

## The Phytosterol Miracle

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In the United States, the ingestion of cholesterol ranges from approximately 200 milligrams (mg) to an alarming 2,000 mg per day. Although we must take in some level of cholesterol each day to maintain optimum health, that level should probably be lower than 300 mg. To put that figure in perspective, a double cheeseburger, fries, and a shake at the local fast-food joint can contain up to 800 mg of cholesterol!

Medical research has shown that approximately 20 to 30 percent of the cholesterol circulating in our blood comes from our diet. So you should monitor your dietary cholesterol intake and keep it low—but that's not always easy.

Bottom line, the only way to avoid cholesterol altogether is to stop eating animal products. But here's the problem: Many of us *don't want* to become vegetarians—or even modified vegetarians. Frankly, I've seen a few strict vegetarians who don't look too healthy. Some of us are definitely hooked on beef, cheese, eggs, liver, lobster, shrimp, chicken, pork and other animal products ... and we look forward to eating them. I know I do! They taste good and are rich sources of protein, iron, folate, and other important nutrients.

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oil in its most harmful form, oxidized cholesterol can be a risk. Meat cannot be stored, cholesterol. Leanness is not hard to age without creating a "healthy food," contains fats. In fact, turkey ranks the highest (Department of Agriculture (USDA) Reference).

concentration in these foods. *beta-sitosterol*, and *stigmasterol*—are the most common. They can cause damage from oxidized low-density lipoprotein (LDL) or "bad"

sterol, campesterol, and stigmasterol are fatty alcohols that cannot be absorbed. They so closely resemble the cholesterol (or animal sterol) molecular structure at the cholesterol receptor sites in our digestive tracts cannot distinguish one from the other. Phytosterols work primarily by inhibiting the body's ability to absorb cholesterol. In a recent study, one gram of beta sitosterol reduced cholesterol by 40 percent. Newer research reported in the *New England Journal of Medicine* showed that LDL cholesterol decreased approximately 14 percent when phytosterols were consumed for about one year.

### Phytosterols work

The process occurs in the intestine. The plant sterols combine with dietary cholesterol secreted from bile to form a new, crystalline matrix. This complex is not absorbed and is, therefore, excreted as waste. It is also thought that phytosterols compete for the cholesterol absorption sites along the intestinal wall, thereby partially block absorption there as well. Once the plant sterol has wedged into the absorption site, it blocks absorption of cholesterol, but cannot be absorbed.

Phytosterols are plant foods, such as rice and soybeans, and the following table:

### Phytosterol Content of Various Foods

|                | (mg/100 g) |
|----------------|------------|
| corn oil       | 1390       |
| bean oil       | 327        |
| olive oil      | 232        |
| sunflower seed | 714        |
| soybean seed   | 534        |
| peanuts        | 161        |
| walnut         | 158        |
| almonds        | 143        |
| peas           | 127        |
| beans          | 124        |
| lentils        | 108        |

These oils will assist with the process of reducing cholesterol, trans fats, and soybean oils are toxic to cells, and will cause an even greater problem. This is not a new discovery. Research done 50 years ago shows that both animal and oil sources interfere with cholesterol absorption. The solution is to create a convenient way to take enough phytosterols to create a cholesterol-lowering effect.