Supplements to help manage total cholesterol, LDL and HDL

Pectin

COMMON NAME: Fruit Pectin

SCIENTIFIC NAME: Pectin

RECOMMENDED WITH CAUTION

LEVELS OF EVIDENCE

1

Recommended:
Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.

2

Recommended with Caution:
Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.

3

Not Recommended - Evidence:
Our team does not recommend this product because clinical trials to date suggest little or no benefit.

4

Not Recommended - High Risk:
Our team recommends against using this product because clinical trials to date suggest substantial risk greater than the benefit.

Evaluated Benefits

Lowered total cholesterol and LDL-cholesterol may reduce risk for cardiovascular disease in a viscosity-dependent mechanism.

Cleveland Clinic Wellness

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Source
Pectins are gel-forming polysaccharides from plant cell walls, especially found in apple and citrus fruits. Pectins are a type of soluble, viscous dietary fiber not digestible by humans. Depending on its molecular weight and degree of esterification, pectin can vary in its viscosity and gelling ability.

Indications/Population
Lowering LDL cholesterol and triglycerides

Mechanism of Action
When presented in a high-viscosity gel-forming preparation, pectin may bind bile acids in the intestine. This increases net excretion of bile acid in the feces. The reduced levels of reabsorbed bile acid stimulate bile acid synthesis in the liver. Uptake of LDL from the circulation is required to provide the cholesterol precursor for bile acid synthesis and thereby reduces total circulating cholesterol. Seventeen well-controlled clinical studies with fermentable soluble nonviscous fibers show no effect versus placebo on LDL and total cholesterol.

Side Effects
Glucose levels have shown to be increased after ingestion of pectin. Other side effects are bloating and diarrhea.

Dosing
6–30 grams daily in divided doses, dissolved in a small amount of water, and diluted with juice has been used in studies. An apple has only about 1 gram of pectin, so only the lowest dose is likely realistic.

The European Panel on Dietetic Products, Nutrition and Allergies concluded that consumption of 6 grams of pectin per day contributes to the maintenance of normal cholesterol levels. A 13% reduction of LDL cholesterol is seen when consuming 12–24 grams of pectin per day. Pectin is readily fermented, so relatively small doses (e.g., 6 grams) will likely be tolerated, but 12–24 may not be.

Drug Interactions/Cautions
Pectin is well tolerated with few reactions. There may be an issue with palatability with larger doses.

Notes
Pectin has “Generally Recognized as Safe” (GRAS) status in the U.S. and is safe for children and in pregnancy. It is considered a harmless food additive (dietary fiber) by the World Health Organization.

High DE (degree of esterification) and high MW (molecular weight) were important factors for cholesterol lowering. Source may also be important, as citrus and apple DE-70 pectin were more effective than OPF (orange pulp fiber) DE-70 pectin.

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