

Commonly used vitamin could help produce 'good' cholesterol, researchers find

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(Medical Xpress) -- Maintaining healthy cholesterol levels can keep heart disease, heart attack and stroke away. And a commonly used vitamin could help by increasing production of “good” cholesterol in the body, researchers at the University of Florida College of Medicine-Jacksonville have found. The findings were published recently in the journal *Metabolism, Clinical and Experimental*.

Physicians have long prescribed a B-vitamin called nicotinic acid to help keep good [cholesterol levels](#) high. Early studies suggest that niacin prevents the removal of good cholesterol — known as high-density lipoprotein or HDL — from the body, and in so doing, raises the concentration of the substance. But the new results from studies of human cells suggest that niacin plays an even greater role, not just preventing removal, but actually boosting production of good cholesterol in the liver and small intestine.

“We’ve known the value of nicotinic acid for years, but this shows there could be even more benefits than we thought,” said the study’s lead author Michael Haas, a research associate professor of medicine.

A person’s cholesterol reading is made up of two major parts: HDL and low-density lipoprotein, also called LDL or “bad” cholesterol. HDL is responsible for moving cholesterol out of various tissues and into the liver so it can be flushed from the body. Doctors recommend keeping good cholesterol levels high and bad cholesterol levels low.

The body uses nicotinic acid to convert carbohydrates into energy. It is found in many over-the-counter multivitamin formulations and is sometimes prescribed on its own to lower triglycerides and increase good cholesterol.

But until now, researchers weren't quite sure whether niacin could actually increase good cholesterol levels.

To find definitive evidence, the UF researchers tested human liver and intestine cells in the first study of its kind. They found that nicotinic acid increased the activity of a gene that produces a protein called apolipoprotein A-1, which is the major component of good cholesterol in the blood. Not only that, the researchers were able to identify the specific region of the gene that was responsible for making new HDL.

The work was funded by a \$20,000 grant from the Endocrine Fellows Association to former UF fellow Dr. Abdul-Razzak Alamir.

“We have hoped for a long time that we would develop a medicine to raise the [good cholesterol](#). Unfortunately many people do not tolerate the side effect of the drug nicotinic acid,” said Dr. Stewart G. Albert, a professor of internal medicine at the St. Louis University School of Medicine, who was not involved in the research. “What Dr. Haas and his group have done is demonstrate how nicotinic acid can increase the body's ability to make the good [cholesterol](#). This may enable researchers to find other medications that will accomplish the same benefit with a lower rate of side effects.”

The other authors of the study are Dr. Arshag D. Mooradian, professor and chairman of the UF College of Medicine-Jacksonville department of medicine; Dr. Joe M. Chehade, a UF associate professor of internal medicine; Dr. Senan Sultan, a former UF fellow; and Dr. Norman C.W. Wong, a professor of medicine, biochemistry and molecular biology at

the University of Calgary.

Provided by University of Florida

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