



HDL cholesterol, or "good" cholesterol, appears to scour the walls of blood vessels, cleaning out excess cholesterol. It then carries that excess cholesterol -- which otherwise might have been used to make the "plaques" that cause coronary artery disease -- back to the liver for processing. So when we measure a person's HDL cholesterol level, we seem to be measuring how vigorously his or her blood vessels are being "scrubbed" free of cholesterol.

HDL levels below 40 mg/dL result in an increased risk of coronary artery disease, even in people whose total cholesterol and LDL cholesterol levels are normal. HDL levels between 40 and 60 mg/dL are considered "normal." However, HDL levels greater than 60 mg/dL may actually protect people from heart disease. Indeed, for several years, doctors have known that when it comes to HDL levels, the higher the better.

How can We Increase Our HDL Levels?

Aerobic exercise. Many people don't like to hear it, but regular aerobic exercise (any exercise, such as walking, jogging or bike riding, that raises your heart rate for 20 to 30 minutes at a time) may be the most effective way to increase HDL levels. Recent evidence suggests that the duration of exercise, rather than the intensity, is the more important factor in raising HDL cholesterol. But any aerobic exercise helps.

Lose weight. Obesity results not only in increased LDL cholesterol, but also in reduced HDL cholesterol. If you are overweight, reducing your weight should increase your HDL levels. This is especially important if your excess weight is stored in your abdominal area; your weight-to-hip ratio is particularly important in determining whether you ought to concentrate on weight loss.

Stop smoking. If you smoke, giving up tobacco will result in an increase in HDL levels. (This is the only advantage I can think of that smokers have over non-smokers -- it gives them something else to do that will raise their HDL.)

Cut out the trans fatty acids. Trans fatty acids are currently present in many of your favorite prepared foods -- anything in which the nutrition label reads "partially hydrogenated vegetable oils" -- so eliminating them from the diet is not a trivial task. But trans fatty acids not only increase LDL cholesterol levels, they also reduce HDL cholesterol levels. Removing them from your diet will almost certainly result in a measurable increase in HDL levels.

Alcohol. With apologies to the American Heart Association, which discourages doctors from telling their patients about the advantages of alcohol: one or two drinks per day can significantly increase HDL levels. More than one or two drinks per day, one hastens to add, can lead to substantial health problems including heart failure -- and there are individuals who will develop such problems even when limiting their alcohol intake to one or two drinks per day.

Increase the monounsaturated fats in your diet. Monounsaturated fats such as canola oil, avocado oil, or olive oil and in the fats found in peanut butter can increase HDL cholesterol levels without increasing the total cholesterol.



Add soluble fiber to your diet. Soluble fibers are found in oats, fruits, vegetables, and legumes, and result in both a reduction in LDL cholesterol and an increase HDL cholesterol. For best results, at least two servings a day should be used.

Other dietary means to increasing HDL. Cranberry juice has been shown to increase HDL levels. Fish and other foods containing omega-3 fatty acids can also increase HDL levels. In postmenopausal women (but not, apparently, in men or pre-menopausal women) calcium supplementation can increase HDL levels.

What about a low-fat diet?

While Americans traditionally have ingested too much fat in the diet, and while limiting total fat in the diet is useful not only for cholesterol control but also for weight reduction, evidence is emerging that too little fat in the diet can be dangerous. A diet in which fat has all but been eliminated can result in a deficit in the essential fatty acids - certain fatty acids that are essential to life, but which the body cannot manufacture itself. Furthermore, ultra-low-fat diets have been reported to result in a significant reduction in HDL cholesterol in some individuals.

The best advice regarding fat in the diet appears to be this: 1) reduce the fat intake to 30 - 35% of the total calories in the diet - but probably no lower than 25% of total calories; 2) try to eliminate saturated fats and trans fats from the diet, and substitute monounsaturated and polyunsaturated fats instead. (That is, eliminate animal and dairy fat, and substitute unprocessed vegetable fats.) Such a diet will avoid the problems seen with an ultra-low-fat diet, and should help raise HDL cholesterol levels.

What about drugs for raising HDL cholesterol?

Drug therapy for raising HDL cholesterol levels has, so far, been less successful than for reducing LDL cholesterol. Statins, in particular, are often not very effective at increasing HDL levels.

Of the drugs used to treat cholesterol, niacin appears to be the most effective at raising HDL levels. Niacin is one of the B vitamins. The amount of niacin needed for increasing HDL levels are so high, however, that it is classified as a drug when used for this purpose. Furthermore, "niacin" takes several forms, including nicotinic acid, nicotinamide, and inositol hexaniacinate - and all of these are labeled as "niacin." Unfortunately, only nicotinic acid raises HDL cholesterol, and this drug can be difficult to take because of its propensity to cause flushing, itching and hot flashes. In general, taking niacin to treat cholesterol levels should be supervised by a doctor.

A three-drug regimen of niacin, cholestyramine, and gemfibrozil has been shown to increase HDL cholesterol substantially, but this drug combination can be particularly difficult to tolerate.



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Now that HDL levels are attracting more and more attention, several drug companies are attempting to develop new drugs aimed specifically at increasing HDL. Unfortunately, there have been early disappointments and it will be several years before we can expect to see such drugs on the market.

Sources:

Rosenson RS. HDL metabolism and approach to the patient with low HDL-cholesterol. UpToDate. May, 2007. (UpToDate.com)