



Heart disease is a big deal in America

— by the United Soybean Board

The most recent data (2006) shows that an estimated 16.8 million Americans were affected by coronary heart disease (CHD). It is also estimated that nearly 800,000 Americans suffered a new coronary attack; 500,000 had a recurrent attack; and an additional 200,000 had a silent first heart attack.

FDA-Approved Health Claim for Soy:

25 grams of soy protein per day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease.

Did this get your attention?

It should. Most likely you know someone who has suffered from coronary heart disease. This is a disease split evenly between men and women. The average age at which a first heart attack occurs is 64.5 for men and 70.3 for women. In 2006, 20% of all the deaths in America were attributed to CHD.

Wait... is there something we can do to prevent CHD?

The FDA approved the health claim that 25 grams of soy protein per day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease. Soyfoods have been recognized by nutritionists for decades as rich sources for high-quality protein. This is really nothing new. Asian countries, where soyfoods are a staple in the diet, have experienced the benefits of soy protein for years. The protein directly lowers blood cholesterol levels.

In 1995, this data became more widely acceptable. In that year, clinical data which included 38 different comparisons, found that soy protein reduced low-density-lipoprotein (LDL) cholesterol by approximately 12 percent. These results

prompted further investigation into the cholesterol-lowering effects of soy protein. In 1999, the U.S. Food Drug Administration (FDA) approved the earlier mentioned, health claim for soy protein and CHD based on its cholesterol-lowering effects. In total, more than 100 clinical trials have been completed, all measuring these effects. Although trials have had varying results, in the end, they all confirm that soy protein can have a lowering effect on LDL. The degree in which it lowers the LDL is what has confused the public. Depending on the soyfoods used in the study, and the health factors of the people used in each study, the results have averaged lower than the previously reported 12 percent. However, it is important to note that a two to five percent reduction in LDL is quite meaningful. Over time, each one percent decrease in LDL reduces CHD risk and or mortality by as much as two to five percent. Therefore, the three percent reduction in LDL is still good and over time each one percent could lower the risk for heart disease by as much as 10 percent.

So, adding soy protein to a diet that's low in saturated fat can reduce your risk of heart disease. The FDA has adopted the figure of twenty-five grams per day as its recommendation. Most of the trials done to test this used 25 grams; however, there is evidence to suggest that lower amounts are still helpful in reducing LDL.



Heart Healthy Sources of Soy Protein

Soyfood	Serving size	Grams of soy protein
Fortified soymilk	1 cup	6-7
Soy cereal	1 ¼ cup	7
Soy yogurt, vanilla	1 cup	6
Soy breakfast patty	2 patties	11
Soy bar	1 bar	14
Soy chips	1 bag	7
Soy nut butter	2 Tbsp	7
Soy nuts, roasted, unsalted	¼ cup	11
Tofu	½ cup	10
Edamame	½ cup	11
Soy burger	1 patty	13-14
Soy pasta	½ cup (cooked)	13
Soy pudding	½ cup	6

Even if you don't get to 25 grams of soy protein a day, you are still able to benefit from the cholesterol lowering properties.

Substituting soyfoods for protein-rich foods higher in saturated fat may lead to a decrease in blood cholesterol.

In addition to the effects of soy protein on cholesterol levels, soyfood also protects against heart disease by lowering triglyceride (a type of fat) levels and modestly raising good cholesterol. The evidence indicated that isoflavones in soy directly improve the health of the arteries. No single food can reduce cholesterol to target levels; however, a diet that makes use of a number of heart-healthy factors including soy protein can have significant effects on cholesterol levels and risk for CHD. Therefore, diets with high-quality soyfoods and its favorable fatty acids make these foods especially attractive in heart healthy diets.

Recent research indicates that soy protein lowers LDL cholesterol by 3 to 5 percent. On a population level, each 1 percent decrease in LDL reduces CHD risk and/or mortality by 2 to 5 percent. Therefore, even a 3 percent reduction in LDL could lower risk for heart disease by as much as 15 percent.

Heart disease is the leading cause of death for both men and women in the United States.

The predominate fatty acid in soybeans is the essential omega-6 fatty acid, which has been proven to reduce blood cholesterol levels. Recently, the American Heart Association rejected some concerns about the pro-inflammatory properties of omega-6 fats and concluded that these fatty acids play a critical role in heart-healthy diets. In addition to providing omega-6 fats, soybeans provide alpha-linolenic acid (ALA), an essential omega-3 fatty acid. This is the same fatty acid found in cold-water fish; evidence suggests that ALA also has direct coronary benefits.

In summary, soyfoods may make important contributions to heart healthy diets by

- Providing high-quality protein, but minimal amounts of saturated fat
- Directly lowering blood cholesterol levels
- Modestly elevating HDL and decreasing triglyceride levels
- Providing omega-6 and omega-3 essential fatty acids
- Favorably affecting CHD risk factors

For more information about how to add soyfoods to your diet, watch for a series of "Cooking with Soy" videos on Soy TV within the nebraskasoybeans.org site.

