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Pantethine & Plant Sterols & Cholesterol Levels

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ASK THE DOCTOR

Answers to Your Health Questions

Decker Weiss: NMD, AACVPR



Dr. Weiss is a member of both the Enzymatic Therapy and Phyto-Pharmica Scientific Advisory Boards and is considered an expert in integrative cardiology.

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HEALTH FACT:
Nearly 20% of Americans ages 20-74 have high cholesterol levels.

Reduce Your Cholesterol Naturally

Thanks to the excellent efforts of health education organizations like the American Heart Association, we've learned a lot about cholesterol and how it affects our health.

We know: high cholesterol levels increase our risk for heart attacks and strokes: lowering our cholesterol levels will reduce this risk and keep our hearts and blood vessels healthy; and that diet, weight loss, and exercise will all help us in our quest to lower our cholesterol levels. We also know at times, despite these good efforts, some people's cholesterol levels are still too high.¹

Prescription drugs to lower cholesterol are now available and they are heavily advertised by the pharmaceutical companies that make them. What the commercials neglect to say is these medications, collectively called statin drugs, have some serious side effects. Statin drugs can cause elevations in liver enzymes, an indication of liver irritation.^{2,3} They are associated with myopathy, a painful disorder of muscle inflammation and muscle degeneration.^{4,5} Ironically, statin drugs significantly reduce CoQ10 levels in the body, a deficit that can lead to heart disease.⁶⁻⁸

Statin drugs have also been linked to a rare and at times, fatal condition called rhabdomyolysis.^{5,9} Because of this alarming link, the makers of cerivastatin, a popular statin drug, recalled this medication from the market on August 8, 2001. The Food and Drug Administration agreed with the recall and supported the decision.¹⁰

Thankfully, there is a safe solution to the dangers of high cholesterol levels.

A natural dietary supplement is now available that can lower cholesterol very effectively without any harmful side effects. Backed by many years of scientific research and clinical study, pantethine and plant sterols, also known as phytosterols, are nature's answer to dangerous prescription cholesterol lowering medications.

To understand how pantethine and plant sterols work to lower cholesterol levels, we need to first review what we know about cholesterol and heart disease.



Q. What exactly is cholesterol?

A. Cholesterol is a soft, waxy, fat-like substance found in every cell of the body. We need cholesterol to help digest fats, strengthen cell membranes, insulate nerves, and make hormones.

Cholesterol is made primarily in the liver but also by cells lining the

small intestine and by individual cells in the body. While our body makes all of the cholesterol we actually need (about 1,000 milligrams a day), we also get additional cholesterol from foods we eat.^{11,12}

The highest sources of cholesterol are egg yolks and organ meats such as liver and kidney. No plant derived

Food contains cholesterol, not even peanut butter or avocado, even though these foods are high in fat. However, all foods from animal sources such as meats, poultry, fish, eggs, and dairy products contain cholesterol.¹³

Q. How does cholesterol cause heart disease?

A. Although cholesterol serves many important functions in the body, too much cholesterol in the bloodstream can be dangerous. When blood cholesterol reaches high levels, it builds up on artery walls, increasing the risk of blood clots, heart attack, and stroke.¹³

The heart is a muscle, and like all muscles, needs a constant supply of oxygen and nutrients. The bloodstream transports these nutrients to the heart through the coronary arteries. If the coronary arteries become narrowed or clogged by cholesterol and fat deposits (atherosclerosis) and cannot supply enough blood to the heart, the result is coronary heart disease (CHD).

If not enough oxygen-carrying blood reaches the heart muscle, a sharp, sudden chest pain (angina) may occur. If the blood supply to a portion of the heart is completely cut off by total blockage of a coronary artery, the result is a heart attack. This is most often caused from a blood clot forming on top of an already narrowed artery.¹⁴

Q. What is LDL and HDL cholesterol?

A. Cholesterol and other fats can't dissolve in the blood and, therefore, can't travel on their own. They have to be transported to and from the cells by special carriers called lipoproteins. The two major lipoproteins are low density lipoproteins (LDL) and high density lipoproteins (HDL). LDL is most often referred to as the “bad” cholesterol whereas HDL is known as the “good” cholesterol.^{12,14} LDLs carry cholesterol throughout the body to the cells. LDLs cause atherosclerosis by clogging up our arteries with the continual buildup of fat. HDL, on the other hand, prevents this fat buildup within arterial walls, by carrying it away from the

arteries, to the liver where it is eventually processed and eliminated.^{12,14}

Q. What are triglycerides?

A. Triglycerides are fats used as fuel by the body and as an energy source for metabolism. Triglyceride levels fluctuate easily, changing after every meal. Increased levels are almost always a sign of too much carbohydrate and sugar intake. Triglycerides in high amounts make the blood more sluggish and less capable of transporting oxygen, particularly through the smallest blood vessels. High triglycerides, along with high LDL “bad” cholesterol, are considered strong and independent risk factors for cardiovascular disease, leading to a heart attack or



stroke.^{12,14}

There are several medications physicians can prescribe for people with elevated triglyceride levels. Some of the most effective (as well as the most harmful) are the statins. The powerful, all-natural combination of pantethine and plant sterols can safely and, just as effectively, lower both triglycerides and LDL “bad” cholesterol and increase HDL “good” cholesterol.^{12,14}

Q. What is pantethine and how does it lower cholesterol?

A. Pantethine, a form of pantothenic acid (also known as vitamin B5) is found in foods such as liver, salmon, and yeast. Pantethine lowers cholesterol by blocking its production.¹⁵

Cholesterol synthesis, or the production of cholesterol in the human body, is an incredibly complex process. It involves many biochemical reactions and enzyme activity requiring several steps.^{12,14}

Studies have shown that pantethine inhibits several of these enzymes and coenzymes. It blocks the activity of one coenzyme involved in cholesterol synthesis, HMG-CoA, by about 50%. This results in significantly lower cholesterol production.

