

Plant sterols - could they be right for you?

Adding plant sterols to a healthy diet and exercise plan can help to lower your blood cholesterol, specifically your LDL-cholesterol or bad cholesterol.

What are plant sterols?

Plant sterols are substances found naturally in vegetables, fruits, nuts, grains and vegetable oils. Plant sterols are also called phytosterols.

How do plant sterols lower blood cholesterol?

Even though your liver makes most of your blood cholesterol, some of it comes from the food you eat. This is called dietary cholesterol.

Plant sterols look a lot like cholesterol in their make up. They partly block cholesterol absorption so that dietary cholesterol can be removed as waste.

This lowers blood levels of LDL-cholesterol without affecting HDL-cholesterol or good cholesterol.

What do research studies show?

- Plant sterols lower LDL-cholesterol on average 10 per cent.
- You can get an added 5 per cent lowering in LDL-cholesterol when you combine plant sterols with healthy eating and lifestyle.
- The results will vary among people.

How much plant sterols do I need to lower my blood cholesterol?

- Adults with modest to high blood cholesterol need to eat 2,000 milligrams (2 grams) each day.
- There is little added benefit beyond eating 3,000 milligrams (3 grams) each day.

Are plant sterols safe?

Yes. It is safe for adults to eat up to 3,000 milligrams (mg) a day unless you have a rare health condition called sitosterolemia. A person with this condition must avoid foods high in plant sterols.

Can I get enough plant sterols naturally through food?

No. The typical Canadian diet has 150 to 400 mg of plant sterols. Vegetarians get about 700 mg plant sterols a day. Both are far less than the amount needed to lower cholesterol.

In order to get 2,000 mg (2 grams) of plant sterols, you will need to eat 2 to 3 servings of **plant sterol-enriched foods** daily.

See the chart titled "Sources of plant sterols".

What are plant sterol-enriched foods?

Plant sterol-enriched foods have concentrated amounts of plant sterols added to them. They include:

- margarine, calorie-reduced margarine
- fruit juice

Health Canada allows food companies to add plant sterols to foods up to 1,000 mg or 1 gram per serving.

How can I eat more plant sterols?

- Include plant sterol-enriched foods each day.
- Cook and bake with vegetable oils.
- Snack on nuts such as almonds, peanuts, pecans or walnuts or sprinkle a small amount on salads or cereal.
- Eat whole grains such as brown rice, oats, quinoa and barley.
- Include a variety of vegetables and fruit each day. Eating Well with Canada's Food Guide recommends including 7 to 10 servings a day.
<http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/index-eng.php>

Can I use plant sterol-enriched foods with cholesterol lowering medications?

Yes. You can get additional lowering of LDL-cholesterol when you combine:

- plant sterols
- cholesterol medications such as statins
- healthy lifestyle changes such as increasing exercise, keeping to a healthy weight, eating healthy and decreasing your intake of fat.

The combination of plant sterols and ezetimibe (Ezetrol) is safe. However, the LDL-cholesterol reducing achieved by the combination of plant sterols and ezetimibe is not significantly greater than if you are taking ezetimibe alone.

Tell your doctor if you are eating plant sterol-enriched foods as the dose of your statin medication may need to be lowered.

Sources of plant sterols

Source	Serving	Plant Sterols (mg)
Plant sterol-enriched foods		
Becel Proactiv margarine, calorie-reduced	12 ml (2 ½ tsp)	1,000
Minute Maid Heart Wise juice	250 ml (1 cup)	1,000
Oasis CholestPrevent juice	250 ml (1 cup)	1,000
President's Choice Blue Menu Celeb margarine with plant sterols	12 ml (2½ tsp)	1,000
Other		
Centrum Cardio multi vitamin	2 tablets	1,000
Common foods		
Corn oil	30 ml (2 tbsp)	215 to 286
Canola oil	30 ml (2 tbsp)	75 to 219
Soybean oil	30 ml (2 tbsp)	66 to 98
Chick peas	60 ml (4 tbsp)	60
Whole grain bread	2 slices	57
Peanuts	60 ml (4 tbsp)	44
Olive oil	30 ml (2 tbsp)	43 to 45
Broccoli (chopped)	250 ml (1 cup)	39
Almonds	30 ml (2 tbsp)	30
Pecans or Walnuts	30 ml (2 tbsp)	32
Flax seed (ground)	15 ml (1 tbsp)	24
Orange	1 small	24
Apple	1 small	13

*ml = millilitres