

## Herbal Medicine for Women's Health

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### Abstract

The treatments used by most doctors are considered conventional medicine. Complementary and alternative medicine (CAM) consists of a group of health care practices and products that are considered out of the mainstream. An “out-of-the-mainstream” treatment is considered complementary if you use it *along with* conventional medicine. Research shows that 40 percent of women in the United States use some form of CAM. People try CAM for a variety of reasons, including: conventional medicine has not helped solve their medical problem. They believe that products derived from nature are healthier and safer than prescription drugs, even though they may not be. They like the holistic approach taken by CAM therapists. A holistic approach involves paying attention to all of a client’s needs to help her regain and maintain her health. These include not just physical but also emotional, social, and spiritual needs. In this review we summarize some indications of herbal medicine in women's health.

**Keywords:** Herbal Medicine, Menopause, PMS, Women



### **Post natal depression**

The sudden change in hormone levels, coupled with the new responsibilities of motherhood can be an overwhelming time for many. It is important to ensure adequate nutrition, possible nutritional deficiencies and stress management. In a clinic environment some herbs of benefit include: Red Raspberry (*Rubus idaeus*), Motherwort (*Leonurus*), Nettles (*Urtica dioica folia*), Borage (*Borago officinalis*), Skullcap (*Scutellaria lateriflora*), St. John's Wort (*Hypericum perforatum*), Lemon Balm (*Melissa officinalis*) and saffron (*Crocus sativus*) [1-4].

### **Menopause**

Known as the change of life, which generally occurs in women ages 47 to 50 (with a range between ages 40-55). A woman is said to be menopausal when 6-12 months pass without a period. Blood tests can be done to measure levels of Follicle Stimulating Hormone (FSH) and Luteinizing Hormone (LH) and used as a tool to confirm if a woman is within menopausal range, although elevated FSH and LH on blood test results do not 100% guarantee that a woman is menopausal. Theoretically a woman can become pregnant up to one year after her last menstrual cycle [1-4].

### **Herbal Medicine for Menopausal Symptoms**

Optimal nutrition and herbal medicine can play a role in minimizing adverse menopausal symptoms such as hot flushes and night sweats, play a role in prevention of heart disease and osteoporosis, lessen vaginal

dryness and support the nervous system for insomnia, headaches and depression. In particular, a group of foods known as phytoestrogens can assist to balance hormones and lessen menopausal symptoms [1]. Phytoestrogens are plant molecules that have a structurally similar character to human estrogens, but are not hormones; phytoestrogens bind with our bodies' estrogen receptors, creating a balancing effect on hormone levels [1].

Though plant phytoestrogens are not identical to human hormones, they can work by activating our bodies own estrogen receptors and have the ability to act both as estrogen agonists (proestrogen) and estrogen antagonists (anti estrogen). Phyto estrogens are capable of exerting a weak estrogen like effect; thus if the bodies total estrogen is low, as commonly found in menopause, the phyto estrogens will provide a net increase in estrogen in the body. Plant phytoestrogens are also referred to as anti estrogenic, due to their ability to occupy estrogen receptor sites, they lower an excess net effect of circulating estrogen and can compete for binding in our bodies estrogen receptor sites against the more potent synthetic xeno estrogens hot flash [1].

### **Hot Flash**

Hot flashes, which are experienced by as many as 75% of menopausal women in the US, are a result of the body getting overheated and cooling itself down, just like what occurs with intense exercise, however in the perimenopause, hormonal changes trigger the heat rather than running to second base! Hot flashes are typically preceded by the feeling

that one is coming on, followed by the sensation of heat creeping over the face, neck, and upper chest which quickly progresses to a generalized feeling of being overheated. Some women may experience cold sweats, a feeling of insects crawling on their skin, or a feeling of pins and needles instead of or in addition to hot flashes. Women may also become light headed, dizzy or faint from hypotension that can occur during an episode. While hot flashes are not at all dangerous, they can be terribly uncomfortable and cause significant embarrassment depending upon when they occur! Hot flashes typically last from one to several minutes - but to the woman it can feel like it's going on forever! Some women report one or two each day - other women report dozens of hot flashes daily! Clearly there is a theme to the hot flashes, but also a tremendous amount of individual variation in the experience. Night sweats are simply the result of hot flashes with their sweating and cooling phase occurring in a woman's sleep with the wet part often waking her up to drenched linen. In addition to general dietary recommendations to benefit perimenopausal women and minimize discomfort, including regular consumption of whole foods rich in phytoestrogens, herbalists recommend a combination of "cooling" herbs, nervines, and adaptogens as well as other herbs if there are concurrent symptoms (for example, insomnia, irritability, or depression). Adaptogens can play an important role in regulating the sympathetic response, thereby reducing stress as a hot flash trigger, and improving the stress response. Below are several sample of herbal medicine for hot flash [5].

