Abstract

Title: The Effect of Soy Isoflavones on Blood Pressure in Postmenopausal Women

Author: Cecilia Assarsson & Camilla Hansson

Supervisor: Andrea Mikkelsen

Examiner: Anna Winkvist

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Background: During menopause the production of estrogen in women gradually decreases. This increases the risk of hypertension which in turn can cause cardiovascular disease. Hormone replacement therapy has been shown to cause breast cancer which has sparked an interest in soy isoflavones and their estrogen like properties.

Objective: The objective of this systematic review was to examine the scientific evidence regarding the effect of supplementation with soy isoflavones on blood pressure in postmenopausal women.

Search strategy: Searches were conducted in two data bases, PubMed and Scopus, to cover as much as possible of the existing scientific evidence that was relevant for the objective. Following words and MeSH terms were used: blood pressure, hypertension, soy isoflavones, isoflavone supplement, menopause, postmenopause, postmenopausal women and climacteric.

Selection criteria: Inclusion criteria were randomized controlled trials in English or Swedish, postmenopausal women whose last menstruation occurred at least twelve months prior and studies examining the effect of soy isoflavones on blood pressure. Exclusion criteria were diseases other than untreated hypertension and combination therapy. The outcome measures were systolic and diastolic blood pressure.

Data collection and analysis: Five studies were included and critically reviewed with SBU’s guide for randomized studies. Grading of the evidence were made according to GRADE.

Main results: Four of the studies did not show a decrease in SBP in the intervention groups compared to the control groups. Only one study showed a significant decrease in SBP. For the outcome measure DBP there was no significant difference between the intervention and control group in either of the studies.

Conclusions: There is moderate (+++) evidence that supplementation with soy isoflavones does not lower SBP in postmenopausal women. Regarding supplementation with soy isoflavones on DBP, there is strong (++++) evidence that it does not have any lowering effect on blood pressure.

Keywords: blood pressure, hypertension, soy isoflavones, phytoestrogens, menopause, postmenopausal women