medical information and alternative treatment knowledge. They can discuss

the conflicts and feelings that surface during the premenstrual time, and look at how they live with or avoid these feelings at other times of the cycle. They can give each other support and identify what they want to change in their lives.

Causes

The causes of PMS are not fully known. Many theories have been suggested; none are universally agreed upon, and none appear to be true for all women with premenstrual symptoms. It is probable that PMS is in fact more than one syndrome and that the symptoms can result from differing causes, requiring individualized treatment for women. Explanations include progesterone deficiency, estrogen excess or a relatively high estrogen/progesterone ratio, vitamin deficiency (especially B₆), hypoglycemia (low blood sugar), fluid retention, prolactin (a pituitary hormone) excess, fatty acid and prostaglandin deficiency, stress, adrenal hormones excess, and changes in the neuroendocrine mechanisms which affect the hypothalamus and pituitary glands.

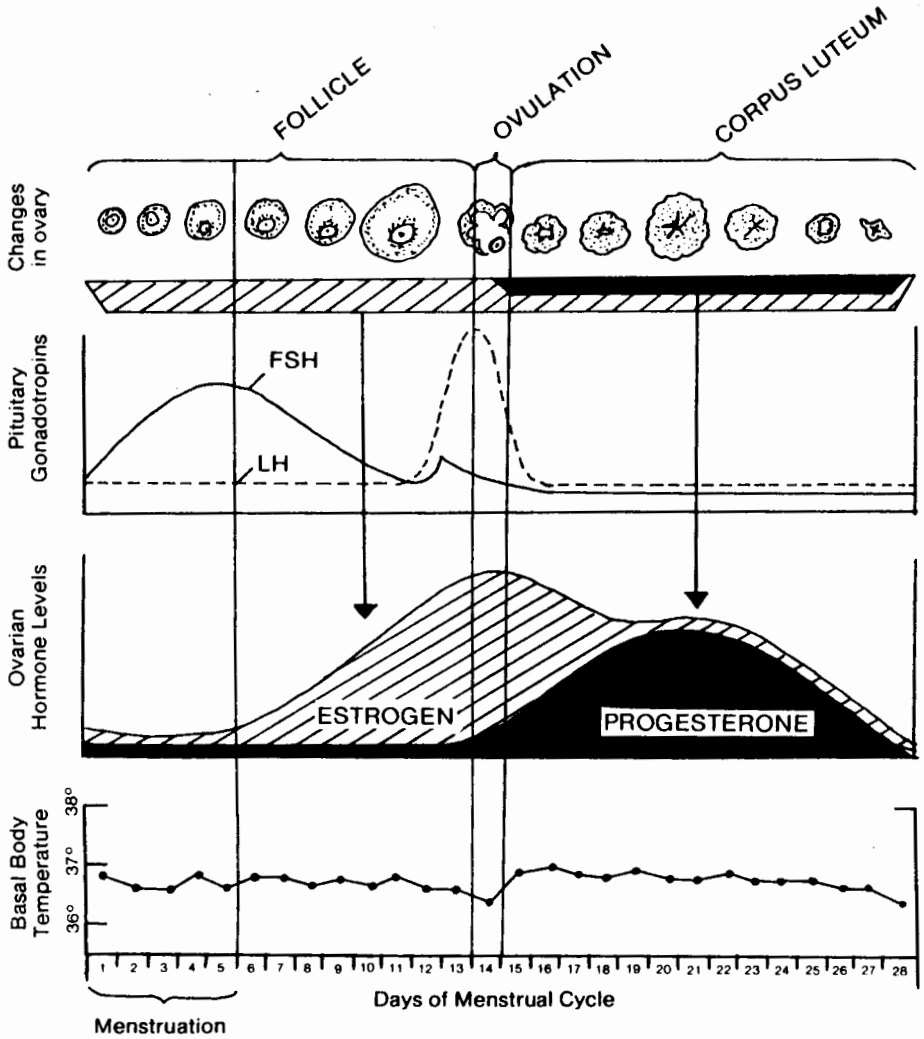
All of the proposed theories relate in some way to the endocrine system and many of them relate to the complex interactions between the hypothalamus, the pituitary and the ovaries. A basic understanding of the menstrual cycle is required to see how these systems interact and why so much emphasis has been placed on the fluctuation of the female hormones estrogen and progesterone during the last half of the cycle, to account for PMS.

Menstrual Cycle

The menstrual cycle is controlled by hormones whose output is controlled by a special part of the brain, the hypothalamus. It sends chemical messages to the pituitary gland which, in turn, regulates the production of hormones by other glands, including the ovaries.

From day 1 of the menstrual cycle, the pituitary gland sends out the follicle stimulating hormone (FSH) to the ovaries where it creates a chemical change in the immature ovarian follicles which surround the egg cells. As these follicles grow they manufacture estrogen. Estrogen from the follicles passes into the bloodstream and is carried to the pituitary gland. Once estrogen has reached a certain level the pituitary secretes less FSH and starts to produce the luteinizing hormone (LH). At about day 14 LH flows into the bloodstream and travels to the ovary where it stimulates the further growth of only one follicle. The ripening follicle then releases an egg, the ovum. It bursts out of the follicle and is sucked

THE REPRODUCTIVE CYCLE



into the fallopian tube. This is ovulation. The scar tissue that is left behind after the egg bursts out of the follicle becomes the corpus luteum or "yellow body." It starts to manufacture another hormone, progesterone, as well as some estrogen. The progesterone causes the uterine glands to begin secreting the nourishing substances necessary for a fertilized ovum to feed on. By about day 21 the ovum has reached the uterus. As the menstrual cycle nears an end, if the egg is fertilized and pregnancy occurs, estrogen and progesterone levels stay high. But if fertilization does not occur, the brain does not get the stimulus it needs to maintain the corpus luteum. The corpus luteum disintegrates, progesterone and estrogen levels drop rapidly and menstruation occurs.

