

## Soy and Hot Flashes

Some perimenopausal women (around the age of menopause) experience hot flashes — a wave of heat passing through the body, causing much discomfort. It has been documented that hormone replacement therapy (HRT, or prescription-strength estrogen) helps alleviate this symptom. However, some women choose not to take this form of estrogen, especially in view of research showing that HRT seems to be linked with higher incidence of breast cancer and cardiovascular disease [*Annals of Internal Medicine* (August 20, 2002), *Journal of the American Medical Association* (August 21, 2002), *The Lancet* (September 20, 2002)]. Instead, some women may opt to try plant-based estrogens, either from food or in a pill form, or both. It has been observed that Japanese women living in Japan seem to undergo fewer and less severe hot flashes than American women. Their soy-rich eating plan has been considered the reason for this result.

Soy foods contain plant-based sources of estrogen termed phytoestrogens. Coumestans, lignans, and isoflavones are classes of these plant estrogens. Of these, isoflavones have been the most researched component. The two isoflavones that are most prevalent in soy are genistin and daidzein. Once these substances are eaten, they are metabolized into a potent material, equol, which resembles estrogen in the human body. The actions of these substances within the body are very complex, possibly conferring benefits to health in some ways.

To investigate the possible link between phytoestrogen intake and reduction in hot flash frequency and intensity, a number of studies have been conducted to determine if isoflavones could be the key factor. Most studies were done using isoflavones in the form of a pill vs. a placebo (a dummy pill). To date, the results are inconclusive. Some studies show that isoflavones help reduce incidence and severity of hot flashes, while others show no difference. Some of the studies even indicated a significant reduction in symptoms among people taking the placebo! How could this happen? Part of the difficulty in measuring hot flashes is that this symptom waxes and wanes over time. Women participating in the study may think the pill they are taking is helping, but in reality, their hot flashes are just subsiding on their own.

You may be wondering whether you need to take isoflavone supplements to help with hot flashes, or eat more soy foods. Most experts recommend taking no more than 50 to 100 milligrams of isoflavones a day, if at all. (This is the amount estimated in the average Japanese diet.) The scientific community does not know the long-term effects of large amounts of concentrated dosages of isoflavones in humans. To be on the safe side, it is relatively easy to obtain 50 to 100 mg. of isoflavones a day from food alone. Here are some examples:

<i>Food Source</i>	<i>Isoflavones (in mg.)</i>
½ cup tofu	25
1 cup unfortified soy milk	10
1 cup fortified soy milk	43

½ cup cooked green soybeans (a.k.a. edamame)	50
½ cup soy crumbles	8.5
½ cup tempeh	53
¼ cup soy nuts	78
¼ cup fortified textured soy protein *	33
(* Some isoflavones may be lost during processing.)	

Deciding to consume more soy as a treatment for hot flashes is like deciding to take any supplement — if you have any health problems or concerns it would be a good idea to speak with your health care provider before making the switch. There is some concern that even natural sources of estrogen such as soy-based foods could be linked to increased rates of breast cancer. Having a history of breast cancer or heart disease would be a good reason to consult a professional before grilling up a pile of tofu dogs. Otherwise, feel free to eat soy in moderation, along with an otherwise balanced diet, to help the hot flashes pass.