### **Black Cohosh**

(*Actaea racemosa*, *Cimicifuga racemosa*) This herb has received quite a bit of scientific attention for its possible effects on hot flashes. Studies of its effectiveness in reducing hot flashes have produced mixed results. However, some women report that it has helped them. Recent research suggests that black cohosh does not act like estrogen, as once thought. This reduces concerns about its effect on hormone-sensitive tissue (eg, uterus, breast). Black cohosh has had a good safety record over a number of years. There have been reports linking black cohosh to liver problems, and this connection continues to be studied [5].

### **Red Clover**

(*Trifolium pratense*) In five controlled studies, no consistent or conclusive evidence was found that red clover leaf extract reduces hot flashes. As with black cohosh, however, some women claim that red clover has helped them. Studies report few side effects and no serious health problems with use. But studies in animals have raised concerns that red clover might have harmful effects on hormone-sensitive tissue [5].

### **Dong Quai**

(*Angelica sinensis*) Dong quai has been used in Traditional Chinese Medicine to treat gynecologic conditions for more than 1,200 years. Yet only one randomized clinical study of dong quai has been conducted to determine its effects on hot flashes, and this botanical therapy was not found to be useful in reducing them. Some experts on Chinese medicine point out that the preparation studied was not the



same as they use in practice. Dong quai should never be used by women with fibroids or blood-clotting problems such as hemophilia, or by women taking drugs that affect clotting such as warfarin (Coumadin) as bleeding complications can result [5].

### **Ginseng**

(*Panax ginseng* or *Panax quinquefolius*)

Research has shown that ginseng may help with some menopausal symptoms, such as mood symptoms and sleep disturbances, and with one's overall sense of well-being. However, it has not been found to be helpful for hot flashes [5].

### **Kava**

(*Piper methysticum*) Kava may decrease anxiety, but there is no evidence that it decreases hot flashes. It is important to note that kava has been associated with liver disease. The FDA has issued a warning to patients and providers about kava because of its potential to damage the liver. Because of this concern, Health Canada does not allow kava to be sold in Canada [5].

### **Evening Primrose Oil**

(*Oenothera biennis*) This botanical is also promoted to relieve hot flashes. However, the only randomized, placebo-controlled study (in only 56 women) found no benefit over placebo (mock medication). Reported side effects include inflammation, problems with blood clotting and the immune system, nausea, and diarrhea. It has been shown to induce seizures in patients diagnosed with schizophrenia who are taking antipsychotic medication. Evening

primrose oil should not be used with anticoagulants or phenothiazines (a type of psychotherapeutic agent) [6].

### **Premenstrual syndromes**

Premenstrual syndromes (PMS) are among the most common health problems reported by women, affecting 20 - 40% of women of reproductive age. Premenstrual Dysphoric Disorder (PMDD) is a severe subtype of PMS that occurs in 3–8% of women of reproductive age [6]. It is characterized by severe mood and behavioral changes. The hallmark of PMDD is its cyclical luteal-phase-related nature [7]. The etiology of the syndrome is multifactorial and not fully defined. Initially, a great role in the etiology was attributed to decreased levels of progesterone in the luteal phase [2]. There is abundant evidence pointing to changes in serotonergic conductivity in the CNS in PMS/PMDD. Thus, the symptoms of PMS/PMDD are believed to be partly associated with disturbed serotonergic conductivity.

Selective serotonin reuptake inhibitors (SSRIs) are the first-line pharmacological agents for the treatment of premenstrual mood symptoms. A significant body of evidence, including numerous double-blind, randomized studies, supports the effectiveness of SSRIs in reducing both the emotional, as well as physical symptoms, of PMS and PMDD. In general, women respond to low doses of SSRIs, and this treatment response usually occurs rapidly, often within several days [8].

Herbal remedies may have some role in the treatment of premenstrual symptoms. *Ginkgo biloba* was found to improve PMS symptoms,



particularly breast tenderness and fluid retention. Though early evidence suggested that evening primrose oil was a useful treatment of PMS. Evening Primrose oil is a plant oil that contains gamma-linolenic acid, an omega-6 essential fatty acid. Gamma-linolenic acid is involved in the metabolism of hormone-like substances called prostaglandins that regulate pain and inflammation in the body [6-8]. Nevertheless, a recent review of studies found that it was no more effective than placebo. Other botanical remedies used clinically but which require further investigation include black cohosh, St. John's Wort and Kava Kava [6-8].

