

Herbs for the Treatment of the Symptoms of Menopause

Wild Yam

The root and rhizome of *Dioscorea villosa* has traditionally been used to treat spasmodic conditions of the female reproductive tract. Research conducted by MediHerb, in conjunction with the University of Queensland, has found that root and rhizome of *Dioscorea villosa* contains only a small amount of the steroidal saponin dioscin. It does however contain other steroidal saponins (methylparvifloside, methylprotodeltonin, glucosidodeltonin and deltonin which are glycosides of diosgenin).¹ Commercially available 'wild yam' extracts may be species other than *Dioscorea villosa*, and may be standardised to diosgenin – the aglycone of dioscin – rather than to the steroidal saponin as expected. These extracts may be the Chinese yam, *Dioscorea opposita*, and may not contain the full spectrum of phytochemicals expected from a good quality herbal extract, or provide the therapeutic activity of Wild Yam (*Dioscorea villosa*).

Wild Yam is popularly, yet incorrectly, accredited with providing progesterogenic activity. Diosgenin, the aglycone of dioscin, is not metabolised in the body to produce progesterone.² Very low levels of progesterone were found in saliva of women taking Wild Yam products, and Wild Yam appeared to suppress progesterone synthesis.³ Diosgenin demonstrated oestrogenic properties, but lacked progesterogenic effects, in an experimental model after subcutaneous administration.⁴ This emphasises the possibility that Wild Yam is in fact oestrogenic (*see below*).

Mechanism of Action

Steroidal saponins may exert oestrogenic effects by binding with oestrogen receptors of the hypothalamus (part of the negative feedback mechanism of oestrogen control). Hence, in the low oestrogen environment of peri- and postmenopause, Wild Yam may alleviate symptoms of oestrogen withdrawal. (The selective binding may reduce the hypothalamus-mediated symptoms by convincing the body that more oestrogen is present in the bloodstream than actually is.)

Black Cohosh

Cimicifuga racemosa (*Actaea racemosa*) root and rhizome has been used traditionally to treat female reproductive

disorders such as dysmenorrhoea, amenorrhoea and ovarian pain. It is also regarded as antirheumatic, of benefit in myalgia and arthritis.^{5,6}

Black Cohosh rhizome/root contains triterpene glycosides, in particular 27-deoxyactein (23-epi-26-deoxyactein). This compound is commonly used as a marker compound for calculating the total triterpene content in commercial preparations.⁷

Clinical Studies

Black Cohosh preparations have been extensively used and clinically investigated. Not all the trial results have been convincing. This may be partly due to poor trial design, including small sample size⁸ and a variation in the dosage evaluated. Many trials have used a dosage of extract equivalent to 40 mg/day of dried root, a dosage low in comparison to that recommended in the *British Herbal Pharmacopoeia* 1983 (0.9–6 g/day dried root and rhizome).

A review published in 2008 found 10 randomised controlled trials for the use of Black Cohosh to relieve menopausal problems. Trials with women suffering medically-induced menopause (e.g. breast cancer survivors and/or those taking tamoxifen) were excluded. A summary of the main findings from these trials is listed in Table 1.⁸

Of randomised controlled trials conducted since this review, two have found that Black Cohosh significantly improved menopausal symptoms in healthy women,^{13,14} and three trials found no effect.¹⁵⁻¹⁷ In an observational study, Black Cohosh improved quality of life in postmenopausal women with elevated body weight.¹⁸

Until March 2007 there had been three randomised controlled trials assessing the efficacy of Black Cohosh among breast cancer survivors, patients or women with a perceived increased risk of breast cancer. The herb significantly reduced hot flushes (1 trial, 12 months), had no effect (1 trial, 4 weeks) and had no significant improvement in menopause symptoms, except sweating (1 trial, 60 days).¹⁹

Six randomised, double-blind, controlled trials ⁸
<ul style="list-style-type: none"> Black Cohosh improved all parameters compared with placebo (dried herb equivalent unknown, 3 months). Black Cohosh was better than placebo, but some outcomes did not reach statistical significance (40 mg/day of dried root, 3 months). Black Cohosh was significantly better than placebo. Women in early menopause had the most benefit (40 mg/day of dried root, 3 months). Subgroup analyses of severely affected or perimenopausal patients showed significant benefits (42 mg/day of dried root, 3 months). Significant benefit found only for night sweats (standardised extract providing 5 mg/day of triterpene glycosides, 12 months). Benefit for Black Cohosh was similar to that of the drug tibolone (40 mg/day of dried root, 3 months).
Four randomised, controlled trials (not double-blind)
<ul style="list-style-type: none"> Benefit for Black Cohosh was similar to that of oestrogen for vasomotor symptoms, and better than diazepam for psychological symptoms (dried herb equivalent unknown, 12 weeks).⁹ Benefit for Black Cohosh was similar to that of hormone treatments (dried herb equivalent unknown, 24 weeks).¹⁰ Benefit for Black Cohosh was similar to that of low-dose transdermal oestradiol (40 mg/day of dried root, 3 months).¹¹ Black Cohosh was more effective than fluoxetine for treating hot flushes and night sweats (dried herb equivalent unknown, 6 months).¹²
Table 1. Randomised controlled trials to December 2007 of Black Cohosh for treatment of menopausal symptoms in healthy women.

