Your Monthly Update

Dear Colleague

Welcome to the March 07 newsletter from Pure Bio Ltd.

Did you know. . .?

… That the following drugs cause the following deficiencies:

Antacids – vitamin B12
Aspirin – folic acid and vitamin C
Statins – CoEnzyme Q10
Diuretics – Vitamin B1 (thiamine)

Given the frequency of prescription of these drugs, it is worth bearing in mind when treating your patients!

Our topic for this month is:

Premenstrual Syndrome

Ranking	Nutritional Supplements	Botanical Medicine
Primary	Calcium Vitamin B6	Vitex
Secondary	Evening primrose oil Magnesium Multiple vitamin-mineral Potassium Vitamin E	
Other	Fibre Progesterone Soy Vitamin A (see dosage warnings) Vitamin B-complex	Black cohosh Dong quai Ginkgo Peony Yarrow St John's Wort

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Symptoms

Premenstrual syndrome is defined as distressing physical and psychological symptoms, not caused by organic disease, which regularly recur during the same phase of each menstrual cycle, and which significantly regress or disappear during the remainder of the cycle. The symptoms occur in the two weeks leading up to the next period known as the luteal phase of the cycle.

PMS symptoms include:

- ***Fatigue:*** **This is the most common symptom of premenstrual syndrome. Women with premenstrual syndrome may feel so tired they can barely get through the day. Some women also may have trouble sleeping at night.**
- ***Tension and irritability:*** **Feeling very on edge. Small annoyances seem huge. Responses are out of proportion to the problem.**
- ***Difficulty concentrating:*** **Hard to do things that require concentration, e.g. balancing accounts, following recipes, or making business decisions. They may also be forgetful.**
- ***Anger:*** **During premenstrual syndrome, normal feelings of anger are often exaggerated. Sufferers may be more argumentative and lash out at more readily.**
- ***Depression:*** **Sadness and crying easily are common feelings related to premenstrual syndrome. At times the sadness may feel profound and inconsolable.**
- ***Food cravings:*** **Some women crave particular foods, such as sweets or salt. Others find their appetite for almost any food increases.**
- ***Breast tenderness:*** **Many woman experience swelling and soreness around their nipples or breasts.**
- ***Bloating in the abdomen, hands and legs*****: Weight gain premenstrually is common. Others have fluid shifts to the abdomen, hands, and legs that make them feel uncomfortably swollen or puffy.**
- ***Headaches:*** **Duration and severity of headaches vary from woman to woman, but are common during premenstrual syndrome.**

Causes

Some researchers have suggested that premenstrual syndrome may be related to abnormally low blood sugar (hypoglycaemia), abnormally low levels of thyroid hormones (hypothyroidism) or a diet low in B vitamins, calcium or magnesium. However, other studies do not support these theories. Preliminary studies indicate that magnesium deficiency could play a role.

There is circumspection that premenstrual syndrome is a state of endorphin deficiency. Endorphin levels in the blood do fluctuate; however, these levels are not felt to reflect the activity of endorphins in the brain. Therefore, there is not enough evidence to support this theory.

It is believed that lifestyle may play a significant role in premenstrual syndrome. This is because premenstrual syndrome symptoms appear to be most troubling in women

who smoke, lead stressful lives, rarely exercise, sleep too little or whose diet is high in caffeine, alcohol, salt, red meat or sugary foods such as chocolate or sweets. However, it's not clear whether these factors increase your risk of premenstrual syndrome or if premenstrual syndrome accounts for these differences in lifestyle. For example, studies looking at the influence of stress do not find a relationship between stress and the severity of premenstrual syndrome. It is more likely that premenstrual syndrome causes stress rather than that stress causes premenstrual syndrome.

It's possible that medications may exaggerate the symptoms of premenstrual syndrome. Oral contraceptives (birth control pills) have been known to produce symptoms of premenstrual syndrome in some women. However, some women have noticed that their symptoms improve or disappear while using birth control pills.

Another theory explaining premenstrual syndrome involves prostaglandins. Prostaglandins are produced in the areas where premenstrual syndrome symptoms originate, i.e. breast, brain, reproductive tract, kidney and gastrointestinal tract. This suggests they may play a role in problems such as cramping, breast tenderness; and gas, diarrhoea and constipation.

Dietary Modification

General measures include dietary changes, exercise, and emotional support. Avoidance of salt before the menstrual period, reduction of caffeine intake, elimination of smoking, alcohol and refined sugars have all been recommended and may help symptoms. Other dietary alterations that have been recommended include restricting the intake of animal fats, dairy products and calcium.

Alcohol can affect hormone metabolism, and alcoholic women are more likely to suffer PMS than are non-alcoholic women. General recommendation is that women with PMS avoid alcohol for several months to evaluate whether such a change will reduce symptoms.

