



Natural Cholesterol Prescription

An article published in the *Journal of the American Medical Association* in 2003 demonstrated that diet can be almost as effective as prescription cholesterol medication in highly motivated people who can follow strict dietary guidelines. Specifically, the diet included plant sterols (1.0 g/1000 calories), soy protein (21.4 g/1000 calories), viscous fibers (9.8 g/1000 calories), and almonds (14 g/1000 calories). The following list includes these foods and others that have been shown to lower cholesterol. Try as many as you can incorporate in your diet to help lower your cholesterol and risk of heart disease.

1. Plant sterols incorporated in margarines can be substituted for butter and older margarines to block cholesterol absorption 50%-->reduce LDL 10-15%
 - a. Benecol (sitostanol) 2g daily
 - b. Take Control (β -sitosterol) 2-5 g 30 min before each meal
 - c. Smart Balance is a less expensive margarine with research showing cholesterol lowering properties
2. Oat bran decreases absorption of cholesterol and fat and slows carbohydrate absorption, keeping you full until lunch-->1/2 cup of oat bran or 1 cup (measured dry) oatmeal daily reduces cholesterol 3-5%
3. Psyllium (Metamucil) binds fat in gut-->reduces LDL 5-9%; can reduce side effects of Xenical, a prescription fat blocker; slows carbohydrate absorption
 - a. 3.4 g 3xdaily or 5.1g 2xdaily in 8 oz fluid
 - b. with Xenical, 6g with each dose 3xdaily
4. Soy protein is a low fat meat or dairy substitute that modulates lipid metabolism and helps prevent arteriosclerosis-->25-50 g daily lowers LDL 13%
5. Nuts used as healthy snacks as a replacement for less healthy chips, cookies, etc., have been shown to lower LDL cholesterol and raise HDL cholesterol
 - a. Almonds are the best studied, and may reduce LDL 1% for every 7g of nuts. 37-74g daily (1-2 hands full of dry roasted almonds without added oils) reduced LDL cholesterol 4.4-9.4% and reduced LDL:HDL ratio 7.8-12.0% (*Circulation*. 2002;106:1327).
 - b. Macadamia nuts in doses of 40-90g daily reduced LDL 3.0-5.3% and increased HDL 7.9% in people with high cholesterol (*J Nutr* 2003;133(4):1060-3).
 - c. Walnuts substituted for 35% of monounsaturated fats in a Mediterranean diet lowered LDL 5.9% (*Ann Intern Med* 2000;132(7):538-46)
 - d. Pecans 68g daily reduced LDL 9.4% but also reduced HDL in people with normal cholesterol (*J Am Diet Assoc* 2000;100(3):312-8). Replacing 20% of total calories in a Step I AHA Diet with pecans in people with high cholesterol reduced LDL 10.4% and raised HDL 2.5 mg/dL (*J Nutr* 2001;131(9):2275-9).

- e. Other healthy nuts with high amounts of monounsaturated fats include peanuts and pistachios.
6. Flaxseed acts as fiber supplement, provides alpha-linoleic acid, and reduces platelet aggregation-->1Tbsp whole or bruised seed 3x daily in bread or on salads reduces LDL 8-18%
 7. Olive oil contains oleic acid, palmitic acid, and linoleic acid-->essential fatty acids which decrease LDL oxidation and lower blood pressure. May use 2-3 Tbsp daily.
 8. Fish contains omega-3 fatty acids that act as anti-inflammatories and blood thinners to reduce heart disease, strokes, and triglycerides
 - a. 1-3 servings of fish weekly preferred
 - b. 3-4g fish oil supplements lower triglycerides--add vit E or garlic
 9. Yogurt contains Lactobacillus acidophilus (and maybe fructo-oligosaccharides) which may deconjugate bile salts-->1 cup daily reduces LDL 3-5%
 10. Garlic may act as a "weak statin," anti-inflammatory, blood thinner, and mild anti-hypertensive-->can lower LDL 4-12%
 - a. Kwai dried garlic powder 300-400mg 3x daily (1.3% alliin)
 - b. Kyollc aged garlic extract 600-7200mg daily (0.03% alliin)..
 - c. Raw garlic clove 1 daily (4q)

The following over the counter supplements are as strong as prescription medicines and require monitoring liver function. Do not use without medical supervision.

11. Niacin is a vitamin essential for lipid metabolism -->reduces LDL 10-25%, raises HDL 15-35%, and lowers triglycerides 20-50%
 - a. Dose 1-3g daily
 - b. Raises homocysteine 17-55%
 - c. Monitor sugar and liver
12. Red yeast is produced on rice fermented with Monascus purpureus yeast. It contains 8 mevinic statins, including the prescription drug lovastatin, which blocks cholesterol production in the liver. The FDA is currently investigating whether this should be regulated as a drug or a dietary supplement
 - a. Cholestin 600mg 2 pills 2x daily contains a total of 9.6mg statins (7.4mg lovastatin)
 - b. Equal efficacy to Zocor--treat and monitor as a prescription statin
 - c. Increased levels with grapefruit
 - d. As a statin, can lower CoQ10 levels, theoretically increasing risk of myopathy (clinical significance unclear). Can try replacing CoQ10 as UbiQGel 50mq 2-3x daily.

Sources:

JAMA. 2003;290(4):502-510&531-533.

PHARMACIST'S LETTER/PRESCRIBER'S LETTER NATURAL MEDICINES COMPREHENSIVE DATABASE. 4th ed., 2002.