Safety

Many clinical studies have confirmed that Black Cohosh does not have an adverse (oestrogenic) effect on endometrial or breast tissue.^{14,15,20-24} Two retrospective studies found that Black Cohosh demonstrated a breast cancer protective effect.^{25,26} In a postmarketing surveillance study, no tumour recurrence was noted after 6 months' treatment with Black Cohosh in breast cancer patients treated with tamoxifen.²⁷

Although some cases of suspected hepatotoxicity have been reported for Black Cohosh, rigorous diagnostic assessment in 2009 of this data found no evidence for a

causal relationship between treatment with Black Cohosh and liver disease.^{28,29} Even an earlier, less rigorous analysis found no cases of probable or certain causality.³⁰ A meta-analysis of 5 randomised, controlled trials did not detect any significant difference between those treated with Black Cohosh and controls regarding abnormality of liver function. In these trials liver function parameters were measured.³¹

St John's Wort

The aerial parts of *Hypericum perforatum* have traditionally been used as a nervine tonic, particularly in the treatment of menopausal neurosis, excitability and nervous conditions with depression.^{5,6}

Clinical studies have found St John's Wort extract to be beneficial for the treatment of menopause (*see Table 2 for details*).

Four clinical studies have investigated the use of St John's Wort and Black Cohosh combined. Placebo-controlled trials found the combination to be effective in reducing menopausal symptoms, including the psychological component.³⁶⁻³⁸ An observational study found the combination was superior to Black Cohosh alone in alleviating menopausal mood symptoms.³⁹

Shatavari

Asparagus racemosus root is regarded in Ayurveda as an aphrodisiac and a female reproductive tonic with a rejuvenative action. Shatavari is traditionally said 'to give the capacity to have a hundred husbands'. In addition to promoting conception it has been used for the treatment of menopause. It is an effective demulcent for dry and inflamed membranes of the lungs, stomach, kidney and sexual organs,⁴⁰ hence it may be of benefit for the treatment of vaginal dryness in menopause.

Shatavari is also regarded as a remedy from the *rasayana* group, meaning it may strengthen or promote the health of all tissues of the body.⁴¹

Trial Details	Results	Ref
randomised, double-blind, placebo-controlled; standardised extract providing 2.7 mg/day of hypericin; 12 weeks	<ul style="list-style-type: none"> better menopause-specific quality of life and fewer sleep problems significantly more women receiving herbal treatment experienced a 30% decrease in the number of hot flushes 	32
randomised, double-blind, placebo-controlled; standardised extract in solution, 60 drops/day‡; 8 weeks	<ul style="list-style-type: none"> decreased frequency and severity of hot flushes (significant difference between herbal and placebo groups found at weeks 4 and 8) decreased duration of hot flushes (significant difference at week 8 only) 	33
observational study; standardised extract providing 0.9 mg/day of hypericin; 12 weeks	<ul style="list-style-type: none"> psychological and vasomotor symptoms improved significantly from baseline, as early as week 5 sexual well being, including for example, libido improved 	34

Table 2. Clinical studies of standardised St John's Wort extract for the treatment of menopause.

Notes: ‡ The number of drops per mL of a herbal liquid extract/solution depends on the alcohol content and the bore size of the dropper, and can range from about 30 to 60 drops per mL.³⁵ This equates to a dosage of about 0.2–0.4 mg/day of hypericin.

Shatavari root contains steroidal saponins,⁴² which support a subtle oestrogen modulating activity.

Korean Ginseng

In western herbal medicine, *Panax ginseng* root is used as an adaptogen and tonic indicated for physical or mental exhaustion and depressive states associated with sexual inadequacy.⁵ Korean Ginseng is highly regarded in traditional Chinese medicine (TCM) as a tonic and restorative, to calm the nerves, to improve libido and is useful in fatigue and debility.^{43,44}

An uncontrolled trial found treatment with standardised Korean Ginseng extract improved symptoms such as general health, depression, insomnia, headache and fatigue in women with menopausal symptoms including some who had had hysterectomies.⁴⁵ In a randomised, double-blind, placebo-controlled trial, postmenopausal women reported improvement in quality of life measures, including depression and well being, after treatment with standardised Korean ginseng extract.⁴⁶ This extract has been defined in other publications. The dosage in both trials was equivalent to 1 g/day of root providing 8 mg/day of ginsenosides.

A beneficial effect on quality of life for Korean Ginseng was measured after 4 months' treatment in patients under increased mental or physical stress or with fatigue. The large, randomised trial compared the extract plus vitamins and minerals to those taking vitamins and minerals alone. The age of participants ranged from 16 to 73 years.⁴⁷ The dosage of Korean Ginseng extract was equivalent to about 0.2 g/day of dried root.

Sage

Traditionally *Salvia officinalis* has been used to restrain excessive sweats and for debility of the nervous system including nervous exhaustion.^{5,6,48} *Salvia officinalis* reduced sweat production in patients with hyperhidrosis (excessive sweating) in a number of open studies.⁴⁹ The therapeutic uses of *Salvia officinalis* are likely apply to *Salvia fruticosa*.⁵⁰

Supportive Formulation

These herbs would complement each other in a very potent formulation to support the physiological and psychological changes before and during menopause.

Indications

- Menopausal symptoms, especially hot flushes and night sweating.
- To improve mental performance, mood and well being during menopause.
- Disorders of the female reproductive tract including poor libido and leukorrhoea.

Cautions and Contraindications

Contraindicated in pregnancy. Although clinical trials show an adverse oestrogenic effect is unlikely, Black Cohosh is best avoided patients with oestrogen-dependent tumours such as breast cancer. Caution in patients with pre-existing cholestasis or known photosensitivity. St John's Wort may interact with prescribed medications. Caution is advised in patients with liver problems, who frequently use alcohol or take any medications.

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