
Efficacy of black cohosh-containing preparations on menopausal symptoms: a meta-analysis

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CRD summary

This review concluded that black cohosh may reduce the frequency of vasomotor symptoms associated with menopause and that more studies were warranted on its effectiveness and safety. The authors' conclusions appeared to reflect the evidence, but given the likelihood of biases in identifying relevant studies it was difficult to verify these conclusions.

Authors' objectives

To investigate the efficacy of preparations containing black cohosh on reduction of vasomotor symptoms associated with menopause.

Searching

English-language studies were identified through a search of PubMed, EMBASE and The Cochrane Library to January 2008. Search terms were reported. Reference lists of identified studies were searched.

Study selection

Randomised controlled trials (RCTs) of preparations that contained black cohosh compared with placebo in perimenopausal or postmenopausal women were eligible for inclusion. Trials were required to report the primary outcome of frequency of vasomotor symptoms. Studies conducted exclusively in women with a history of breast cancer were excluded.

More than half of the included studies administered black cohosh (20mg to 160mg) in combination with other products that included St John's wort, dong quai root, milk thistle extract, red clover flower extract, ginseng, chaste-tree berry fruit extract, isoflavones, lignans, soy extract, primrose oil, vitamin D, vitamin E and calcium.

Included studies used different scales to quantify the frequency of vasomotor symptoms. These included Kupperman index, Menopausal Rating Scale, Menopausal Rating Score I, Menstrual Rating Score and number of hot flushes.

The average age of women ranged from 50.5 to 59 years. All included studies excluded patients with a history of hormone-dependent cancer and/or previous use of hormones unless followed by a washout period.

Two reviewers independently selected studies for inclusion.

Assessment of study quality

Methodological quality was assessed by two independent reviewers using the five-point Jadad scale of randomisation, blinding and withdrawals. Studies were considered high quality if they scored at least 3. Disagreements were resolved through discussions with a third reviewer.

Data extraction

For each study two independent reviewers extracted data on the change in proportion of participants with symptoms from baseline to 12 weeks. The rate difference was calculated as the difference between proportions for the black cohosh group compared to placebo groups, with a standard error. If these data were calculated if they were not reported.

Methods of synthesis

The pooled rate difference and corresponding 95% confidence intervals (CI) were calculated using a fixed-effect meta-analysis where there was no evidence of statistical heterogeneity; a random-effects model was used if statistically significant heterogeneity was observed. Statistical heterogeneity was assessed using a χ^2 test. Sensitivity analyses were conducted to test the influence of trials that used black cohosh alone and studies that used black cohosh in conjunction with other products.

Results of the review

Nine trials (more than 1,400 participants) were included in the review. Overall study quality was good; six trials received a score of more than 3 and were considered good quality; the other three trials scored 3.

Preparations that contained black cohosh improved symptoms overall by 26% (95% CI 11% to 40%) compared to placebo in seven trials. Significant heterogeneity was detected.

Five trials that used black cohosh in combination with other products improved symptoms by 41% (95% CI 20% to 62%). Two of these trials administered St John's wort combined with black cohosh and improved symptoms by 33% (95% CI 24% to 42%). Two trials used black cohosh alone compared to placebo and found improvement in symptoms in the black cohosh group by 11% (95% CI 1% to 20%).

The reported side effects were no different between black cohosh and placebo groups.

Authors' conclusions

Results were consistent with previous reviews that suggested a benefit of black cohosh in reducing the frequency of vasomotor symptoms.

CRD commentary

This review addressed a clear question supported by appropriate inclusion criteria. Relevant databases were searched. The authors reported that the likelihood was that fewer complementary and alternative medicine trials with positive outcomes were published in mainstream journals and states that this likely contributed to publication bias in this review (which was not investigated). Language was restricted to English and may have caused language bias. The authors reported that they did not make attempts to identify unpublished data.

Suitable methods were used throughout the review process to minimise the risks of reviewer error and bias. Validity was assessed appropriately. Results were appropriately pooled using meta-analysis. Heterogeneity was assessed.

The authors' conclusions appeared to reflect the evidence, but given the likelihood of biases in identifying relevant studies it was difficult to verify these conclusions.

Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that more data were required on the efficacy and safety of black cohosh.

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