What is important to know about this cycle, in relation to PMS, is that the estrogen and progesterone levels change at different times in the cycle. At the end of a menstrual period the estrogen level rises. It reaches its peak just before ovulation. After ovulation the level of estrogen drops steeply. It again rises and falls off again before menstruation, but the rise is not nearly as high as before ovulation. Progesterone is also secreted in a monthly rhythm. The progesterone level rises after ovulation to enrich the wall of the uterus and then drops off before menstruation. Many theories about the cause of PMS have centered on either a deficiency of progesterone or an imbalance in the estrogen/progesterone ratio in the latter half of the menstrual cycle.

Some Theories

Estrogen/Progesterone Imbalance In the last half of the menstrual cycle, after ovulation, progesterone is being released for the first time in the cycle. As well, both estrogen and progesterone rise, peak, and then fall during this second half of the cycle. It has been suggested that if these two hormones lose their normally fine balance, symptoms of PMS may arise. Three different theories concerning this balance between estrogen and progesterone have been put forward as possible causes of PMS: 1. a deficiency of progesterone; 2. high levels of estrogen, and 3. high levels of progesterone. The most popular theory is that of progesterone deficiency. The resulting treatment is the administration of progesterone during the second half of the cycle. It should be kept in mind that these are only theories and that no consistent difference in hormone levels has been found between women with and without PMS. The popular progesterone deficiency theory has not been substantiated.

Hypoglycemia Many women experiencing PMS crave carbohydrates and sugar premenstrually. They may also experience hypoglycemia-like fainting spells, fatigue, depression, palpitations and headaches after eating refined carbohydrates and sugar during this period. Although the blood glucose levels of most women with PMS have been found to remain in the normal range even during their symptom phase, it has been suggested that a woman's body may be more responsive to insulin the week before her period. Sugar stimulates insulin production and then insulin makes the blood sugar level drop. And the lowering of blood sugar can bring on depression, agitation, fatigue, irritability and headaches. Also, increased insulin is known to prevent the kidneys from excreting sodium (salt). This can contribute to weight gain and swelling that many women experience premenstrually. These symptoms can be minimized by eating frequent small meals and avoiding refined sugar and carbohydrates.

Vitamin B Deficiency (Particularly B₆) Researchers have found that the body is not effective in regulating estrogen production if it has insufficient B vitamins. It has been suggested that elevated levels of estrogen in premenstrual women is caused by the inability of the liver to deactivate them due to B vitamin deficiency. The liver normally deactivates estrogens and they are cleared by the kidneys via the urine. This B vitamin deficiency may contribute to bloating and swelling. Also vitamin B₆ is thought to be a coenzyme in the metabolism of the neurotransmitters serotonin and dopamine, which are a person's mood regulators, from the amine tryptophan. A vitamin B₆ deficiency will decrease the production of these neurotransmitters. Vitamin B₆ is also required by the body to produce the prostaglandin PGE₁. A deficiency of PGE₁ may contribute to hypoglycemia-like symptoms. Increased B₆ in the diet has been found to help stabilize women's moods and to alleviate the symptoms of headache, edema, depression and irritability.

Neuroendocrine System It has been suggested that PMS is caused by events of the neuroendocrine system. Neuroendocrine means a combination of the nervous system and the endocrine or hormonal network in the body. This theory looks at the way the hypothalamus and pituitary glands in the brain initially receive nerve-transmitting signals to release hormones that in turn start hormone production in the ovaries and other parts of the body. It is suggested that the nerve-transmitting signals in the brain come from the peptides alpha-melanocyte-stimulating hormone (alpha-MSH) and beta-endorphin, and that the interaction between the hypothalamus and the pituitary is influenced by these peptides during the last half of the menstrual cycle. These peptides are

amino acid compounds that originate in the brain's neurointermediate lobe. The fluctuation of these peptides may be responsible for shifts in a woman's mood and behaviour as well as changes in her hormonal production. Also, external events in a woman's life, such as stress, diet changes, or major life changes, may influence the neuroendocrine system and in turn the menstrual cycle.

Prolactin Excess Prolactin, a brain hormone, fluctuates from day to day but consistently peaks when a woman ovulates and remains higher in the second half of the menstrual cycle. Some researchers have suggested that prolactin may affect psychological symptoms such as depression and mood swings, and possibly fluid retention. Some women with PMS do have elevated prolactin levels, but most do not. The drug bromocriptine has been used in some studies to try to suppress prolactin and so to reduce fluid retention. The results have not been conclusive.

Fatty Acid and Prostaglandin Deficiency Prostaglandins are hormone-like substances circulating in the body. Recent research indicates that a deficiency of one of these prostaglandins, PGE₁, may lead to some PMS symptoms. A deficiency in PGE₁ can contribute to hypoglycemia-like symptoms because PGE₁ is required to inhibit the secretion of insulin from glucose. Also it has been suggested that sufficient PGE₁ may prevent the effects of raised prolactin levels and so alleviate the symptoms of fluid retention, breast tenderness, irritability and depression associated with it.

