

SOY AND WOMEN'S HEALTH

SOY AND BREAST CANCER

Please refer to the section [Soy and Cancer](#)

SOY AND MENOPAUSE

One of the characteristic symptoms of menopause is the hot flash, yet the incidence of this symptom varies widely around the globe. As in the case for heart disease, many Asian women do not experience this symptom with the same frequency as Western women during the menopausal years.

Chinese women for example experience hot flashes at an incidence level of 18%¹ while their Singaporean counterparts have an incidence of 14%². On the other hand 70-80% of western women experience hot flashes during menopause¹.

Since soy contains phytoestrogens, it has been proposed that it might be useful in the management of hot flashes in post-menopausal women.

How does soy improve the symptoms of menopause?

Dr. Alice Murkies and colleagues³ from Brighton Medical Clinic in Australia compared the effects of supplementation with soy flour versus wheat flour on the number of hot flashes experienced in a group of post-menopausal women. The number of hot flashes experienced by the women receiving soy flour decreased significantly within six weeks. After 12 weeks, the number of hot flashes had significantly decreased by 45% in the women receiving soy flour and by 25% in the women receiving wheat flour.

Dr. Amnon Brzezinski at the Hedassah Medical Centre in Israel⁴ examined the effects of a standard diet compared to a phytoestrogen-rich diet on menopausal symptoms. One quarter of the total daily calorie intake was replaced with phytoestrogen-rich foods (including tofu, soy drink, tempeh and flaxseed). The women consuming both the standard diet and phytoestrogen-rich diet experienced an improvement in their total scores of menopausal symptoms. However, the women consuming the phytoestrogen-rich diet experienced a 55% reduction in the number of hot flashes compared to the women on the standard diet, where the number of hot flashes was significantly decreased by 35%.

Dr. Paola Albertazzi and colleagues⁵ at the University of Ferrara in Italy reported that symptomatic women (experiencing more than seven hot flashes per day) consuming 40 grams per day of soy protein with its naturally occurring isoflavones had significantly fewer hot flashes than those consuming the non-soy (casein - milk protein) control. The number of hot flashes decreased significantly after two weeks on soy treatment. By 12 weeks of treatment, the number of hot flashes had decreased by 45% with soy treatment compared to the start of the study. The women receiving the non-soy control also experienced a significant 30% decrease in the number of hot flashes after 12 weeks reflecting a strong placebo effect.

Dr. Scott Washburn and colleagues⁶ from Wake Forest University, USA, compared the effects on various menopause symptoms, of consuming a carbohydrate control or 20

grams of soy protein with isoflavones in one daily dose or 20 grams of soy protein with isoflavones split into two daily doses.

No differences were observed in the number of hot flashes experienced by the women in either group. However, the researchers observed a significant reduction in the severity of hot flashes in women consuming 20 grams of soy protein with isoflavones in two split doses, compared with women receiving the carbohydrate control and the soy protein in one dose.

More research is clearly needed to determine the role of soy foods and isoflavones in alleviating menopause symptoms.

WOMEN AND HEART HEALTH

Nearly 39,000 Canadian women die each year from heart disease⁸. Soy protein operates on a number of levels to reduce heart disease risk. One of those is its ability to reduce blood cholesterol (for more information, please refer to the section on [Soy and Heart Health](#)).

Various researchers have studied the cholesterol-lowering ability of soy protein specifically in women.

Dr. Scott Washburn⁶ from Wake Forest University showed in peri-menopausal women that 20g of soy protein with isoflavones significantly reduced total cholesterol and LDL-cholesterol compared to the control (carbohydrate) diet. This beneficial effect occurred when the soy protein was consumed in one daily dose or split over two daily doses.

A study in pre-menopausal vegetarian women by Dr. Aedin Cassidy and colleagues at the Dunn Clinical Nutrition Centre in Cambridge⁹, showed that replacing animal protein with 60g of textured vegetable protein (TVP) resulted in a significant 9% reduction in total cholesterol levels. In a separate part of this study, a significant improvement in the ratio of LDL:HDL cholesterol (an indicator of heart disease risk) occurred when 28g of TVP was added to the daily diet.

WOMEN AND BONE HEALTH

For additional information, please see the section on [Soy and Osteoporosis](#).

References for Soy & Women's Health:

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