In a study of Chinese women, increasing tea consumption was associated with increasing prevalence of PMS. Among a group of college students in the United States, consumption of caffeine-containing beverages was associated with increases in both the prevalence and severity of PMS. Moreover, the more caffeine women consumed, the more likely they were to suffer from PMS. A preliminary study showed that women with heavy caffeine consumption were more likely to have shorter menstrual periods and shorter cycle length compared with women who did not consume caffeine.

Several studies suggest that diets low in fat or high in fibre may help to reduce symptoms of PMS. Recommendation is a diet very low in meat and dairy fat and high in fruit, vegetables and whole grains.

Lifestyle Modification

Women with PMS who jogged an average of about 12 miles a week for six months were reported to experience a reduction in breast tenderness, fluid retention, depression, and stress. Doctors frequently recommend regular exercise as a way to reduce symptoms of PMS.

Nutritional Supplement Treatment Options

Women have been encouraged to increase their intake of complex carbohydrates (for example, pasta and rice), magnesium and zinc (minerals), vitamins A, E, and B6. While doses of vitamin B6 of 50mg once or twice daily can help relieve symptoms of premenstrual syndrome, excessive use of vitamin B6 is discouraged, since it can disrupt the nervous system.

Vitamin B6 - Many, though not all, clinical trials show that taking 50–400 mg of vitamin B6 per day for several months help relieve symptoms of PMS. A composite analysis of the best designed controlled trials shows that vitamin B6 is more than twice as likely to reduce symptoms of PMS as is placebo. Many doctors suggest 100–400 mg per day for at least three months. However, intakes greater than 200 mg per day can cause side effects and should never be taken without the supervision of a healthcare professional.

Vitamin B6 taken in it activated form – P5P – reduces the risk of damage to the nervous system – *P5P50 PE*

Calcium - Women who consume more calcium from their diets are less likely to suffer severe PMS. A large double-blind trial found that women who took 1,200 mg per day of calcium for three menstrual cycles had a 48% reduction in PMS symptoms, compared to a 30% reduction in the placebo group. Other double-blind trials have shown that supplementing 1,000 mg of calcium per day relieves premenstrual symptoms – *Calcium Aspartate PE*, *Calcium Citrate PE*, *Calcium MCHA PE*

GLA - Women with PMS have been shown to have impaired conversion of linoleic acid to gamma linolenic acid (GLA). Because a deficiency of GLA might, in theory, be a factor in PMS and because evening primrose oil (EPO) contains significant amounts of GLA, researchers have studied EPO as a potential way to reduce symptoms of PMS.

Despite these conflicting results, some doctors consider EPO to be worth a try; the amount usually recommended is 3–4 grams per day. EPO may work best when used over several menstrual cycles and may be more helpful in women with PMS who also experience breast tenderness or fibrocystic breast disease – *EPO PE*

An even richer source of GLA is *Blackcurrant Seed Oil PE* or – the richest source of all at 24% GLA – *Borage Oil PE*

Magnesium - Women with PMS have been reported to be at increased risk of magnesium deficiency. Supplementing with magnesium may help reduce symptoms. In one double-blind trial using only 200 mg per day for two months, a significant reduction was reported for several symptoms related to PMS (fluid retention, weight gain, swelling of extremities, breast tenderness, and abdominal bloating). Magnesium has also been reported to be effective in reducing the symptoms of menstrual migraine headaches. While the ideal amount of magnesium has yet to be determined, some doctors recommend 400 mg per day. Effects of magnesium may begin to appear only after two to three months –

- ***Liquid Magnesium Pure Bio***
- ***Magnesium Aspartate PE***
- ***Magnesium Citrate PE***
- ***Magnesium Glycinate PE***
- ***Magnesium Orotate - Kloesterl***

Potassium - A preliminary, uncontrolled trial found that women with severe PMS who took potassium supplements had complete resolution of PMS symptoms within four menstrual cycles. Most participants took 400 mg of potassium per day as potassium aspartate plus 200 mg of potassium per day as potassium chloride for the first two cycles, then switched to solely the aspartate form (600 mg potassium per day) for the remainder of the year-long trial. Without exception, all of the women found their symptoms (i.e., bloating, fatigue, irritability, etc.) decreasing gradually over three cycles and disappearing completely by the fourth cycle. Controlled trials are needed to confirm these preliminary observations –

- **Potassium asparate PE**
- **Potassium citrate PE**

L-tryptophan has been shown to help relieve PMS symptoms. In a double-blind trial, women with premenstrual discomfort received 6 grams per day of L-tryptophan or

placebo for 17 days. Those who took L-tryptophan had significant improvement of symptoms, including mood swings, tension, irritability, breast sensitivity, water retention, and headache. There was a slight reduction in premenstrual depression, but it was not statistically significant. L-tryptophan is available only by prescription, but 5-hydroxytryptophan (5-HTP, a metabolic byproduct of L-) has similar effects – ***5HTP PE***

Soy - In a double-blind trial, supplementing with soy protein (providing 68 mg of isoflavones per day) for two menstrual cycles was significantly more effective than a placebo at relieving premenstrual swelling and cramping. The placebo used in this study was cow's milk protein. However, some researchers believe that cow's milk, because of its oestrogen content, can worsen premenstrual symptoms – ***Soy Isoflavones PE***