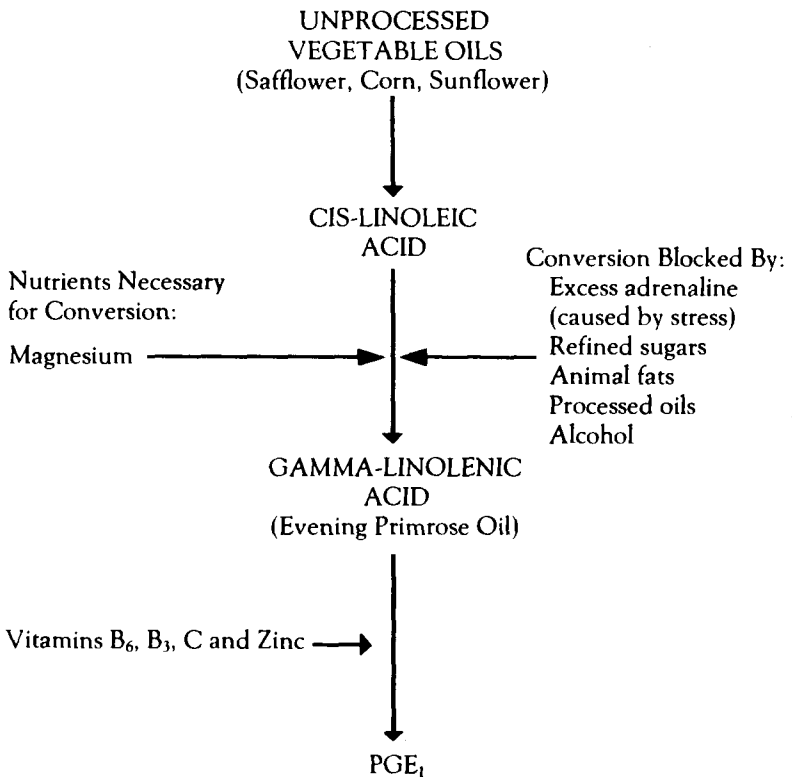
PGE₁ is produced in the body through a series of conversions of unsaturated vegetable oils eaten in the diet (such as safflower oil, corn oil, and sunflower oil) into the fatty acids cis-linoleic acid and gamma-linolenic acid, and then into PGE₁. Although the body is capable of making these conversions, eating habits and vitamin deficiencies can interfere with this. Intake of processed oils, refined sugars, saturated (animal) fats, and alcohol and deficiencies in magnesium, zinc, vitamins C, B₃, and B₆ can hinder or prevent it. In some cases, the inability to convert linoleic acid to gamma-linolenic acid is inherited (a condition related to eczema, asthma and allergies). There is little gamma linolenic acid in the usual human diet. One of the few sources is Evening Primrose Oil (Efamol) which is derived from the seeds of a wild plant.

Aldosterone System Some new studies have linked PMS to an oversupply of renin, angiotensin and aldosterone—adrenal hormones that are collectively called the aldosterone system. Estrogen increases the level of adrenal hormones present in the bloodstream. And an aldosterone excess prevents the normal

excretion of salt from the kidneys. This salt build up can lead to fluid retention.

Monoamine Oxydase Deficiency Monoamine oxydase is an enzyme that circulates in both the blood and the brain. Neurotransmitters carry messages between neurons in the brain. MAO prevents these neurotransmitters from building up and so quiets brain cells that would otherwise be activated. Low levels of MAO means higher arousal in the brain. MAO is also necessary for the digestion of foods containing amines. A deficiency in MAO may lead to a build up of toxins causing a breakdown in the sugar metabolism process, resulting in hypoglycemia. Many of the symptoms of MAO deficiency such as irritability, being highly emotional, and craving sweets and alcohol are similar to those of PMS, although the link has not been conclusively proven. The treatment is to eliminate foods containing amines and sugar, and to supplement the diet with vitamins and minerals.

The Production of PGE₁



Candida albicans An overgrowth of candida albicans yeast in the intestine, though not necessarily a primary cause of PMS, can affect the hormone regulation system and exaggerate the symptoms of PMS. The frequency of intestinal yeast overgrowth as the underlying cause of many problems is just becoming known and is directly connected to the immune system response, including allergies. The treatment for yeast overgrowth is Nystatin (a drug) or Capristatin (a non-drug preparation) plus a low-sugar, low-mold, low-carbohydrate diet. Treating candida has relieved PMS symptoms for women for whom a nutritional program was only partially successful (as well as clearing up their allergies).

Allergies Allergies or sensitivities to foods and other substances in the environment can also have a role in PMS. Many women with severe PMS are also susceptible to allergies. Finding and dealing with the allergy (or allergies) has relieved PMS symptoms for women for whom a nutritional program was only partially successful. Doctors Nazzaro and Lombard, who run a clinic in Massachusetts, claim that the only PMS sufferers they have not been able to help with their nutritional program are those with severe environmental allergies.

Symptoms

PMS evidences itself by a wide range of symptoms which can appear between 2 and 14 days before menstruation and disappear with the onset of bleeding or shortly thereafter. While about 150 symptoms have been recognized as connected with this condition, grouping them into four categories has been suggested by endocrinologist Guy Abraham. An individual woman may experience one subgroup of symptoms or a combination of subgroup symptoms. Abraham uses the term Premenstrual Tension (PMT) rather than PMS to define these categories.

