

Soy Comparable to Some Diabetes Drugs

Lowers Blood Sugar, Cholesterol in Women

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June 20, 2002 -- Soy may help people with diabetes control their blood sugar as well as some prescription drugs. But it will be a long time before anyone can say exactly how much or what kind of soy works best.

Evidence has mounted for years that soy products such as tofu may help protect against heart disease and stroke. In women past menopause, soy has been shown to make cells more responsive to insulin -- the hormone that regulates blood sugar in the body.

Curious about the effects on diabetes, a team of researchers tried giving soy supplements to 32 women past menopause who had type 2 diabetes. They presented their results at the annual meeting of the American Diabetes Association.

Type 2 diabetes occurs when the body does not react to insulin normally -- called insulin resistance. Initially, the body compensates by producing more insulin, but eventually this is not enough, and blood sugar levels in the blood begin to rise. Being overweight is the No. 1 cause of type 2 diabetes. This differs from type 1 diabetes, which normally appears in children and young adults and is caused by the pancreas not producing insulin.

The women were split equally into two groups. One group sprinkled their food daily with a white powder containing 30 grams of soy protein and 132 milligrams of soy isoflavones for 12 weeks. (Isoflavones are chemicals found in soybeans that are similar -- but not identical -- to the female hormone estrogen.) Two weeks later, they sprinkled their food with an identical powder that contained no soy product for another 12 weeks. The other group used the fake powder first and the soy powder second. Neither group knew which they were using at the time.

The women's weight stayed nearly constant throughout the 12 weeks. When they ate the soy, insulin resistance improved and their insulin, blood sugar, and cholesterol levels were better than when they ate the fake powder. The soy products lowered the women's blood sugar as much as some prescription diabetes drugs, the researchers say.

Other studies have suggested that too much soy can upset a woman's balance of hormones. The researchers in this study found no sign of this or any other significant side effects.

It's too early to recommend that people with diabetes run to their health food stores for soy supplements, says lead author Vijay Jayogopal, MRCP, of the University of Hull in England. "We don't know how much to give." Longer and bigger studies are needed. But he added that "in general, eating phytoestrogens is beneficial."

Phytoestrogens are chemicals in plants that resemble estrogen. Isoflavones are one type. The researchers' findings are significant for women past menopause because these women

don't produce their own estrogen, and for this reason they are more vulnerable to heart disease, stroke, and other blood vessel diseases. People with diabetes are also generally more vulnerable to these often fatal diseases.

Giving women estrogen directly raises their risk of cancer, so researchers have been considering phytoestrogens as another option. "It seemed like this might give an alternative to a population that otherwise didn't have one," says Jayogopal. He and his colleagues plan further studies in an attempt to isolate the active ingredient in soy.

The study encouraged Simone Lemieux, PhD, physiologist at Laval University in Quebec, who is also studying blood vessel diseases in women past menopause. "It looks very promising," she says.

In general, she says, people should try to get their protein from a mixture of plant and animal sources.

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