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ACHES & CLAIMS

## Researchers in Italy Found Bergamot Lowered Blood Cholesterol

In Some Studies, Daily Supplements Were Effective; Larger Independent Studies Are Needed



Bergamot fruit on the tree *RESERVEAGE NUTRITION*

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Jan. 19, 2015 4:35 p.m. ET

0 COMMENTS

**The Ache:** Common cholesterol-lowering drugs called statins can have unpleasant side effects, including muscle aches and weakness.

**The Claim:** An extract from a bitter, fragrant citrus fruit called bergamot, commonly known as a flavoring in Earl Grey tea, can lower cholesterol with minimal side effects, some scientists say. It also boosts good cholesterol, reduces fatty deposits in the liver and lowers blood sugar, they add.

The Verdict: Bergamot has been shown to lower cholesterol in at least four human studies published or presented at scientific meetings. But much of the work is authored by a group of Italian researchers who work closely with a company that sells the extract, scientists say. Larger, independent studies in other countries are needed to confirm the results, they say.

Bergamot fruit grows on sunny slopes in Southern Italy and are rich in substances called flavonoids, which likely are the reason for its beneficial effects says Arrigo Cicero, a scientist in the atherosclerosis and metabolic disease research unit of the University of Bologna. But he adds that he feels additional human studies are needed to prove efficacy.

Flavonoids are antioxidants, or substances some scientists believe reduce chemical reactions in the body that damage cells. Earl Grey tea likely contains too little bergamot to have a therapeutic effect, scientists say, though the tea is high in another class of antioxidant called catechins.

Bergamot supplements, often in 500 milligram or 650 milligram capsules or tablets, are intended to be taken before meals. In human studies, a bergamot extract was shown effective at a dose of 500 milligrams to 1,500 milligrams a day, according to published results.

In a monthlong study of 77 patients published in 2013 in the *International Journal of Cardiology*, 1,000 milligrams daily of bergamot extract lowered cholesterol from an average of 278 milligrams per deciliter of blood to 191.

The study also found that by adding bergamot researchers were able to reduce by half the dose of the cholesterol drug rosuvastatin without a reduction in efficacy, says study co-author Vincenzo Mollace, professor at the Magna Graecia University in Catanzaro, Italy. Dr. Mollace, a cardiologist, is a paid scientific consultant to Italy's Herbal & Antioxidant Derivatives Srl, which sells the extract for use in dietary supplements.

"The data looks very good," says David Frid, a staff physician in the section of preventive cardiology at the Cleveland Clinic. "But it would be beneficial for this to be reproduced [by another research group] in order to say that in fact this is a true cholesterol-lowering effect."



While Dr. Mollace’s study showed mild heartburn as the only side effect, larger long-term studies are needed to establish safety.

“I would tell a patient the caveat is, ‘If you want to try it, you need to be aware that we don’t really know its side effects,’ ” says Dr. Frid. In addition, he adds, statins have been shown to improve health outcomes, such as reducing heart attacks, while bergamot hasn’t yet met that rigorous test.

A glass of bergamot juice tastes like sour grapefruit, making capsules a palatable way to ingest a therapeutic dose, says Annie Eng, chief executive of HP Ingredients Inc., a Bradenton, Fla., company that sells its Bergamonte brand extract to about 30 U.S. dietary-supplement companies.

Some brands combine bergamot with other ingredients. Bergamot Cholesterol Support, a new product from Reserveage Nutrition LLC of Gainesville, Fla., combines the citrus extract with resveratrol, an antioxidant derived from grapes and Japanese knotweed.



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The company hasn't studied the combination, but it "logically it would make sense" that the two would work well together, says Rob Maru, the company's chief innovation officer.

The amount of plant flavonoids in dietary supplements with bergamot will vary significantly depending on the fruit itself and how it is processed, scientists say. BergaMet Mega from Australia's Nathealthsolutions Pty Ltd., is formulated to have the same potency of flavonoids as used in Dr. Mollace's studies, says Chief Executive Selwyn Barr.

Dr. Mollace, who serves as an unpaid scientific advisor to Nathealthsolutions, confirmed that BergaMet has the same concentration of flavonoids as the extract he studied.

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