PMT-A (Anxiety) This subgroup includes nervous tension, mood swings, irritability, anger, anxiety, and mild to moderate depression. Approximately 80% of PMS women experience these symptoms.

PMT-C (Carbohydrate craving and intolerance) This subgroup includes symptoms such as headache, craving for sweets, craving for alcohol, increased appetite, heart pounding, fatigue, dizziness or faintness. Approximately 60% of PMS women experience these kind of symptoms.

PMT-H (Hyper-hydration or water retention) This subgroup includes weight gain, swelling of extremities, breast tender-

ness and abdominal bloating. Approximately 40% of PMS women experience these kinds of symptoms.

PMT-D (Depression) This subgroup is characterized by severe depression, withdrawal, confusion, crying easily, insomnia, forgetfulness, and suicidal thoughts. Approximately 20% of PMS women experience this.

Charting

The diagnosis of PMS is a subjective one which can be made by a woman herself with the help of someone familiar with the patterns and symptoms of PMS. There are currently no specific medical or psychological tests available for PMS. Symptoms which recur premenstrually on a regular basis, though not necessarily every month, are premenstrual symptoms.

A menstrual calendar is the best way of demonstrating which symptoms are premenstrual and which occur at other times in the monthly cycle. This means charting on a graph when you menstruate, when your symptoms occur, and how severe they are. You can also chart your cyclic temperature changes with a basal body thermometer. When women ovulate, their temperature rises 0.3-1.0 degrees F. and stays elevated until the next menstrual period. So if you chart both your temperature and symptoms over a few months you can determine if the symptoms are "premenstrual."

Some physicians and researchers have defined premenstrual syndrome as recurrent premenstrual difficulties followed by at least one week which is entirely free of symptoms. However, it is also true that whatever difficulties a woman has, they may become more severe premenstrually. For example, a woman whose premenstrual syndrome consists of depression will have at least one week free of any depression. But women who are generally depressed will usually be more depressed premenstrually. While the depressed woman may not have PMS as defined by some physicians, her perception of having increased difficulty premenstrually is valid, and the changing severity of her problem may still be related to her menstrual cycle.

Positive Aspects of PMS

Much of the literature about PMS focuses on the negative aspects of the premenstrual phase—the symptoms, the difficulties. And of

course, for many women the emphasis is on finding relief and alleviating the symptoms.

For some women, however, there are definitely positive aspects to the premenstrual time. PMS, in some ways, resembles an altered state of consciousness, an experience of seeing the world through a magnifying lens. Some women describe their creativity and perceptiveness as being heightened, as having a richness of sensation and imagery which is not present at other times. They look forward to being premenstrual for the effect on their creativity, even though some of the other symptoms create strains on their relationships in their families. Other women describe being much more sensitive to the unjust aspects of the working situations they are in while they are premenstrual, which when they are not premenstrual they would be more 'realistic' about, and be able to 'cope' with better. However they appreciate their premenstrual awareness as it contributes to their vision and desire to work for changes.

II. SELF-HELP FOR PREMENSTRUAL SYNDROME

What Can Help

Although hormonal imbalance is clearly a factor in some symptoms of PMS, this does not mean that hormone therapy is the only or best way to alleviate these symptoms. There are various ways to balance hormone production or to stimulate hormone production (in the case of deficiencies) with nutritional supplements and herbs. Foods which contribute to the creation of hormonal imbalances and deficiencies can be avoided. Other kinds of deficiencies and imbalances are implicated in PMS and can be dealt with through dietary changes and nutritional supplements rather than drugs. And there are many ways to reduce stress levels and deal with the emotional changes that are often associated with PMS. It usually takes a month or two for the results of a nutritional program to become evident. The third month can often be a time of stabilization or even setback, although there is usually more improvement in the fourth month. Often, after about six months, it becomes possible (and sometimes necessary) to decrease dosages of supplements.

Vitamins, Minerals and Other Supplements

Although specific vitamins and minerals are suggested here as having specific relevance to PMS, it is important to know that it is necessary to take a multi-vitamin/mineral tablet which will provide all the required nutrients. If the multi-vitamin/mineral tablet is not adequate in a particular vitamin or mineral to counteract the possible deficiencies associated with PMS, the specific nutrient can be taken in addition to the multi-vitamin/mineral tablet. For example, a good multi-vitamin/mineral tablet will provide enough B complex except for Vitamin B₆ which can then be taken in addition to the multi-vitamin/mineral tablet. Always take supplements with meals.

The **B-complex vitamins** and in particular **Vitamin B₆** (pyridoxine) have eased PMS symptoms for many women, especially fatigue, depression, breast swelling and headaches. A B vitamin deficiency creates a high level of estrogen, a possible cause of PMS. Women taking the contraceptive pill are often deficient in B₆. B₆ must be taken in combination with a Vitamin B-complex pill. Start with 50 milligrams of B₆ daily (plus a B-complex tablet) and slowly work up to 250 milligrams a day. Some women increase their dosage to 800 mg a day during the two weeks before

their period, but this is not advisable. Eventually it will increase the body's need for the vitamin and become ineffective. There can be side effects from too much B₆ (nausea, gastric acidity, dizziness, headaches, sleep disturbances, difficulty walking and/or numbness in the feet). If any side effects are noticed, decrease the amount of B₆ immediately. Buy natural source B vitamins.