But, that's not all. To compensate

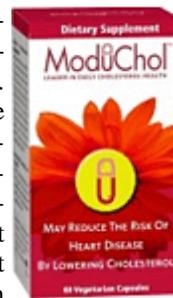
for the lowered cholesterol production, the liver pulls LDL out of the bloodstream.¹⁶⁻²¹ The end result? Studies have shown that on average, pantethine can lower total cholesterol levels by 16%,^{22,23} LDL cholesterol levels by 14%,²² serum triglycerides by 38%,²⁴ and can raise HDL cholesterol by 10%.²²

Q. What are plant sterols and how do they lower cholesterol levels?

A. Plant sterols are the fats of plants. They are found in nuts, vegetable oils, corn, and rice. Plant sterols are structurally similar to cholesterol and are able to act as a stand-in for cholesterol and block its absorption.

^{25,26} The liver receives about 800 mg of cholesterol every day from intestinal absorption. Cholesterol is absorbed from the intestines through receptor sites special channels that are shaped exactly like cholesterol molecules. The cholesterol enters these channels and is then absorbed into the bloodstream.¹⁴ Because plant sterols look like cholesterol, they fit perfectly into these channels. The cholesterol, being blocked from absorption, remains in our intestines where it is eventually excreted.^{25,27}

If we eat enough plant sterols, the amount of cholesterol transported from the intestinal tract to the liver is greatly reduced. And, just



HEALTH FACT:
In addition to unhealthy cholesterol levels, smoking, high blood pressure, physical inactivity, obesity and diabetes contribute to heart disease

like pantethine's effect on the liver, this cholesterol reduction causes the liver to pull LDL cholesterol out of the blood, reducing both total and LDL cholesterol levels.²⁷⁻³⁰

Q. Can't we get the benefit of plant sterols and pantethine just by eating those foods that contain them?

A. These amounts of plant sterols and pantethine found in food just aren't enough to have much of an effect on our health. In order to lower cholesterol levels, we need to

take a concentrated combination of pantethine and plant sterols in just the right ratio.

Plant sterols are bound to fibers in the plants. Even if we ate lots of raw fruits and vegetables, we wouldn't be getting many of these beneficial plant fats. There are also several forms of plant sterols. Some ratios of these plant sterols are more beneficial than others. On the average, we eat 160 to 360 mg of plant sterols a day.²⁵

While pantethine is found in several food sources, it is difficult to get beneficial amounts from our food. There are about 12 mg of pantethine in 3 ounces of brewer's yeast and 8 mg in an average serving of liver.¹⁵

Q. How much pantethine and plant sterol combination should I take?

A. Many studies have examined the effects of pantethine and plant sterols on cholesterol levels resulting in the determination of the most effective amounts to take of these heart healthy nutrients.

Manufacturers of high quality nutritional supplements offer pantethine combined with plant sterols in the most beneficial ratio as determined by this research. The best results are obtained by taking a combination of 400 mg of plant sterols and 200 mg of pantethine three times a day.

Q. Should only people with actual heart disease or those with high cholesterol levels be concerned about cholesterol?

A. No, recent studies have shown that cholesterol lowering in people without heart disease greatly reduces their risk for ever developing CHD, including heart attacks and atherosclerosis. This is true for those with high cholesterol levels and for those with average cholesterol levels.^{34,35}

Most physicians would never consider prescribing statin drugs to people without actual heart disease or high cholesterol levels because of the many health risks of the drugs. But the combination of pantethine and plant sterols can naturally

and very effectively help those people with heart disease, high cholesterol levels, high triglyceride levels (or all three!) as well as those of us just

wanting added “health insurance” for our hearts.

Q. Are pantethine and plant sterols safe?

A. Yes, both pantethine and plant sterols are very safe. Some people may experience some mild stomach upset when they first take pantethine. Taking the combination of pantethine and plant sterols with meals generally solves this problem.^{15,25}

Conclusion

Americans have listened, learned, and most importantly, taken to heart the vast and vital information on the need to keep our cholesterol levels under control. The result? More and more Americans are lucky enough to die of old age.

The Centers for Disease Control recently released a report stating that the average American life expectancy has reached a new high of 76.9 years, thanks in no small measure to fewer people who are dying from heart disease.³⁶

The authors of this report stated that we could push our life expectancy even higher. We can attain healthy, old age by eating right, exercising regularly, and taking other simple steps to promote good health and prevent serious illness and heart disease.³²

Taking the all-natural combination of pantethine and plant sterols is one simple, yet powerful step, to keep our hearts and blood vessels healthy for a long, long time.

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