

# Black cohosh

(black snakeroot, *Cimicifuga racemosa* (L.) Nutt., *Actaea racemosa* L.)

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**PREPARATIONS:** The rhizome and root are the parts used medicinally. Extracts of black cohosh rhizome/root are available in several dose forms, including capsules, tablets and tinctures. Chopped or powdered forms of the dried material are also available. Several products marketed as dietary supplements containing black cohosh are available on the New Zealand market.

**ACTIVE CONSTITUENTS:** The triterpene glycoside constituents (e.g. actein, 23-epi-26-deoxyactein, cimicifugoside, cimigenol, cimicifugosides J-M) may be important for activity; a mechanism of action has not yet been established.

**MAIN USES:** Black cohosh has a history of traditional use for musculoskeletal pain, fever, cough and a range of other disorders. Contemporary interest is focussed on its use in treating peri- and post-menopausal symptoms. Extracts of black cohosh are also included in some multi-herbal-ingredient products formulated for the treatment of mild depression and osteo- or rheumatoid arthritis.

**EVIDENCE FOR EFFICACY:** Several randomised controlled trials have assessed the effects of preparations containing black cohosh extracts in women with peri- or post-menopausal symptoms. Some have reported beneficial effects on certain primary outcome variables, particularly hot flushes and sweating, but the evidence is not conclusive.

## Summary Message

Evidence for the efficacy of black cohosh extracts for treatment of menopausal symptoms is inconclusive. Black cohosh extracts have been associated with hepatotoxic reactions including changes in liver function test values, hepatitis, jaundice and hepatic failure. Health professionals should be aware of the possibility of (undisclosed) use of black cohosh, particularly among patients of menopausal age, be vigilant to signs of liver injury in patients using black cohosh, inform users of black cohosh about the possibility of hepatotoxic reactions and signs and symptoms of liver injury. Suspected adverse drug reactions should be reported to CARM.

As with all herbal medicines, different black cohosh products vary in their pharmaceutical quality, and the implications of this for efficacy and safety should be considered.

A systematic review, conducted in December 2007, of six randomised, double-blind, controlled trials of preparations containing black cohosh extracts and involving a total of 1112 women with peri- or post-menopausal symptoms concluded that the efficacy of black cohosh in this indication is uncertain. Five of the trials included a placebo-control arm, and four included some form of conventional treatment (e.g. conjugated oestrogens around 0.6mg daily, tibolone 2.5mg daily).

A Cochrane systematic review of black cohosh for menopausal symptoms is in preparation.

**ADVERSE EFFECTS:** Over the last five years, spontaneous reports of suspected hepatotoxic

Herbal medicines are a popular health care choice, but few have been tested to contemporary standards. **CHARMS & HARMS** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.

effects associated with the use of black cohosh preparations have emerged. The reports describe various reactions, including changes in liver function test values, hepatitis, jaundice and, in a small number of cases, hepatic failure requiring liver transplantation. There is a New Zealand case report of hepatic necrosis in a 53-year-old woman taking black cohosh and nitrofurantoin. Causality has not been established in all cases.

Individuals who have previously experienced liver disorders should only take black cohosh preparations with caution. Individuals who develop signs and symptoms suggestive of liver injury (tiredness, loss of appetite, yellowing of skin and eyes, severe upper stomach pain with nausea and vomiting, dark urine) should stop taking black cohosh and consult their doctor urgently.

There is conflicting information regarding oestrogenic activity of constituents of black cohosh, with more recent data indicating a lack of oestrogenic activity. However, a draft monograph on black cohosh produced by the Herbal Medicinal Products Committee of the European Medicines Agency advises that black cohosh preparations should not be used concurrently with oestrogens unless recommended by a doctor, that individuals should consult a doctor if vaginal bleeding occurs, or if unclear or new symptoms emerge, and that individuals who have undergone or are undergoing treatment for breast cancer or other tumours should not use black cohosh.

Skin reactions (e.g. urticaria), facial and peripheral oedema, and gastrointestinal symptoms have also been reported in association with black cohosh. The frequencies of adverse effects associated with black cohosh are unknown.

Health professionals are reminded to report suspected adverse reactions associated with all medicines, including vaccines and complementary medicines, to the Centre for Adverse Reactions Monitoring (<http://carm.otago.ac.nz>).

**DRUG INTERACTIONS:** There are no reported drug interactions for black cohosh. Drug interaction studies involving healthy volunteers who received black cohosh extracts have indicated that the black cohosh extracts tested did not appear to

have pharmacokinetic interactions with caffeine, chlorzoxazone, digoxin and midazolam.

There is very limited evidence from an in vitro (murine cells) study that very high concentrations of black cohosh may reduce the cytotoxicity of cisplatin, and potentiate the effects of docetaxel and doxorubicin; these findings require confirmation in further studies.

### Key references

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