Pre-menstrual syndrome

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<th>Practice points</th>
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<td>• Chaste tree may decrease some symptoms of PMS, especially breast pain or tenderness, oedema, constipation, irritability, mood changes and headache in some women. Recommended to be taken daily as a single dose upon rising, before breakfast, and throughout the menstrual cycle.</td>
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<td>• Vitamin B6 may improve symptoms of PMS such as breast pain or tenderness and depression in some patients. It should not be used in high doses long-term due to possible toxicity</td>
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<td>• Low magnesium is correlated with PMS and supplementation may decrease symptoms. Combination magnesium and B6 may be more effective than magnesium alone</td>
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<td>• Higher blood levels of calcium and magnesium may be associated with less severe PMS symptoms</td>
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<td>• A cyclic constellation of physical, psychological and behavioural symptoms occurring monthly from the late luteal phase of the menstrual cycle to onset of menstruation</td>
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<td>• Aetiology may involve abnormal neurotransmitter responses to normal ovarian function, hormonal imbalances, sodium retention and nutritional deficiencies</td>
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<td>• Common symptoms include irritability, anxiety, headache, depression, breast tenderness, fluid retention, abdominal bloating, and weight gain</td>
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<td>• Up to 90% of women are affected by PMS to varying degrees</td>
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<td>• 20–32% of menstruating women report mild-to-moderate PMS symptoms</td>
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<td>• 3–8% report severe symptoms (premenstrual dysphoric disorder (PMDD))</td>
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<td>• Address the proposed physiologic causes of symptoms (e.g. hormonal imbalance or neurotransmitter response affecting mood)</td>
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<td>• Manage symptoms through nonpharmacologic treatment: dietary changes, lifestyle modifications, appropriate supplementation</td>
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<td>• Pharmacologic treatment (antidepressants) if non-pharmacologic approaches fail to provide adequate benefit</td>
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Complementary medicines

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<td><strong>CHASTE TREE (Vitex agnus-castus)</strong></td>
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Mechanism of action
• May decrease oestrogen levels and increase progesterone levels by inhibiting the release of follicle-stimulating hormone and stimulating of luteinising hormone |
• More recent research suggests vitex may act via neurotransmitters (dopaminergic) and/or opioid receptors to reduce prolactin secretion |

Research
• Several clinical trials have found that vitex may decrease some symptoms of PMS, especially breast pain or tenderness (mastalgia), oedema, constipation, irritability, depressed mood/mood alterations, anger, and headache in some women |
• Results range from being up to twice as effective as placebo to similar to placebo or vitamin B6
In PMDD, vitex extract 20-40 mg/d for 8 weeks may be comparable to fluoxetine 20-40 mg/d. Vitex may be more effective for physical symptoms (breast tenderness, swelling, cramps, food cravings), while fluoxetine may be more effective for psychological symptoms (depression, irritability, insomnia, nervous tension).

Three systematic reviews support vitex in reducing physical PMS and PMDD symptoms and poor mood relative to placebo.

Adverse effects
May cause nausea, acne, allergic reactions, headaches, and dyspepsia.

VITAMIN B6

Mechanism of action
• Role in neurotransmitter biosynthesis (serotonin, dopamine)
• Role in synthesis of prostaglandins and fatty acids

Research
There is some evidence that B6 can improve symptoms of PMS such as breast pain or tenderness (mastalgia) and PMS-related depression in some patients.

A 1999 meta-analysis (9 trials; n=940) found vitamin B6 100 mg/d was significantly better than placebo in relieving overall PMS symptoms and in relieving mood and depression. Continuous vitamin B6 treatment of 50–150 mg/day may be beneficial for some PMS symptoms.

A 2007 RCT (n=160) found vitamin B6 80 mg/d significantly decreased a number of psychological and physical symptoms including moodiness, irritability, anxiety, depression, forgetfulness, teariness, fatigue, sugar cravings, increased appetite and oedema.

Another 2007 controlled trial compared B6 with bromocriptine and found vitamin B6 100 mg/d and bromocriptine were more effective than placebo for reducing the mean premenstrual symptom score after 3 months. B6 had a higher response rate and fewer side effects.

Adverse effects
High doses of vitamin B6 taken over a long period of time may cause peripheral neuropathy. This is unlikely to occur at doses <200 mg/d.

Interactions
• Amiodarone: B6 may increase risk of photosensitivity
• A number of medications may decrease B6 levels and/or increase B6 requirements: antibiotics, hydralazine, isoniazid, L-dopa, oral contraceptives, penicillamine, phenobarbitone, phenytoin and theophylline

Dosage
• Typically found in tablet form
• Dosage range: 100–500 mg/d. Doses of 50-100 mg/d seem to work as effectively as higher doses.

MAGNESIUM (Mg)

Women (20–25y) with PMS may have lower Mg levels and the risk of PMS may correlate with the level of deficiency.

A 2010 randomised controlled trial found that the combination of Mg and vitamin B6 was more effective than Mg or placebo alone in decreasing PMS symptoms.
**REFERENCES**


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**Note on:**

**EVENING PRIMROSE OIL (Oenothera biennis)**

- Most clinical studies show that taking evening primrose oil orally does not relieve symptoms

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**Diet and lifestyle recommendations**

- Premenstrual decreases in caffeine, salt, and refined sugars may help reduce fluid retention, bloating, and weight gain.
- A healthy diet rich in complex carbohydrates may improve dysphoric mood state.
- Increasing dietary calcium and vitamin D intake may help relieve PMS symptoms.
- Cognitive behavioural therapy (including relaxation) may help PMS/PMDD symptoms.
- Acupuncture and massage may improve PMS symptoms.

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**REFERENCES**