**What are the benefits of soy?** [1]

Alice,

What are the benefits of soy?

**Answer**

Dear Reader,

*Soy vey!* It seems as though soy foods are everywhere, from nuts to chips to beverages. With all the hype around this plant-based protein, it makes you wonder — is it legit, or just another fad food? Studies show that soy does indeed provide some health benefits. That being said, to reap the most benefit, there are a few considerations to make as far as the safety and quality of soy products.

To understand where the benefits of soy come from, it’s helpful to talk about soy’s healthful components. Made up of a number of nutrients and plant estrogens (phytoestrogens), called isoflavones, research suggests that these soy components can work together to help:

- **Lower cholesterol:** Soy has been associated with a significant reduction of total cholesterol levels in the blood, including low-density lipoprotein cholesterol (LDL, also known as the “bad cholesterol”) and triglycerides. Studies show that when soy proteins replace foods high in saturated fat, trans-saturated fats, and cholesterol, there is a correlation with lower total cholesterol levels.

- **Reduce the risk of heart disease:** Soy’s fiber, polyunsaturated fats, and plant proteins have been shown to lower heart disease risk. The isoflavones found in soy can improve your heart health by keeping your arteries and blood vessels clean and clear — they may increase nitric oxide secretion by endothelial cells, (the cells that line blood vessels) causing smooth muscle cells in the vessel wall to relax. This allows for blood to flow more easily, thereby decreasing heart attack risk or clotting. Recent research has also shown that soy may have an impact on a biomarker called e-selectin, which is capable of increasing the risk of heart disease. E-selectin is a protein that can be found in endothelial cells of individuals with heart disease. This protein makes the cells sticky and attractive to inflammatory cells that can damage the vessel. Isoflavones seem to play a role in reducing the amount of e-selectin, thereby decreasing inflammation and maintaining the smooth lining of the vessel walls.

- **Regulate leptin (the “satiety hormone?”):** In adults with metabolic diseases such as obesity, insulin resistance, or type II diabetes mellitus, soy protein may play a role in
reducing elevated leptin levels (another biomarker that can influence heart disease risk). Usually, leptin rises after a meal and signals to the brain that you are full or satiated. However, in insulin-resistant or obese adults, leptin levels are chronically elevated and lose effectiveness on the brain. High leptin levels don't prevent hunger, and instead begin to affect other aspects of health, such as immune function, and cardiovascular health, including high blood pressure. In adults with metabolic disorders, eating soy may help lower leptin levels to a healthier range.

In addition to these benefits, research has also investigated the relationship between soy and cancer?and there is some disagreement among experts as to whether soy may prevent or promote cancer. Since isoflavones in soy are plant estrogens, they act as weak forms of estrogen in the human body. Some experts believe that genestin, one type of isoflavone, may reduce natural estrogen cycles in women, thereby decreasing risk of cancer. On the other hand, others feel it may promote estrogen receptor positive forms of breast cancer. In non-human studies (i.e., laboratory, animal, population, and case-controlled studies), isoflavones have been shown to have protective effects against breast and prostate cancers, but results associated with colon cancer have been mixed. Because there haven't been any randomized control trials on humans, the American Cancer Society (ACS) [2] states that more information is needed to better understand how soy impacts cancer prevention and recurrence in humans. The ACS does acknowledge the conflicting scientific evidence on whether soy products are beneficial or harmful for cancer survivors, and recommends that "moderate" amounts of soy can be part of a healthy, plant-based diet (until more research is conducted and more is known). At the same time, ACS also advocates against ingesting a high level intake of soy from pills, powders, and/or other supplements.

On that note and before you load up your shopping cart with soy milk and tofu dogs, it's a good idea to consider your current health status to determine whether they're safe for you to consume. For those who are allergic to soy, it's advised to be on the lookout for products and supplements that may contain soy and/or soy isoflavones (remember to scan your product labels, folks!). It's also advised that people with certain health conditions (including kidney disease, hypothyroidism, or if they're pregnant or breastfeeding) talk with their health care provider first before consuming soy products and supplements.

If you choose to incorporate soy in your diet (if it's safe for you to do so), consider that a moderate amount of soy is approximately 25 to 30 grams (g) of soy protein per day and whole soybeans contain most of the naturally occurring isoflavones. As soy is processed, these nutritive components may be lost and not all food manufacturers list isoflavone content. For example, a half cup of tofu may have 32 milligrams (mg) of isoflavones and 10 g of soy protein while one fourth cup of plain soy nuts may have 55 mg of isoflavones and 17 g of soy protein, almost double that amount. Now that you're armed with the knowledge of this nutritious food, go forth and explore whether adding it to your diet will result in healthful, tasty dishes ahead!

Alice!


Related questions

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Published date:
Jun 27, 2003
Last reviewed on:
Jul 03, 2015