Unsaturated fats, high-quality carbs lower risk of heart disease

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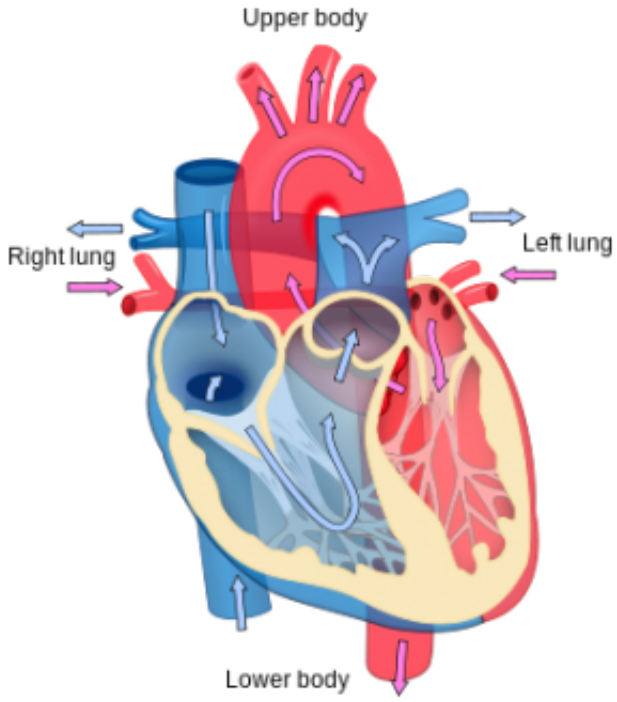

Heart diagram. Credit: Wikipedia

While eliminating saturated fats can improve heart health, a new study shows that it makes a difference which foods are used in their place. A study published today in the *Journal of the American College of Cardiology* shows that replacing saturated fats with unsaturated fats and high-quality carbohydrates has the most impact on reducing the risk of heart disease. When saturated fats were replaced with highly processed

foods, there was no benefit.

Previous research looked at the association between consumption of saturated fatty acids and the risk of coronary heart disease, but did not specify the replacement for saturated fat - such as unsaturated fats or the type of dietary carbohydrate. This is one of the first studies to distinguish between polyunsaturated fatty acids, monounsaturated fatty acids, and carbohydrates from whole grains or refined starches and added sugars.

"Many physicians could benefit from more in-depth nutritional knowledge to help them counsel their patients on changing their dietary practices in a way that will impact their health. In particular, we found that when study participants consumed less saturated fats, they were replacing them with low-quality carbohydrates such as refined grains that are not beneficial to preventing heart disease," said Frank B. Hu, M.D., Ph.D., study author and professor of nutrition and epidemiology at the Harvard T.H. Chan School of Public Health.

"Our findings suggest that when patients are making lifestyle changes to their diets, cardiologists should encourage the consumption of unsaturated fats like vegetable oils, nuts, and seeds, as well as healthy carbohydrates such as whole grains," Hu said.

Editor-in-Chief of the *Journal of the American College of Cardiology*, Valentin Fuster, M.D., Ph.D., FACC, further elaborated on the important role clinicians play in helping patients make healthy lifestyle choices. "All physicians and medical personnel who interact with patients should speak with them about the benefits of consuming unsaturated fats and healthy carbohydrates," Fuster said.

Researchers analyzed data from the Nurses' Health Study, a cohort of 121,701 female nurses enrolled in 1976, and the Health Professionals

Follow-up Study, a cohort of 51,529 men enrolled in 1986. For this study, researchers followed 84,628 women and 42,908 men who were free of diabetes, cardiovascular disease and cancer and documented 7,667 incidents of coronary heart disease.

Participants provided information on diet, lifestyle, medical history, and newly diagnosed diseases through questionnaires at baseline and every two to four years for 24 to 30 years. The questionnaire asked how often and in what quantity specific foods had been consumed in the past year and to specify the types of fats or oil used for frying, baking and at the table. The questionnaire was validated against biomarkers of dietary fatty acids.

Researchers noted that participants generally replaced calories from saturated fatty acids with calories from low-quality carbohydrates—such as white bread or potatoes—rather than calories from unsaturated fats found in vegetable oils, nuts and seeds or high-quality carbohydrates like those in whole grains. Replacing 5 percent of energy intake from saturated fats with an equivalent intake from either polyunsaturated fats, monounsaturated fats, or carbohydrates from whole grains was associated with 25 percent, 15 percent, and 9 percent lower risk of coronary heart disease, respectively. However, replacing 5 percent of energy intake from saturated fats with carbohydrates from refined starches or sugars was not associated with either increased or decreased risk of coronary heart disease.

Examples of the kinds of changes that Hu said could result in reduced risk of heart disease:

- Cooking with healthy fats such as canola oil, olive oil or other vegetable oils instead of butter, lard, and hard margarine.
- Exchanging snacks like potato chips and cookies for peanuts, almonds and olives.

- Making sandwiches with a whole wheat bun, avocados and chicken breast instead of large amounts of cheese and processed meats.

Study limitations included the observational nature that did not allow the study to prove causality and self-reported diet questionnaires cannot be completely accurate. However, the authors stated that their results were broadly consistent with those from randomized clinical trials, and the diet questionnaire was validated against fatty acid biomarkers.

In an accompanying editorial, Robert A. Vogel, M.D., Cardiology Section at the Department of Veterans Affairs Medical Center in Denver, said, "Healthfulness clearly lies in the quality or type of both fat and carbohydrate."

The study and editorial are part of a comprehensive Population Health Promotion issue of the *Journal of the American College of Cardiology* focusing on issues that broadly impact public health and the prevention of cardiovascular disease and related conditions. Population health is a strategic priority of the American College of Cardiology, which recently brought together experts from around the world to address issues such as smoking and nutrition in the context of developing public health strategies for improving population health.

More information: "Saturated fat as compared to unsaturated fats and sources of carbohydrates in relation to risk of coronary heart disease: A prospective cohort study," Yanping Li, Adela Hruby, Adam M. Bernstein, Sylvia H. Ley, Dong D. Wang, Stephanie E. Chiuve, Laura Sampson, Kathryn M. Rexrode, Eric B. Rimm, Walter C. Willett, Frank B. Hu, *Journal of the American College of Cardiology*, online September 28, 2015, DOI: 10.1016/j.jacc.2015.07.055