B₆ is of special importance to women with PMT-A, PMT-H and PMT-C symptoms. It is necessary for the synthesis of PGE₁, a prostaglandin whose deficiency seems to have a role in PMT-C. It suppresses aldosterone (high levels of which are associated with PMT-H) and increases progesterone production (important for women with PMT-A symptoms).

Dietary sources of B₆ are: liver, herring, salmon, brown rice, green leafy vegetables, green beans, carrots, corn, green peppers, cabbage, whole grain cereals and breads, wheat germ, soybeans, nuts, brewers yeast and molasses. Vegetables should be eaten raw as cooking destroys B vitamins.

Vitamin E has a role in promoting hormonal balance and can help reduce breast tenderness. 200-400 IU of Vitamin E daily is adequate. In the case of diabetes, high blood pressure, rheumatic heart condition, and for people taking digitalis, doses should never exceed 100 IU daily. Vitamin E tablets with selenium (a mineral) are the most effective. They should be taken with a meal containing some fats or oils. When Vitamin E is taken, **Vitamin C** becomes depleted, so the daily vitamin intake should include 2,000 milligrams of Vitamin C (taken in smaller doses at intervals throughout the day). Vitamin C is also necessary for the synthesis of the prostaglandin PGE₁, helps relieve stress, supports the immune system and has a diuretic (regulates fluid retention) effect.

Vitamin A helps boost resistance to disease, viruses and infections. 5000 units of Vitamin A taken three times daily is considered helpful for women with PMS.

Magnesium deficiency is related to all types of PMS and may explain the common craving for chocolate, which is magnesium-rich, when premenstrual. As well as being necessary for calcium absorption and the synthesis of the prostaglandin PGE₁, magnesium seems to make Vitamin B₆ work more efficiently to control the symptoms of PMS. The recommended dosage is 250 mg of magnesium daily. Dietary sources of magnesium are whole grains, soybeans, molasses, green leafy vegetables, legumes, nuts, seeds, shellfish and brewer's yeast.

Calcium levels tend to decrease in the blood of PMS sufferers in the two weeks before menstruation, which can lead to insomnia, headaches, nervousness, bloatedness, abdominal/menstrual cramps and pelvic pain. Calcium and magnesium must be taken together but the experts differ on recommended dosages. Some say to take 500 mg of calcium daily, along with 250 mg of magnesium and 400 units of Vitamin D (doubling the amounts of calcium and magnesium for the two weeks preceding menstruation). If cramping still occurs, 500 mg of calcium with 250 mg of magnesium can be taken every two hours up to a maximum of six times. Others say that the amount of magnesium should be equal to the amount of calcium, and still others suggest more magnesium than calcium. Women with severe PMS may need to take up to 400 mg of magnesium daily, along with a B complex vitamin.

Women with kidney stones or other conditions requiring careful monitoring of calcium levels should check with a doctor before taking such large doses of calcium.

Calcium-rich foods are: milk, cheese, yogurt, sardines, mackerel, scallops, mustard and collard greens, broccoli, parsley, watercress, egg yolks, almonds, sesame seeds, soybeans, molasses, brewer's yeast, kelp.

Potassium helps regulate fluid retention. Women who experience bloating may be potassium-deficient. Potassium supplements are available but can upset the stomach. Some potassium-rich foods are: peaches, broccoli, lettuce, yams, potatoes, squash, nuts, raw sunflower seeds, garlic, halibut, herring, sardines, lentils, whole grains, molasses, kelp and brewer's yeast.

Iron deficiency may cause some of a woman's premenstrual fatigue and weakness, especially if she bleeds heavily during her period. Iron supplements should be taken in combination with Vitamin C to aid absorption. Iron-rich foods are: apricots, egg yolks, whole grains, black strap molasses, potatoes, dried beans and peas, spinach, beets, chard, oatmeal, sunflower seeds, pumpkin seeds, brewer's yeast, clams.

Zinc is necessary for the synthesis of the prostaglandin PGE₁. Zinc deficiency may contribute to such premenstrual symptoms as irritability, depression, nervousness and headaches. 15-25 mg of zinc can be taken daily with calcium and magnesium (but not at the same time as iron; they prevent each other's absorption). Seafood is high in zinc, as are milk, eggs, brewer's yeast, legumes and sunflower seeds and nuts. Zinc deficiency is common in women using copper intrauterine devices (IUDs).

Tryptophan is an amino acid (a component of protein). It has helped some women overcome their feelings of nervousness and depression, and it also helps insomnia. It is found naturally in milk and other complete proteins (which is one reason why a warm glass of milk before bed does have a calming effect; so does the calcium in the milk) and is also available in tablet form in health food and vitamin stores in the U.S.A. (now banned in Canada).

