

# CHOLESTEROL

## Niacin vs. Statins

**N**iacin has a long historical use as lipid lowering agent for high cholesterol but was discarded in favor of prescription statins. The final decision, however, should be based on the evidence and 'nothing but the truth'. After reading about both, what is your verdict?

### First, A History Lesson

In 1954, Dr. Abram Hoffer made a novel and remarkable discovery about niacin – this B vitamin could lower high cholesterol. Still, niacin had one drawback. At therapeutic doses of up to 3000 mg daily, skin flushing seemed an intolerable side effect.



Cholesterol, the waxy lipid (fat) that you need for multiple benefits in the body has a dark side when it becomes sticky and hard, compromising vessel integrity and blocking blood flow. The result is an increased risk of coronary artery disease (CAD), heart attacks and strokes. In the past several decades, CAD related diseases have been the number one killer for both men and women, leading to much debate on how best to reduce the risks. In the beginning, it looked like controlling cholesterol was where to start. Enter the drug companies with their “magic bullets”.

The history of statins began with their introduction in 1987 as an agent for CAD by their ability to inhibit the enzyme in the liver that makes cholesterol. While the end result reduced total and low density lipoprotein cholesterol (LDL-C), the cost was decreased CoQ10, an important energy (and antioxidant) nutrient that uses the same pathways. The largest amount of CoQ10 is found in the heart (pumping 2000 gallons of blood daily through 60,000 miles of blood vessels requires a lot of energy!) The brain and other muscles require CoQ10 as well. Little wonder the side effect for statins include cognitive issues, fatigue and even muscle weakness. Still, over the years, newer forms of statins emerged. In 2002, a statin with a different mechanism of reducing cholesterol in the intestines was marketed as an “add-on” to the first statin. Besides the unwanted side effects, another problem with statins was their inability to substantially raise the protective form of high density lipoprotein cholesterol (HDL-C) so they acquired the help of a nutrient that could – niacin.

### The Changing Heart

Time and progress in medicine have changed our view of CAD. We now know that cholesterol control is only a small part of arterial and heart health. Blood vessel function is challenged from plaque encouraged by inflammation and oxidation of LDL-C, and oxidative damage to the vessels themselves.

We also know that LDL-C is not the “bad” guy. It is the most susceptible to “bad” changes in size and structure. Larger LDL-C particles are better. The addition of an adhesive protein – Lp(a) – makes it easy to stick to arterial walls and harder to remove. Statistically, a high Lp(a) is 10 times more likely to cause a heart attack than a high LDL-C. A suggested Lp(a) value for low risk is under 20 mg/dL and one higher than 40 mg/dL is considered a moderate CAD risk.

HDL-C is still the “good” guy, carrying away excess blood cholesterol to the liver but is a bigger factor in heart attack risk than previously thought. According to the Framingham Heart Study, heart attacks do not occur in individuals with a value of more than 70 mg/dL, despite LDL-C values, attesting to its heart protective role.

Finally, lowering inflammation supports blood vessels as high levels of both homocysteine and C-reactive protein (CRP) play a role in plaque accumulation. Again, a high CRP will increase the risk of heart attack despite a normal LDL-C. A CRP level of 3.0 mg/L puts you at high risk for developing CAD.



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## Cholesterol: Niacin vs. Statins

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### What is Niacin?

Niacin or nicotinic acid is one of two forms of B3, a member of the vitamin B family. B3's other form is niacinamide, which helps with osteoarthritis and blood sugar. This article will focus on niacin's role in cardiovascular disease. Even the National Cholesterol Education Program (set up in 1985 by the NIH) recognized niacin as a "drug" for cholesterol management. As with other nutrients, the government recommended doses are based on the amount needed to prevent disease or pellagra. The daily values of niacin are only 16 mg for males and 14 mg for females over the age of 14.

The one drawback patients did not like was an intense "itchy" flushing about 20-30 minutes after taking niacin, caused by an increase in blood flow to the skin surface. The sensation lasts about a half hour and seems to subside with continual use. That problem was solved with inositol hexanicotinate, a non-flush form considered safer, too (see **How & Why Experts Use Niacin** section). Another form that reduces flushing is a sustained or extended release but it stay in the liver longer and may raise liver enzymes. Also, doses over 3000 mg a day may alter blood glucose which can be remedied by taking a lower dose of 1000-2000 mg and still achieve favorable lipid results.