#### **Saffron (*Crocus sativus*)**

A number of recent experimental studies and clinical trials have been indicated that saffron is effective in the treatment of mild to moderate depression [2, 3, 9-12]. It has been suggested that serotonergic mechanism is involved in the antidepressant effect of saffron. As a therapeutically plant, saffron (dried stigma of *Crocus sativus* L. that belongs to the Iridaceae family) is considered an

excellent stomach ailment and an antispasmodic, helps digestion and increases appetite [9-12]. It also relieves renal colic, reduces stomachaches and relieves tension and is effective in the treatment of Alzheimer's disease [13-15]. Recent studies indicate its potential as an anti cancer agent and memory enhancer [13-15]. A recent double blind randomized clinical trial suggests that saffron is effective in the treatment of PMS symptoms [16]. In this small preliminary double-blind and placebo controlled randomized trial, stigma of *Crocus sativus* was found to be effective in relieving symptoms of PMS. The clinical relevance of this finding was emphasized by the improvements seen in the Total Premenstrual Daily Symptoms and the Hamilton Depression Rating Scale [16].

#### **Conclusion**

In conclusion, the clinical trial like conventional therapy [17-22] should confirm the efficacy of herbal medicine in women's health.

#### **References**

1. Akhondzadeh S. Herbal medicine in the treatment of psychiatric and neurological Disorders. In *Low cost approaches to promote physical and mental health: theory research and practice*, edited by L. L'Abate, 2007, 119-38. New York: Springer.
2. Akhondzadeh S, Fallah-Pour H, Afkham K, Jamshidi AH and Khalighi-Cigaroudi F. Comparison of *Crocus sativus* L. and imipramine in the treatment of mild to moderate depression: a pilot double-blind randomized trial [ISRCTN45683816]. *BMC*



*Comp. Alt. Med.* 2004; 4: 12.

3. Akhondzadeh S, Tamacebi-pour N, Noorbala AA, Amini H, Fallah Pour H, Jamshidi AH and Khani M. *Crocus sativus* L. in the treatment of mild to moderate depression: A double-blind, randomized and placebo controlled trial. *Phytother. Res.* 2005; 19: 25 - 9.

4. Hosseinzadeh H and Sadeghnia HR. Safranal, a constituent of *Crocus sativus* (saffron), attenuated cerebral ischemia induced oxidative damage in rat hippocampus. *J. Pharm. Pharm. Sci.* 2005; 8 (3): 394 - 9.

5. Kraemer GR and Kraemer RR. Premenstrual syndrome: diagnosis and treatment experiences. *J. Wom. Health* 1998; 7: 893 -907.

6. Halbreich U, Borenstein J, Pearlstein T and Kahn L. The prevalence, impairment, impact, and burden of premenstrual dysphoric disorder (PMS/PMDD). *Psychoneuroendocrinol.* 2003; 28 (Suppl. 3): 1 - 23.

7. Andrus GM. Recent and future advances in the treatment of PMS, PMDD and menopause. *Drugs* 2001; 4: 1341 - 73.

8. Stevinson C and Ernst E. Complementary/alternative therapies for premenstrual syndrome: a systematic review

of randomized controlled trials. *Am. J. Obstet. Gynecol.* 2001; 185: 227 - 235.

9. Akhondzadeh Basti A, Moshiri E, Noorbala AA, Jamshidi AH, Abbasi SH and Akhondzadeh S. Comparison of petal of *Crocus sativus* L. and fluoxetine in the treatment of depressed outpatients: a pilot double-blind randomized trial. *Prog Neuropsychopharmacol. Biol. Psychiatry* 2007; 31: 439 - 42.

10. Modabbernia A, Sohrabi H, Nasehi AA, Raisi F, Saroukhani S, Jamshidi A, Tabrizi M, Ashrafi M and Akhondzadeh S. Effect of saffron on fluoxetine-induced sexual impairment in men: randomized double-blind placebo-controlled trial. *Psychopharmacol.* 2012; 223 (4): 381 - 8

11. Moshiri E, Basti AA, Noorbala AA, Jamshidi AH, Hesameddin Abbasi S and Akhondzadeh S. *Crocus sativus* L. (petal) in the treatment of mild-to-moderate depression: a double-blind, randomized and placebo controlled trial. *Phytomedicine* 2006; 13: 607 - 11. 16979327.