Evening Primrose Oil, the oil from the evening primrose flower, is rich in gamma-linolenic acid, an essential fatty acid which is the precursor for one form of the prostaglandin PGE₁. Low levels of PGE₁ are thought to have a role in PMS, especially PMT-C. How that works is not fully understood, but many women have found total or partial relief from their premenstrual symptoms with Evening Primrose Oil. It is available at health food and vitamin stores under the brand name Efamol. Doctors Nazzaro and Lombard in *The PMS Solution* recommend starting Evening Primrose Oil on Day 4 of the cycle with 1 capsule a day, increasing to 2 capsules on Day 12 and to 3 capsules on Day 20 till menstruation comes. If there is some relief from symptoms, they increase the dosage to a maximum of 5 capsules daily in the premenstrual week over the next couple of months. A few women may experience headaches or lack of energy. If they last more than 24 hours, the dosage should be lowered. This program is carried out at their clinic under medical supervision. If a woman is trying Evening Primrose Oil on her own, she is advised not to keep increasing her dosage beyond what is recommended for the first month. Any program like this is best done under the supervision of a medical practitioner who understands the nutritional approach. Vitamin B₆ will enhance the effect of Evening Primrose Oil. Unfortunately Evening Primrose Oil is very expensive, so the other treatments such as vitamins and minerals, diet and exercise can be tried first.

Diet

Eat six times a day; three small meals with a mid-morning, mid-afternoon and late-evening snack. This is because many women with PMS are also hypoglycemic. Hypoglycemia is a condition in which the blood sugar level falls either too rapidly or to too low a level. The symptoms of hypoglycemia are very similar to some of the symptoms of PMS. Small frequent meals help keep the blood sugar level stable.

Get adequate protein but not more than 1 gram per kilo of body weight per day. Get protein from fish and chicken rather than red meat, and from combining beans and grains (see *Diet for a Small Planet* by Frances Moore Lappe: Ballantine Books).

Increase intake of complex carbohydrates: vegetables, lentils, beans, cereals & whole grains such as wheat, rice, buckwheat, millet and oats.

Limit dairy products to two servings a day, especially women with PMT-A symptoms. Dairy products inhibit magnesium absorption and contribute to elevated blood estrogen levels.

Avoid refined sugar: it inhibits the conversion of gamma-linolenic acid (necessary for the production of prostaglandin E_1); it also interferes with hormonal balance and contributes to hypoglycemia. Satisfy the craving for sweets with fresh fruit. Extremely sugar-sensitive women should also avoid honey and grapes, which are high in glucose. Avoiding sugar is especially important for women with PMT-C and PMT-A symptoms.

Avoid saturated fats (fats which harden when cool) such as animal fats. Use cold-processed polyunsaturated vegetable oils, especially safflower oil which contains cis-linoleic acid which is necessary for the synthesis of PGE_1 . This is particularly important for women with PMT-C symptoms. Animal fats block magnesium absorption and prevent proper formulation of PGE_1 . They also lead to the synthesis of another prostaglandin, PGE_2 , which has a role in menstrual cramps and possibly in the development of breast cancer.

Reduce salt intake. As well as table salt, high sodium foods include pickles, soy sauce, soda water, canned soups, bouillon cubes, snack foods, condiments and cured meats. Excess salt contributes to fluid retention. Many PMS sufferers (PMT-H group) have reduced their bloating, headaches and irritability by the elimination of salt alone. Those in the PMT-C group should also avoid salt because of its role in increasing glucose absorption.

Eliminate caffeine. Coffee, black tea, cola drinks, chocolate, and some pain relievers like Anacin and Excedrin all contain caffeine. Caffeine increases breast swelling and tenderness and can cause irritability, hyperactivity and headaches. It depletes the body of B vitamins, potassium and zinc. Its avoidance is especially important for women with PMT-H symptoms.

Avoid alcohol. Both the craving for alcohol and the inability to tolerate it increase in the premenstrual phase. There is always the danger of alcohol dependency developing from premenstrual binges. One doctor says that 20% of the women he treats for PMS are alcohol abusers. Alcohol affects blood sugar levels, depletes the body of magnesium, zinc and B vitamins, can harm the liver and hinders the synthesis of prostaglandin PGE_1 .

Avoid processed and fast foods; they usually contain large amounts of salt, sugar and chemical additives, and provide "empty" calories with little nutritional value.

Drink more water. This helps reduce fluid retention, strange as it may seem. For the kidneys to excrete the water, they must excrete salt too, so the net effect of drinking water is that the body excretes that water plus salt and more water.

Increase diuretic foods (foods which lessen water retention): cabbage, cucumbers, parsley, watercress, watermelon, cantaloupe, strawberries, artichokes, asparagus.

Try to avoid foods rich in amines: bananas, raisins, cheese, avocados, walnuts, pecans, sour cream, tangerines, oranges, mushrooms, lemons, pineapples, tomatoes, dates, prunes and plums.

Herbs

Dong quai (also spelled dang quei, tang kwei, tang kwei) is a Chinese herb which is known to nourish female glands, regulate hormones and correct menstrual problems, including PMS. It is known as the "female ginseng." It is available in tablet or tea form from Chinese herbalists but is no longer available in capsule form in health food stores in Canada. It is still available in the U.S.A. It should not be taken at the same time as other herbs and little or no fruit should be eaten when taking dong quai.

Some herbs are **diuretics** i.e. they relieve the body of fluid retention. Some diuretic herbs which can be made into teas are dandelion, camomile, spearmint and raspberry leaf. Herbs should be used sparingly (not more than 3 times a day for a tea made from these herbs, and then only when necessary).

Exercise

Many women have found that regular exercise helps lessen the severity of the PMS symptoms such as depression, fatigue, irritability, headaches and cramps. We know that aerobic exercise (continuous exercise which raises the heartbeat) improves circulation and oxygenation, which helps us to feel better. It may also be that exercise increases progesterone production and makes the brain release beta-endorphins, hormones which create a mild "high" or feeling of wellbeing.

