



## Plant Sterols 101

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### What are plant sterols?

- Plant sterols, also known as phytosterols are naturally occurring substances that have been part of the human diet for thousands of years.
- Plant sterols have a chemical structure similar to that of cholesterol.
- Small quantities of plant sterols are found naturally in foods such as fruits and vegetables, vegetable oils, nuts, seeds and whole grains.

### Why are plant sterols important?

- Eating foods with added plant sterols can help lower LDL (lousy) cholesterol levels, a benefit for those persons who have high LDL-cholesterol levels, a well known risk factor for heart disease.

### How do plant sterols help lower cholesterol?

- Plant sterols work by helping to remove cholesterol from the body by partially blocking its absorption into the bloodstream.
- The result is lower LDL-cholesterol levels in the blood.

### Can you get enough plant sterols naturally to lower LDL cholesterol?

- No, you can't. A typical diet provides only about 0.2 mg of plant sterols – but in order to get the recommended daily amount, you would need to eat 425 tomatoes, 210 carrots, 150 apples or 83 oranges!
- The good news is that fortified foods are available to help meet the daily requirements for plant sterols.

### What is the recommended dose for plant sterols?

- Based on available evidence, an intake of **2 grams** per day is needed to lower LDL cholesterol in adults. The upper intake limit is 3 grams per day of added plant sterols – it is important to note that additional cholesterol-lowering benefits will **not** be obtained at intakes higher than 3 grams per day.
- Children with elevated LDL cholesterol can safely consume **1 gram** of plant sterols daily.
- Plant sterol enriched foods are **not** recommended for breastfeeding or pregnant women.

### How effective are plant sterols?

- Data from clinical trials identify that foods enriched with plant sterols providing an intake of about **2 grams per day** can lower LDL cholesterol levels by about **9%**.
- The cholesterol-lowering effect of plant sterols varies widely among individuals:
  - Studies have found that people with high to very high blood cholesterol experience a much greater cholesterol-lowering effect than those with borderline high cholesterol.
- For best results, consume plant sterol fortified foods two or three times per day rather than only once.

## Are plant sterols safe?

- Research has shown that there are no known risks or side effects from eating foods with added plant sterols. They can be taken with cholesterol-reducing medications.
- It is recommended that individuals on statin treatment advise their doctor that they are consuming plant sterol-enriched foods as the dosage of medication may need to be adjusted.

## How can I increase my intake of plant sterols?

Plant Sterol Fortified Foods	Plant Sterols (g)	Cal
<b>Margarines</b>		
Becel pro.activ® Margarine with plant sterols, 2 tsp (10 g)	0.8	30
PC® Blue Menu® Celeb Margarine with plant sterols, 2 tsp (10 g)	0.8	70
<b>Yogurt</b>		
Astro® Biobest® Yogurt with plant sterols, 1 container (100 g)	1.0	100
<b>Yogurt Drinks</b>		
Astro® Biobest® Probiotic Yogurt Drink with plant sterols, 1 bottle (90ml)	1.0	70
PC® Blue Menu® Yogurt Drink with Plant Sterols, 1 bottle (93ml)	1.0	80
<b>Juices</b>		
Oasis® Health Break CholestPrevent Juice, 1 cup (250ml)	1.0	110
Minute Maid® Heart Wise Orange Juice, 1 cup (250ml)	1.0	110

### Examples:

1 yogurt and 1 serving of fruit juice = 2 grams of plant sterols per day

1 yogurt drink and 2 ½ tsp of margarine = 2 grams of plant sterols per day

## Remember....

- It's still important to follow a heart healthy diet and include other foods that lower cholesterol. A combination of a heart healthy diet with plant sterols will help improve blood LDL cholesterol levels.
- Plant sterols are not a substitute for heart healthy eating or for taking cholesterol-reducing medication prescribed by your doctor.