12. Akhondzadeh Basti A, Moshiri E, Noorbala AA, Jamshidi AH, Abbasi SH and Akhondzadeh S. Comparison of petal of *Crocus sativus* L. and fluoxetine in the treatment of depressed outpatients: a pilot double-blind randomized trial. *Prog.*



*Neuropsychopharmacol Biol Psychiatry* 2007; 31: 439 - 42.

**13.** Akhondzadeh S, Sabet MS, Harirchian MH, Togha M, Cheraghmakani H, Razeghi S, Hejazi SSH, Yousefi MH, Alimardani R, Jamshidi A, Zare F and Moradi A. Saffron in the treatment of patients with mild to moderate Alzheimer's disease: a 16-week, randomized and placebo-controlled trial. *J. Clin. Pharm. Ther.* 2010; 35: 581 - 8.

**14.** Akhondzadeh S, Shafiee Sabet M, Harirchian MH, Togha M, Cheraghmakani H, Razeghi S, Hejazi SSH, Yousefi MH, Alimardani R, Jamshidi A, Rezazadeh SA, Yousefi A, Zare F, Moradi A and Vossoughi A. A 22-week, multicenter, randomized, double blind controlled trial of *Crocus sativus* in the treatment of mild-to-moderate Alzheimer's disease. *Psychopharmacology (Berl)* 2010; 207: 637 - 43.

**15.** Farokhnia M, Shafiee Sabet M, Iranpour N, Gougol A, Yekehtaz H, Alimardani R, Farsad F, Kamalipour M and Akhondzadeh S. Comparing the efficacy and safety of *Crocus sativus* L. with memantine in patients with moderate to severe Alzheimer's disease: a double-blind randomized clinical trial. *Hum. Psychopharmacol.* 2014; 29 (4): 351 - 9.

**16.** Agha-Hosseini M, Kashani L, Aleyaseen A, Ghoreishi A, Rahmanpour H, Zarrinara AR and Akhondzadeh S. *Crocus sativus* L. (saffron) in the treatment of premenstrual syndrome: a double-blind, randomised and placebo-controlled trial. *BJOG.* 2008; 115 (4): 515 - 9.

**17.** Kashani L, Raisi F, Saroukhani S, Sohrabi H, Modabbernia A, Nasehi AA, Jamshidi A, Ashrafi M, Mansouri P, Ghaeli P and Akhondzadeh S. Saffron for treatment of fluoxetine-induced sexual dysfunction in women: randomized double-blind placebo-controlled study. *Hum. Psychopharmacol.* 2013; 28 (1): 54 - 60.

**18.** Akhondzadeh S, Ahmadi-Abhari SA, Assadi SM, Shabestari OL, Kashani AR and Farzanehgan ZM. Double-blind randomized controlled trial of baclofen vs. clonidine in the treatment of opiates withdrawal. *J. Clin. Pharm. Ther.* 2000; 25 (5): 347 - 53.

**19.** Ghaleiha A, Entezari N, Modabbernia A, Najand B, Askari N, Tabrizi M, Ashrafi M, Hajiaghaee R and Akhondzadeh S. Memantine add-on in moderate to severe obsessive-compulsive disorder: randomized double-blind placebo-controlled study. *J. Psychiatr. Res.* 2013; 47 (2): 175 - 80.

**20.** Modabbernia A, Rezaei F, Salehi B,



Jafarinia M, Ashrafi M, Tabrizi M, Hosseini SM, Tajdini M, Ghaleiha A and Akhondzadeh S. Intranasal oxytocin as an adjunct to risperidone in patients with schizophrenia : an 8-week, randomized, double-blind, placebo-controlled study. *CNS Drugs* 2013; 27 (1): 57 - 65.

**21.** Akhondzadeh S, Fallah J, Mohammadi MR, Imani R, Mohammadi M, Salehi B, Ghanizadeh A, Raznahan M, Mohebibi-Rasa

S, Rezazadeh SA and Forghani S. Double-blind placebo-controlled trial of pentoxifylline added to risperidone: effects on aberrant behavior in children with autism. *Prog. Neuropsychopharmacol. Biol. Psychiatry*. 2010; 34 (1): 32 - 6.

**22.** Akhondzadeh S. The 5-HT hypothesis of schizophrenia. *IDrugs*. 2001; 4 (3): 295 - 300.

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