

International Conference Supports Soy's Positive Role in Health Tokyo 2008



The health benefits of soy are becoming well recognized due to the vast amount of research been undertaken over recent years. To provide an up-to-date account of this research, the 8th International Soy Symposium on the Role of Soy in Health and Disease was hosted in Tokyo, Japan in November 2008. Lynne Garton provides an overview of this conference with details of the most recent studies that continue to support soy's health benefits.

Soy and Health – the Japanese experience

Dr Yamori, Japan explained that the traditional diet and lifestyle of the Japanese, including soy, was one of the reasons for the longest average life expectancies in the world. Their low risk of diseases such as heart disease, prostate and breast cancers has been linked with their intake of soy and the associated isoflavones (natural plant compounds found in soy that are being investigated for their potential health benefits). Dr Yamori stressed that if more soy foods were eaten by Western populations it could hopefully contribute to a healthy, long life.

Soy and the Menopause

The isoflavones found in soy show structural similarities to the hormone estrogen and for this reason it has been suggested that soy may help with menopausal symptoms. Studies looking at the impact of soy isoflavones on hot flushes have had mixed results, although it seems to be the more hot flushes a woman experiences (greater than 5 a day) the bigger the benefit. Another reason given for the mixed results could be due to the presence of different levels of isoflavones used in these studies. This was discussed by Dr Williamson-Hughes, USA who presented the results from a recent review of 17 studies that investigated soy isoflavones on hot flushes. From this review, the studies that used genistein (one of the isoflavones in soy), at levels of 15mg a day, appeared to have a greater benefit on hot flushes.

Soy and Obesity

With the growing incidence of obesity in the Western world, foods that have a role in keeping us full for longer may help to reduce food and calorie intake and so help with weight control. Dr Dye, UK presented a study investigating this. From a study in twenty young healthy men, it became clear that eating soy at breakfast and lunch significantly reduced food eaten at dinner and evening snacks compared to non soy meals. This resulted in a reduction of 144kcal across the total day with the men reporting that eating a soy based breakfast and lunch was more filling than the meals that didn't contain soy. Reducing 144kcal a day could account for a weight loss of approximately 15lbs (6.8kg) over the course of a year.

Soy and Heart Disease

Due to the lower incidence of heart disease in populations consuming soy it has been suggested that soy can reduce the risk of cardiovascular disease risk factors. Dr Kokubo, Japan confirmed this with the results from a study of forty thousand Japanese who were followed up over the course of 12 years. Women who ate soy foods more than five times a week had a 45% lower risk of a heart attack, and a 69% lower risk of dying from a heart attack, compared to those women eating 0 to 2 servings of soy a week.

One of the mechanisms that has been suggested for soy's positive role in heart health is its cholesterol lowering action. The results of an analysis that took into account 45 studies investigating the effect of soy protein on cholesterol reduction was presented by Dr Krul, USA. The results of this analysis found that including soy protein into the diet resulted in a 4% reduction in total cholesterol and a 5% reduction in LDL cholesterol (the 'bad' cholesterol).

Dispelling the Myths of Soy

From presentations at the Symposium it was made clear that soy does not have negative effects on hormonal status nor is it associated with a negative impact on health.

Three studies examined the effect of soy isoflavones on male reproductive hormones and fertility. Dr Hamilton-Reeves, USA presented the results from 32 trials investigating the effects of soy protein and isoflavones on reproductive hormones such as testosterone and free testosterone in men. No significant effects of soy protein or isoflavones on any of the hormones were observed. Dr Serafini, Italy looked at the effects of different doses of soy isoflavones on sperm formation in healthy men. In this 3 month study, 20 men were given either 160, 320 or 480mg soy isoflavones a day. After 3 months there were no significant differences in ejaculated volume, sperm concentration, count and motility of sperm. Dr Duncan, Canada confirmed these findings. Thirty two healthy men supplemented their diet with milk protein or a soy protein low in isoflavones or a soy protein high in isoflavones for 57 days each. Analysis of semen samples revealed no significant effects of soy protein containing low or high isoflavones on semen volume, sperm concentration, sperm count, total motile sperm count, sperm motility or sperm morphology.

The safety issues of soy on breast cancer risk was also addressed. Populations who typically consume soy appear to have a lower risk of breast cancer and it has been suggested that soy can reduce the risk of breast cancer and improve breast cancer prognosis. Professor Shu, USA presented evidence suggesting that soy food consumption is safe and even beneficial for breast cancer survivors. The Shanghai Breast Cancer Survival Study includes over 5000 breast cancer patients. After a follow up of approximately 26 months, soy food intake was associated with a more favourable outcome; women who ate the most soy protein a day had a 24% lower risk for all deaths and a 33% lower risk for breast cancer deaths or relapse compared to the women in the lowest group of soy intake. Furthermore soy food intake did not appear to interact with Tamoxifen (a widely used treatment for breast cancer) in relation to breast cancer survival. Professor Shu suggested that while soy intake appears to be safe and beneficial for breast cancer survival patients following 26 months of diagnosis, longer term follow up is still required.

Conclusions

Eating healthily is key in an active and healthy lifestyle and including soy foods into the diet can help achieve this. The presentations delivered at the 8th International Symposium on the Role of Soy continue to confirm the health benefits of soy, as well as highlight soy's safety.

Lynne Garton
Nutritionist and Health Writer

Key Points and Dietary Recommendations

- . Populations who traditionally include soy foods into their diet appear to have a lower risk of diseases such as heart disease
- . Soy protein has been shown to be effective in reducing blood cholesterol at intakes of approximately 25g a day. 25g of soy protein can be achieved by consuming 3 to 4 servings of soy foods a day
- . The benefits of soy is thought to be due to its excellent nutritional profile as well as the presence of isoflavones
- . Consuming soy that contains more than 15mg of genistein/ day appears to be beneficial in reducing hot flushes. 15mg of genistein can be obtained by consuming 2 to 3 servings of soy foods a day
- . Including soy foods at breakfast and lunch such as soy milk, soy yoghurts and desserts, soy mince, tofu...) can help keep you feel full for longer, helping to reduce food and calorie intake, so helping to maintain a healthy weight
- . Soy foods have been shown to be safe in relation to male hormones and fertility as well as in breast cancer patients