

Heart healthy diet: Low fat or low carbs?

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(PhysOrg.com) -- Losing weight, especially among adults who are very heavy to obese, is a good way to prevent the onset of atherosclerosis, the artery-thickening condition that leads to potentially deadly heart disease. A diet that is low in either fats or carbohydrates can help reduce weight. But which one is the more heart-healthy?

Shane Phillips, a University of Illinois at Chicago assistant professor of physical therapy, says preliminary evidence favors the low-fat approach, and he cautions against recently popular low-carbohydrate diets, which usually allow generous portions of meats and other foods that can contain a lot of fat.

"People have different opinions about healthy diets. Being overweight or obese is a risk factor. The question is, how do you lose weight in the most healthful manner?" Phillips asks.

Earlier, limited studies he conducted suggested that weight loss with carbohydrates might not fully protect the circulation. He is now going to study 60 young-to-middle age people in hopes of reaching more conclusive findings.

Phillips received a \$1.25 million grant from the National Heart, Lung and Blood Institute to put qualified volunteer subjects on six-week diets -- randomly chosen to get either low fat or low carbohydrate. All subjects will be clinically obese, with body-mass indexes between 30 and 39. All their breakfast, lunch and dinner meals will be pre-prepared.

While Phillips expects that everyone will lose weight, he hypothesizes that the low-fat diets will promote better body chemistry for healthier arteries. Blood samples will be taken every two weeks and tested for levels of chemicals linked to healthier [cardiovascular function](#).

Nitric oxide produced by the endothelium, the inner-lining of arteries, regulates stability which helps to keep blood pumping freely.

Atherosclerosis, closely linked to obesity, can reduce nitric oxide production while raising levels of reactive [oxygen species](#), a troubling invader that further scavenges remaining nitric oxide thereby compounding the problem of vascular health.

While weight loss -- regardless of what dietary route is taken -- should reduce the risk of atherosclerosis, Phillips hypothesizes that those on a low-fat diet will have better vascular endothelial function compared to those on the low-carbohydrate diets, and therefore will have reduced risk of [heart disease](#). He will check if low-carbohydrate diets also lower levels of the blood protein hormone adiponectin, which helps control the harmful reactive oxygen species.

"Is adiponectin a secret to how blood circulation is protected?" Phillips asked. "It is usually high and protective in lean individuals, and has been associated with obesity, where it's lower," he said. How diet may affect adiponectin levels and other markers of cardiovascular health and how these factors might protect small blood vessels is a previously unexplored question Phillips hopes to answer.

"We're looking for healthy ways to live," Phillips said. "Heart disease is a main killer. Can research uncover new ways that allow people to prevent it more effectively? If we know about certain aspects of a diet that affects vasculature, we hope to leverage it to a better treatment candidate."

Provided by University of Illinois at Chicago

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