

The Health Benefits of Soy Protein

As a leader in science and innovation, The Solae Company (formerly DuPont Protein Technologies, now a joint venture between DuPont and Bunge Limited) is committed to the research and application of the health benefits of soy. In fact, during the past 30 years, soy protein produced by the company has been used in the majority of peer-reviewed studies, completed by researchers at highly regarded universities and institutions that explore the health benefits of soy protein. The research suggests that consuming soy protein-based foods may be beneficial to overall health.

Areas of health that are or may be enhanced by soy consumption include:

Heart Health

In 1999, the Food and Drug Administration (FDA) approved the use of a health claim on food labels related to soy protein and the reduced risk of heart disease. The FDA concluded, based on scientific evidence from more than 50 independent studies (many of which included soy protein produced by The Solae Company), that 25 grams of soy protein per day, as part of a diet low in saturated fat and cholesterol, reduces the risk of coronary heart disease. The UK Joint Health Claims Initiative (JHCI) re-confirmed this by issuing a similar claim in 2002.

According to research, there are several ways that intake of soy protein with naturally occurring isoflavones can improve heart health. Intake of soy protein may:

- ▶ Improve plasma lipids (e.g. lower total cholesterol, LDLs, and triglycerides); its effect is more pronounced in people with elevated cholesterol levels while maintaining HDL concentrations ⁽¹⁾

Consumption of soy protein with naturally occurring isoflavones also: ^(1,3)

- ▶ May alter how the liver metabolizes cholesterol (possibly improving the removal of LDL cholesterol)
- ▶ May increase the elasticity of arteries
- ▶ May reduce the build-up of plaque inside arterial walls

Blood Pressure

Research suggests that the consumption of soy protein with naturally occurring isoflavones may be linked to lower blood pressure. The way in which soy helps reduce blood pressure is being investigated, however studies have indicated it may improve vascular reactivity. Research has suggested that specific peptides in soy may inhibit the angiotensin-converting enzyme (ACE) in hypertensive but not normotensive rats. ^(1,4,5)

Bone Health

Epidemiological studies show that populations consuming vegetable protein as their primary source of protein have a lower incidence of hip fractures compared to populations consuming protein primarily from animal sources. Preliminary studies in women have shown that eating soy protein with higher levels of naturally occurring isoflavones can positively affect bone mineral density in the lumbar spine as compared to consumption of milk protein. ^(12, 13)

Vegetable protein, in comparison to animal protein, may decrease calcium excretion and isoflavones may be responsible for the deposit of minerals into the bone. A possible reason may be the lower sulfur amino acid content of vegetable protein. Sulfur containing amino acids increase acid load, which in turn increases calcium loss. ^(6,7)



Cancer Risk

Asian countries with high soy consumption have lower incidences of breast, prostate, and colon cancers as compared to countries with low soy consumption. Several components in soy, including isoflavones and soy protein, may exert beneficial effects. Animal studies have shown that intake of soy protein may inhibit tumor development. Research also has found that animals fed soy protein experienced a reduction in the spread of malignant cancer cells. Research is ongoing to further explore the relationship between soy protein and certain types of cancer. ^(5,8)

Menopausal Symptoms

Studies that examined soy protein consumption in peri-menopausal women have found promising results. Preliminary research suggests eating a diet rich in soy isoflavones may help lower the number and lessen the severity of hot flashes in some peri-menopausal women. ⁽¹⁴⁾

Diabetes Management

Soy protein may influence insulin activity in the body. Soy, and its many components, may also favorably alter glycemic control. Consumption of soy protein has been associated with the reduction of several chronic complications associated with diabetes, including cardiovascular disease and high blood pressure. ^(9,10)

In addition to the potential benefits listed above, soy protein is a healthy and tasty option for those with certain dietary needs:

Protein Quality

Soy contains a higher quality protein than other plant foods, making it an excellent meat-free alternative. Unlike other plant proteins, soy protein is considered complete. Its Protein Digestibility Corrected Amino Acid Score (PDCAAS), which measures protein quality, is 1.0—the highest possible score. And soy protein is equal in protein quality to meat, milk and eggs. ⁽⁶⁾

Lactose Free

Thirty to 50 million Americans are considered lactose intolerant. Certain populations are more widely affected than others. Approximately 75 percent of all African Americans and American Indians as well as 90 percent of Asian Americans are lactose intolerant. Soy protein is a nutritionally rich option for individuals who have trouble digesting milk and dairy products. ⁽¹¹⁾

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