**Cholesterol Control: Statins vs. Plant Sterols**

**Overview**

There are two main types of cholesterol: high-density lipoprotein (HDL) and low-density lipoprotein (LDL). HDL cholesterol is considered “good” cholesterol because it helps the body get rid of LDL cholesterol, which is known as “bad” cholesterol. High levels of LDL cholesterol can double your risk of having a heart attack.

Adopting healthy lifestyle habits and eating foods that increase HDL cholesterol and lower LDL cholesterol are good for your overall health. But these steps may not be enough for you. If your LDL cholesterol levels remain high after you improve your diet and exercise habits, you still have work to do to reduce your risk of heart disease.

Two possible solutions are statins and plant sterols. Statins are medications prescribed by a doctor, and plant sterols are substances found in certain plant-based foods. Let’s look at how these two options compare in lowering cholesterol levels.

**How do statins work?**

Statins work by lowering levels of LDL cholesterol in your body. They do this by reducing the amount of LDL cholesterol that your liver makes. Statins also help your body reabsorb any cholesterol that’s built up in your arteries.

The American Heart Association and the American College of Cardiology [guidelines](http://circ.ahajournals.org/content/129/25_suppl_2/S1" \l "sec-16" \t "_blank)recommend statins for certain people. These are people who:

* have an LDL level of 190 mg/dL or higher
* already have cardiovascular disease
* have diabetes, are 40–75 years old, and have an LDL level between 70 and 189 mg/dL
* don’t have diabetes, are 40–75 years old, and have an increased risk of developing cardiovascular disease in the next 10 years. Examples of statins available today include:
* atorvastatin (Lipitor)
* fluvastatin (Lescol)
* lovastatin (Altoprev)
* pitavastatin (Livalo)
* pravastatin (Pravachol)
* rosuvastatin (Crestor)
* simvastatin (Zocor)

**How do plant sterols work?**

Plant sterols are compounds that help block your body from absorbing cholesterol. While plant sterols help lower LDL cholesterol, they don’t appear to affect your levels of HDL cholesterol or triglycerides. One Canadian [study](http://www.onlinecjc.ca/article/S0828-282X(14)00288-8/abstract) concluded that plant sterols are the most effective natural treatments for high cholesterol.

Plant sterols are found naturally in:

* fruits
* vegetables
* vegetable oils
* wheat bran and wheat germ
* cereals
* legumes
* nuts

All of these foods contain low levels of plant sterols, though. So eating these foods may not make a big impact on your cholesterol level.

An easier way to get enough plant sterols to lower your cholesterol level is through eating fortified foods. Plant sterols are added to certain foods, including some kinds of orange juice, yogurt, and margarine. To reap the cholesterol-lowering benefits, you need to consume at least 2 grams of plant sterols per day. This equals about two 8-ounce glasses of sterol-fortified orange juice per day.

As for how effective plant sterols are, [one study](http://www.nejm.org/doi/full/10.1056/NEJM199511163332002) examined people with high cholesterol who used margarine that contains plant sterols instead of regular margarine. The study found that these people were able to lower their LDL cholesterol levels by 14 percent in one year.

**How do they compare?**

Both statins and plant sterols help lower LDL cholesterol levels. Statins are the gold standard for drug treatment, and sterols are thought to be one of the best natural options to combat high cholesterol. Let’s see how else they compare.

**Effectiveness**

Statins are one of the most commonly prescribed drugs, in part because they’re well-tolerated by most people. And besides lowering cholesterol levels, they can help reduce the risk of heart attack or stroke.

Plant sterols may not reduce the risk of heart attack or stroke like statins do. However, it is proven that sterols can help reduce LDL cholesterol.

**Side effects** Statins can cause side effects for some people. These can include memory loss, muscle pain or damage, weakness, and nausea.

Sterols, on the other hand, are not known to cause side effects when used short-term. Information on side effects from long-term use is not available.

**Drug interactions**

Plant sterols are not known to interact with other drugs. Statins, however, may interact with some drugs. These include:

* antibiotics such as erythromycin
* antifungal drugs such as ketoconazole
* HIV drugs such as protease inhibitors
* heart disease drugs such as amiodarone, diltiazem, verapamil, and niacin

**Pregnancy**

Sterols are safer for pregnant women. Statins may cause birth defects, but sterols don’t pose this risk.

**Cost**

The more cost-effective option depends on your insurance coverage. If statins are covered by your insurance, they may be relatively inexpensive. Consuming foods fortified with plant sterols might be more expensive. For instance, to get 2 grams per day of plant sterols from fortified orange juice, you would go through about eight cartons a month.

However, if your insurance does not cover statins, the opposite may be true. It may be more cost effective for you to eat more foods fortified with plant sterols rather than pay out-of-pocket for statins.

**Talk with your doctor**

The most important factor to consider when comparing statins to sterols is what your doctor prescribes for you. If your doctor prescribes a statin for you, be sure to follow their instructions. If you would prefer a more natural option than medication, tell your doctor. Discuss what the best options may be for you and what risks you face based on your cholesterol levels.

Your doctor can also answer any questions you may have, such as:

* Are plant sterols strong enough to lower my cholesterol to a safe level?
* Can I try using statins and plant sterols together?
* Am I taking any medications that might interact with a statin?
* Can you refer me to a dietitian for guidance on a cholesterol-lowering diet?
* When should I have my cholesterol levels retested to find out if my treatment is working?

**Q&A**

**Q:**

Can statins and sterols be used together?

**A:**

A [2009 study](https://www.ncbi.nlm.nih.gov/pubmed/20439548) analyzed research that compared people who took statins with plant sterols to patients who took only statins. The study had impressive results. Compared to statin therapy alone, the combination of plant sterols and statin therapy decreased the group’s total cholesterol by 14 percent. It also reduced their LDL cholesterol by 13 percent. But despite these promising results, more research is needed. We still don’t know if adding plant sterols to statin therapy will lower the risk of cardiovascular problems such as heart attack and stroke.

If you want to use statins and plant sterols together, be sure to check with your doctor first. There’s no evidence to suggest that this practice is dangerous. However, in rare cases, allergic reactions could occur.

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