Vitamin E - Although women with PMS do not appear to be deficient in vitamin E, a double-blind trial reported that 400 IU of vitamin E per day may decrease symptoms of PMS – ***Vitamin E 400i.u. PE***

Multi-Nutrient - Some of the nutrients mentioned above appear together in multivitamin-mineral supplements. One double-blind trial used a multivitamin-mineral supplement containing vitamin B6 (600 mg per day), magnesium (500 mg per day), vitamin E (200 IU per day), vitamin A (25,000 IU per day), B-complex vitamins, and various other vitamins and minerals. This supplement was found to relieve each of four different categories of PMS symptoms. Related results have been reported in other clinical trials – ***Nutrient 950 PE***

Most well-controlled trials have not found vaginally applied natural progesterone to be effective against the symptoms of premenstrual syndrome. Only anecdotal reports have claimed that orally or rectally administered progesterone may be effective. Progesterone is a hormone, and as such, there are concerns about its inappropriate use. A physician should be consulted before using this or other hormones. Few side effects have been associated with use of topical progesterone creams, but skin reactions may occur. The effect of natural progesterone on breast cancer risk remains unclear; some research suggests the possibility of increased risk, whereas other research points to a possible reduction in risk.

Vitamin A - Very high amounts of vitamin A - 100,000 IU per day or more - have reduced symptoms of PMS, but such an amount can cause serious side effects with long-term use. Women who are or who could become pregnant should not supplement with more than 10,000 IU (3,000 mcg) per day of vitamin A. Other people should not take more than 25,000 IU per day without the supervision of their practitioner. As yet, no trials have explored the effects of these safer amounts of vitamin A in women suffering from PMS – ***Vitamin A 25,000i.u. PE***

B-Complex - Many years ago, research linked B vitamin deficiencies to PMS in preliminary research. Based on that early work, some practitioners recommend B-complex vitamins for women with PMS – ***B-Complex Plus PE***

Botanical Treatment Options

St. John's wort: This herb may help elevate serotonin levels, possibly helping premenstrual syndrome symptoms. Studies do not agree on its effectiveness. St. John's wort should never be used if you take prescription antidepressants.

Vitex (Agnus Castus): has been shown to help re-establish normal balance of oestrogen and progesterone during the menstrual cycle. Vitex also blocks prolactin secretion in women with excessive levels of this hormone; excessive levels of prolactin can lead to breast tenderness and failure to ovulate. A double-blind trial has confirmed that vitex reduces mildly elevated levels of prolactin before a woman’s period. Studies have shown that using vitex once in the morning over a period of several months helps normalize hormone balance and thus alleviate the symptoms of PMS. A preliminary trial and a double-blind trial have found that women taking 20 mg

per day of a concentrated vitex extract for three menstrual cycles experience a significant reduction in symptoms of PMS.

Vitex has been shown to be as effective as 200 mg vitamin B6 in a double-blind trial of women with PMS. Two surveys examined 1,542 women with PMS who had taken a German liquid extract of vitex for their PMS symptoms for as long as 16 years. With an average intake of 42 drops per day, 92% of the women surveyed reported the effectiveness of vitex as "very good,""good," or "satisfactory."

Some healthcare practitioners recommend 40 drops of a concentrated liquid vitex extract or one capsule of the equivalent dried, powdered extract once per day in the morning with some liquid. Vitex should be taken for at least four cycles to determine efficacy – *Agnus Castus tincture Pure Bio*

Ginkgo Biloba - A double-blind trial has shown that standardized *Ginkgo biloba* extract, when taken daily from day 16 of one menstrual cycle to day 5 of the next menstrual cycle, alleviates congestive and psychological symptoms of PMS better than placebo. The trial used 80 mg of a ginkgo extract BID –

- ***Ginkgo 50™ PE***
- ***Ginkgo herbal tincture Pure Bio***

Dong Quai - In Traditional Chinese Medicine, dong quai is rarely used alone and is typically used in combination with herbs such as peony (*Paeonia officinalis*) and osha (*Ligusticum porteri*) for menopausal symptoms as well as for menstrual cramps. However, no clinical trials have been completed to determine the effectiveness of dong quai for PMS – *Dong Quai herbal tincture Pure Bio*

Black cohosh is approved in Germany for use in women with PMS. This approval appears to be based on historical use as there are no modern clinical trials to support the use of black cohosh for PMS – *Black Cohosh herbal tincture Pure Bio*

Yarrow - Based on anecdotal evidence, yarrow tea has been used by European doctors when the main symptom of PMS is spastic pain. Combine 2–3 teaspoons of yarrow flowers with one cup of hot water, then cover and steep for 15 minutes. Drink three to five cups per day beginning two days before PMS symptoms usually commence. In addition, 1–3 cups of the tea added to hot or cold water can be used as a sitz bath.

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