An exercise program does not have to be strenuous, but should be regular. Good aerobic exercises are running, cycling, swimming, aerobic dancing and brisk walking, so long as they are sustained

for at least twenty minutes and done on a regular basis (at least three times a week). Stretching exercises, especially yoga, help the nervous system. If you have not been exercising at all, it is a good idea to have a medical checkup first, and start any exercise program slowly and carefully.

Massage, Shiatsu, Acupuncture

Massage can help relieve feelings of bloatedness, improve circulation and reduce tension and anxiety. A massage therapist uses a variety of techniques which can help with PMS symptoms, but anyone can learn some simple massage strokes which can help a friend get some relief from tension (see *The Massage Book* by George Downing: Random House).

Shiatsu is a Japanese form of massage which uses finger pressure on certain points of the body. Shiatsu treatments can help balance the body's hormonal system and bring relief from tension and stress. Some massage therapists are trained in shiatsu.

Acupuncture works in a similar way to Shiatsu. Specific points are stimulated in order to balance the body's flow of energy. Fine needles are inserted in the skin at the acupuncture points to release the blocked energy which, according to Chinese tradition, should be flowing along energy pathways known as meridians. It has helped some women with menstrual problems. In Canada acupuncture has to be done by an MD who has studied acupuncture.

Stress Reduction

Stress makes the symptoms of any problems we have worse, including the symptoms of PMS. It isn't possible to eliminate all the stresses in our lives, but there are many ways to reduce the effects of stress on our bodies and minds. It can be as simple as taking some time each day to be alone and quiet, listen to music, soak in a hot bath or write in a journal. This may take some planning, but families, roommates, etc. can be asked to co-operate in allowing us this quiet time. Too often, women feel guilty about taking time to be self-nurturing and this can stop us from asking for what we need and want. It may also be possible to avoid certain high-stress situations when premenstrual. Here are some suggestions for stress reduction:

Exercise, as mentioned before, increases feelings of wellbeing and provides a release for pent-up tensions.

Yoga is an old discipline which many people use today to strengthen and relax the body and calm the mind. There are specific yoga poses which help alleviate menstrual problems. It is

best to study yoga with a teacher and there are usually yoga classes available in larger urban centres, but it is possible to learn some simple poses from a book on yoga.

Stretching exercises, like yoga, strengthen and relax the body, keep it flexible and improve circulation, all of which reduce tension and contribute to feeling better physically and mentally.

Relaxation techniques: there are many forms of relaxation exercises which help reduce mental and physical stress. There are physical forms which focus on breathing and muscle relaxation, and more mental forms such as self-hypnosis, autogenic training and meditation. They are simple to learn, and if a teacher is not available in your area, there are many books and tapes available now with instructions on various stress reduction and meditative techniques.

Support groups: changing our diets and lifestyles are things we can do individually, and sometimes sticking with them can take a lot of will power and self-discipline. It is almost always easier to stick with a plan if we are getting support from others who understand the problems we are trying to overcome. Meeting with other women with PMS in a group is also useful for sharing information and exchanging ideas about solving problems which those with PMS encounter. Above all, it is important to meet other women who have had to cope with similar problems and to recognize that each PMS sufferer is not the only one in the world. Knowing that many women share the same problems and getting support in solving those problems can reduce a lot of the stress felt by those with PMS. Some women's centres have organized PMS support groups but anyone can organize a group by advertising in local community centres and libraries. (See *Helping Ourselves: A Handbook for Women Starting Groups* listed in the bibliography.)

Water

Baths Warm baths relax muscles, ease tension, soothe nerves and help relieve the feeling of bloatedness. A brisk rubdown after a bath will increase circulation and reduce the feeling of bloatedness. Whirlpools are also good for relaxing tense muscles and improving circulation.

Sitz Baths Sitz baths are for the hips and pelvic area only. A large basin or wash tub can be used. Take a hot sitz bath for 5-10 minutes on alternate nights a week before your period is due. Keep the feet warm with a blanket. Sitz baths help relieve the feeling of congestion in the pelvic area and improves circulation to the area.

Orgasm

Having an orgasm is sometimes effective in reducing the feeling of congestion in the pelvic area, as well as in releasing tension.

What to Avoid

Tranquillizers and anti-depressants Too many doctors are quick to prescribe tranquillizers and anti-depressants when they think there is no physiological basis for a woman's feelings of depression, anxiety and irritability. Even if there is no obvious physiological basis for these feelings, they are no doubt coming from some real situation that the woman is in and should be dealt with as a legitimate response to a situation, not something to be dismissed and suppressed with drugs. Avoid any mood-altering drugs, except in crisis situations; there are many other ways to deal with distress, including finding women to talk to who understand where these feelings are coming from. And remember that even minor tranquillizers can be addictive and should be used only in a crisis and on a short term basis.

Diuretics Diuretics are often prescribed for premenstrual edema (bloating and water retention). They can be dangerous because they deplete the body of potassium, magnesium and zinc, minerals which play a role in counteracting PMS.

Other Drugs

Spirolactone is a new drug for fluid retention and bloatedness. This drug has caused tumours in test animals, and the side effects for humans are uncertain and possibly dangerous.

Bromocriptine (the brand name of which is Parlodel) has also been prescribed for edema. It suppresses prolactin which is thought to be possibly responsible for fluid retention. It has helped some women and made the symptoms of PMS worse in others. Common side effects are dizziness, nausea, vomiting, headaches and constipation.

