Abstract

Title: Effects on risk markers for cardiovascular disease when replacing meat with soy foods.

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Background There are 1.4 million people suffering from cardiovascular disease (CVD) in Sweden, which is also the most common cause of death in the country. Studies have shown that properties in soy could have a positive effect on known risk markers for CVD. High consumption of fresh and processed meats has been shown to have negative health effects, and to increase the risk for CVD.

Objective The objective of this study was to explore if there are grounds for recommending a replacement of meat with soy foods to lower risks of cardiovascular disease.

Search strategy The databases PubMed and Scopus were used to search for articles (Last search date: 2016-02-10) containing the search terms: cardiovascular, soy, meat, soy foods, soybean proteins, lipoproteins, dyslipidemias, hypertension, insulin resistance, metabolic syndrome, lipids and randomized

Selection criteria Studies that were randomized controlled trials (RCT) who compared intake of soy foods with meat were included. Only articles written in either Swedish or English were included. Study subjects were men and women over the age of 18 who had maintained the same weight and level of physical activity during the course of the study.

Data collection and analysis Three studies met the inclusion criteria. We first examined them using Swedish Agency for Health Technology Assessment and Assessment of Social Services’ (SBU) template “Evaluation of randomized controlled trials” and later compiled and evaluated each composite outcome according to the GRADE-system.

Main results All studies show a significant decrease on overall cholesterol levels when meats are replaced with soy foods. More specifically, the studies show a decrease of LDL-cholesterol in postmenopausal women and a significant decrease of HDL-cholesterol and triglycerides in men. The results for insulin sensitivity were heterogeneous and a significant improvement in insulin sensitivity in women with metabolic syndrome was observed.
Conclusions According to our findings, the risk of developing a CVD seem to decrease when replacing meats with soy foods. Evidence in composite outcomes varies, why, more studies are needed.

Keywords Cardiovascular disease, metabolic syndrome, insulin resistance, hypertension, dyslipidemia, soy, meat