

## Cholesterol and Supplements that Lower Cholesterol

### Cholesterol

Cholesterol is a fat-like substance that can both be produced by our body and obtained from food sources. A complete cholesterol profile shows the followings:

1. Low-density lipoprotein, or LDL, “bad cholesterol”: contributes to the cholesterol buildup and the narrowing of blood vessels. Just imagine a clogged water pipe – less blood is able to flow through and supply your heart.
2. High-density lipoprotein, or HDL, “good cholesterol”: helps to remove LDL away from arteries.
3. Triglyceride, or TG: another form of fat that stores excess energy from diet.

Having high level of “bad” cholesterol (LDL) and TC, and low level of “good” cholesterol (HDL) put you at high risk of heart disease and stroke – the No.1 cause of death in the United States. In recent years, increasing numbers of people are utilizing supplements in addition to lifestyle changes and prescription medications to prevent and manage elevated cholesterol. Although few natural products have been proved to improve cholesterol levels, some may be helpful. Which ones are worth a try?

### Fish Oil

Active ingredients: Omega-3 fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

Common uses: May reduce TG. May relieve symptoms of rheumatoid arthritis.

Dosing: For patients with heart disease, take 1 gram of EPA+DHA daily with meals; for patients with high triglyceride, take 2-4 grams of EPA+DHA daily with meals. It is generally best to start low and tape up dose slowly. Different products may contain different amount of EPA and DHA so that you may need to look carefully into the supplement facts.

Pros: Well studied and comparatively effective.

Cons: May cause fishy aftertaste, loose stools and heartburn. May not be safe for people with fish allergies. May interact with some blood-thinning medications such as warfarin, aspirin and clopidogrel.

### Krill Oil

Active ingredients: Lower concentration of EPA and DHA than fish oil.

Common uses: May lower TG, LDL, and may increase HDL.

Pros: An option for those who cannot tolerate fish oil. May be better absorbed.

Cons: Limited studies have been conducted. It remains unknown if krill oil has same effects as fish oil.

### Coenzyme Q-10 (CoQ10)

Active components: Ubiquinol.

Common uses: May help to treat congestive heart failure and statin-associated muscle pain. May improve blood sugar control in diabetes.

Pros: Well tolerated. An association between taking CoQ10 and improved heart function was found. It may ease statin-associated muscle pain.

Cons: May make warfarin less effective.

### Red Yeast Rice

Active component: Monacolin K, a substance that is chemically identical to the active ingredient in the cholesterol-lowering drug lovastatin.

Common uses: May lower TG and LDL.

Dosing: 1200 mg by mouth twice a day with food (2400 mg per day).

Pros: Studies suggest it is effective in lowering cholesterol.

Cons: May cause the same types of side effects and drug interactions as lovastatin.

Caution: Should not be used if the patient is taking statin drugs. Taking it might be dangerous because there is no way to determine the quality or quantity of the active ingredient present in the products.

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### **Policosanol**

Common uses: May lower TC, LDL, and may increase HDL

Dosing: 5-20 mg daily.

Pros: Well tolerated. It can be used along with statins because it has different mechanism of action.

Cons: Its efficacy is uncertain.

### **Flaxseed and Flaxseed Oil**

Active ingredients: soluble fiber and alpha-linolenic acid (ALA), one form of omega-3 fatty acid.

Common use: May lower cholesterol. May have a laxative effect.

Pros: Well tolerated. It can be cooked into bread or muffins.

Cons: May cause gas and loose stools. May interact with blood-thinning drugs.

Soy Protein (as a substitute for other high-fat protein sources)

Common Uses: May slightly lower LDL.

Pros: Safe for most people.

Other products that might help:

Garlic, artichoke extract; barley; blond psyllium; green tea extract; niacin; oat bran; plant stanols and plant sterols, etc.

Don't Forget, be sure to consult your doctor before you start any supplement. The supplement you choose might interact with other medications you take. Do not use supplements to replace conventional care or to postpone seeing doctors.

Reference:

American Heart Association

Mayo Clinic

Lexicomp

National Center for Complementary and Integrative Health

Class notes