Oral contraceptives (the birth control pill) have made PMS symptoms worse for many women, probably due to the fact that they contain synthetic progestogens which can worsen PMS. Yet some doctors suggest the pill for PMS. There are of course other dangers associated with oral contraceptives, such as circulatory and blood clotting disorders.

Lithium is usually given to alleviate manic-depressive states. It has no effect on moderate PMS; its only value may be for women whose depression is so severe they cannot function normally,

although it does not help PMS itself. There are a number of serious side effects associated with lithium.

Sleep aids may be considered by women who have trouble sleeping due to premenstrual anxiety and tension. Sleeping pills are often addictive and disturb normal sleep patterns; they are to be avoided except in a crisis. Halcion, a new insomnia reliever, is claimed to be non-addictive, but there is evidence to the contrary. There are natural aids for insomnia such as calcium, tryptophan (an amino acid), camomile tea and other herbs, and there are many relaxation techniques mentioned in the section on stress reduction.

Thyroid medication may be given to women with PMT-D symptoms on the assumption that low thyroid secretions contribute to the hormonal imbalances of PMS. Some women have been helped by thyroid medication but any drug which affects the endocrine (hormonal) system should be approached with caution. There are other ways to deal with thyroid deficiency. Kelp is a natural source of iodine, the mineral necessary for the proper functioning of the thyroid gland. Raw thyroid gland (obtainable from a naturopathic doctor) can stimulate the thyroid gland's productivity.

Prostaglandin inhibitors (aspirin, Midol, Motrin, Ponstel) can be effective for menstrual cramps, but are not useful for PMS.

Smoking Smoking has other dangers besides lung cancer and emphysema. Nicotine is a stimulant which can make the hypoglycemic response worse. Smoking also interferes with calcium absorption. Avoiding smoking is especially important for women with PMT-H and PMT-C symptoms.

Hysterectomy Hysterectomy (surgical removal of the uterus and sometimes the ovaries as well) may be suggested by some doctors for relief from PMS. On no account agree to a hysterectomy for this reason! Many women have found that their PMS symptoms get worse after a hysterectomy. If the ovaries are removed, a woman will go into menopause immediately and experience more severe menopausal symptoms than those going through menopause naturally.

D & C D & C (Dilation and curettage) is another frequently used surgical procedure which cannot help PMS.

III. PROGESTERONE THERAPY: PROS AND CONS

Progesterone is the most common medical treatment for PMS, and has been used by Dr. Katharina Dalton in England for the past thirty years. She believes that PMS is a progesterone deficiency, although we now know that PMS is much more complicated than a single deficiency. Progesterone is now used in Canada and the U.S.A., although to date it has not been approved by the U.S. Food and Drug Administration for the treatment of PMS. Many women have found relief from PMS by taking progesterone, although some have not been helped. According to Dr. Guy Abraham, women in the PMT-A group are the only ones likely to be helped by progesterone, and PMT-C and PMT-H symptoms may get worse. Because of progesterone's Central Nervous System-depressing properties, its use in pure PMT-D women is potentially harmful.

Any form of hormonal treatment should be approached with caution. The long term effects on a woman's health of taking progesterone are not known, and there can be side effects such as vaginal dryness, diminished sex drive, heavy menstrual flow, spotting between periods, hot flashes, vaginal itching, yeast infections, depression, migraine-like headaches, visual disturbances, blood clotting, raised blood pressure and jaundice.

If a woman has tried all the dietary and nutritional approaches and still suffers from PMS, she may want to try progesterone. Abraham suggests micronized progesterone, administered orally. Hopefully it will be a short-term course of treatments. It is very important that the progesterone be natural i.e. derived from yams or soybean products, and not a synthetic progestogen. Synthetic progestogens are chemically formulated from progesterone but react differently. This is very significant; progestogens can suppress the body's progesterone production, making PMS symptoms worse, and have many other health risks such as blood clotting disorders, liver dysfunction and potential damage to a fetus.

IV. FURTHER READING ON PMS

Books

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Other Recommended Books

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Crook, William MD. **The Yeast Connection**. Future Health, P.O. Box 846, Jackson, Tennessee 38302.

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Federation of Feminist Women's Health Centers. **How To Stay Out of the Gynecologist's Office**. Culver City, CA: Peace Press, 1981.

Fredericks, Carlton. **Low Blood Sugar and You**. New York: Grosset & Dunlap, 1977.

Mason, L. John. **Guide to Stress Reduction**. Culver City, CA: Peace Press, 1980.

Nutrition Search, Inc. **Nutrition Almanac.** New York: McGraw-Hill Paperbacks, 1979.

Seaman, Barbara and Gideon Seaman, MD. **Women and the Crisis in Sex Hormones.** New York: Bantam Books, 1977.

Women's Counselling Referral and Education Centre. **Helping Ourselves: A Handbook for Women Starting Groups.** WCREC, 348 College Street, Toronto, Ontario, M5T 1S4 (available by mail order for \$5).

Notes

For centuries health information was passed from woman to woman, from one generation to the next. As the medical profession took over health care late in the 19th century, this information became more and more their property.

One way women have begun to take back control of our own health care is to collect and write information and to share it with each other.

We have become used to thinking that only the medical "experts" know about good health care. In fact, we all have valuable information and we can share it and learn together. We call this concept "self-help."

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