### Comparative Analysis

To continue our case, let's examine the evidence with two representative studies. The first is the 1991 Coronary Drug Project done at the Mayo Clinic Rochester with conclusions that niacin "was the most effective agent in achieving cholesterol-lowering (10% overall)" when evaluated with other lipid-lowering agents and estrogen. It was a multi-center trial from 1969 to 1975 of 1119 men aged 30-64 at the onset placed on niacin and 2789 on placebo. At the end of the five years, the mortality from heart attack in the niacin group was reduced 27% but a 10 year follow up post study showed mortality still 11% lower. "The data also suggested that patients with a higher baseline cholesterol experienced greater benefit from niacin therapy". During that study, compliance to niacin was affected by the flushing side effect.

In a 1994 study of 136 participants by Illingworth, lovastatin (Mevacor) challenged niacin. At the end of the 26 weeks, the statin reduced LDL-C by 32% compared to niacin's 23%. However, niacin increased HDL-C by 33%; lovastatin only 7%. Niacin also reduced Lp(a) by 35% *while lovastatin had no effect*. The researchers concluded that "lovastatin was more effective in reducing LDL-C" and "niacin was more effective in increasing HDL-C and reducing Lp(a) level". Given what was known in 1994, it looked like the stain scored better. By today's standards, niacin proved more beneficial in lowering CAD risk by altering several risk factors at once.



### How & Why Experts Use Niacin

What do health experts have to say? I've chosen these witnesses on Niacin's behalf.

Harvey Simon, M.D. responds to a niacin question in the Harvard Health Publication by saying, "In the doses needed to improve cholesterol, niacin is a drug and a potent one. On average, it can lower LDL cholesterol by 10-25%. Statins and other lipid-lowering drugs do even better but niacin outshines them all for lowering triglycerides levels (down 20-50%) and raising HDL cholesterol levels (up 15-35%)". Simon goes on to say, "Many people turn to niacin because they want to treat themselves" but cautions to "let your doctor know (and) monitor you to see if it's working".

Dr. Hoffer, the originator of niacin therapy for high cholesterol reports that niacin "was not simply a compound that lowered cholesterol but one that made cholesterol blood levels *normal*". More than 2000 studies have confirmed his original work and demonstrated the importance of HDL-C "as a marker of cardiovascular health" Hoffer goes on to say that "all the abnormal lipid fractions become more normal when subjected to niacin, making it the most effective substance known in this area". Like other health experts, Hoffer recommends taking a B complex to balance the high single B3 (niacin) therapy.

Michael Murray, N.D. states "the research on the safety and effectiveness of niacin is exceptional and in many respects far superior to that of the statin drugs. Niacin has been shown to reduce LDL cholesterol, Lp(a) lipoprotein, triglycerides and fibrinogen while simultaneously increasing HDL cholesterol". He warns that although niacin at therapeutic doses should be monitored by your health care professional; many will self-medicate and suggests that if you do, use the inositol hexanicotinate form as it has a "slightly better clinical results than standard niacin and it is much better tolerated in terms of flushing and long term side effects: Taking regular niacin at night might help you sleep through the flush. Murray adds that night dosing for any form may be helpful also as that is when the liver makes cholesterol.

Dr. Murray's Protocol: Take 500 mg for one week at night. Increase to 1000 mg the next week and 1500 mg the third week. After being on the 1500 mg dose for 2 months, have your doctor check your results with cholesterol and liver enzymes tests. Murray suggests testing every three months for the first year and annually after that (or as your doctor advises). *Please see medical disclaimer on next page.*

### Summary

There you have it: two methods, two results. In the case of which therapy lowers more cholesterol risk factors and does so to benefit the heart (and body) the most, what is your final verdict?



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## Cholesterol: Niacin vs. Statins

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### Resources

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*Medical Disclaimer: Niacin is only one piece of the cardiac puzzle. This information is not intended to substitute for your healthcare professional's advice nor to diagnose, treat, prevent or cure any medical condition.*

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