

PubMed



Display Settings: Abstract



[J Ethnopharmacol.](#) 2011 Oct 31;138(1):156-61. doi: 10.1016/j.jep.2011.08.076. Epub 2011 Sep 8.

## Effects of an isopropanolic-aqueous black cohosh extract on central body temperature of ovariectomized rats.

[Ma X](#), [Zhang H](#), [Wang K](#), [Yang L](#), [Qin L](#), [Bai W](#), [Guan Y](#), [Jia J](#), [Kang J](#), [Zhou C](#).

Department of Gynecology, The First Hospital of Peking University, Beijing, China.

### Abstract

**ETHNOPHARMACOLOGICAL RELEVANCE:** Black cohosh (*Cimicifuga racemosa*) is widely used in menopause symptoms strategy.

**AIM OF THE STUDY:** The aim of this study was to examine the effect of **isopropanolic** black cohosh extract (iCR) on the central body temperature (CBT) of ovariectomized rats (OVX) and elaborate its possible effects in alleviating menopause related hot flushes.

**MATERIALS AND METHODS:** 64 female Sprague-Dawley rats, weighing  $230 \pm 10$ g and aged 6-8 weeks, were divided into four groups: ovariectomy (OVX), sham, ovariectomy plus **estradiol** valerate (OVX+E), and ovariectomy plus iCR (OVX+ICR). The sham group underwent a sham surgery without ovariectomies, while the other three groups underwent bilateral ovariectomies under sterile conditions and a temperature implant was embedded in the abdominal cavity of all four groups. After 2-week recovery period, the temperature of all animals was monitored for 6 weeks.

**RESULTS:** CBT of four groups maintained a normal circadian rhythm, with a low day CBT and a high night CBT. CBTs of the sham group were lower than that of the other three groups. The day CBTs of the (OVX+E) group and (OVX+ICR) group were lower than that of the OVX group from day 2 and day 22 respectively. For the difference between day and night CBT, the sham group was smallest, while (OVX+E) and (OVX+ICR) groups were higher than that of OVX group. The amplitude of day and night CBT, CBT fluctuation frequency at 5 min intervals, were higher for the OVX group than the sham group; the amplitude of day and night CBT of (OVX+E) group and the amplitude of night CBT of (OVX+ICR) group were higher than those of OVX group; while the amplitude of day CBT of (OVX+ICR) group was lower than that of OVX group; CBT fluctuation frequency at 5 min intervals was higher for the (OVX+E) and (OVX+ICR) groups than the OVX group.

**CONCLUSIONS:** Ovariectomized rats had abnormal thermoregulation, demonstrating an increase in day and night CBT, greater difference between day and night CBT, higher amplitude of day and night CBT, and more CBT fluctuation frequency. For the herbal extract iCR, the onset of affecting abnormal thermoregulation took longer than that of **estradiol** valerate. ICR had a significant effect on day CBT but was only little effective on night CBT of ovariectomized rats.

Copyright © 2011 Elsevier Ireland Ltd. All rights reserved.

PMID: 21924343 [PubMed - indexed for MEDLINE]

## **Publication Types, MeSH Terms, Substances**

**LinkOut - more resources**