

Losing belly fat, whether from a low-carb or a low-fat diet, helps improve blood vessel function

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Overweight people who shed pounds, especially belly fat, can improve the function of their blood vessels no matter whether they are on a low-carb or a low-fat diet, according to a study being presented by Johns Hopkins researchers at an American Heart Association scientific meeting in San Diego on March 13 that is focused on cardiovascular disease prevention.

In the six-month weight-loss study, Hopkins researchers found that the more belly fat the participants lost, the better their [arteries](#) were able to expand when needed, allowing more blood to flow more freely. The researchers also found that participants in the study who were on a low-carb diet lost about ten pounds more, on average, than those who were on a low-fat diet. Being overweight increases the [risk of cardiovascular disease](#), especially if the fat is accumulated in the belly above the waist.

"After six months, those who were on the low-carb diet lost an average of 28.9 pounds versus 18.7 pounds among those on the low-fat diet," says lead investigator Kerry J. Stewart, Ed.D., a professor of medicine at the Johns Hopkins University School of Medicine and director of clinical and research [exercise physiology](#) at the Johns Hopkins Heart and Vascular Institute.

Stewart and his colleagues studied 60 men and women who weighed an average of 215 pounds at the start of the program. Half of the

participants went on a low-carb diet while the others followed a low-fat diet. All took part in [moderate exercise](#) and their diets provided a similar amount of calories each day.

In order to evaluate the health of the participants' [blood vessels](#) before and after the weight loss program, the researchers conducted a blood flow test by constricting circulation in the [upper arm](#) for five minutes with a blood pressure cuff. With this type of test, when the cuff is released, a healthier artery will expand more, allowing more blood to flow through the artery. The researchers measured how much blood reached the fingertips before, during, and after the constriction of the artery. Stewart says this test can give an indication of the overall health of the vascular system throughout the body. The researchers found that the more belly fat a person had lost, the greater the blood flow to the finger, signaling better the function of the artery.

"Our study demonstrated that the amount of improvement in the vessels was directly linked to how much central, or [belly fat](#), the individuals lost, regardless of which diet they were on," says Stewart. "This is important since there have been concerns that a low-carb diet, which means eating more fat, may have a harmful effect on cardiovascular health. These results showed no harmful effects from the low-carb diet."

In the low-carb diet used in the study, up to 30 percent of calories came from carbs such as bread, pasta and certain fruits, while 40 percent was from fat consumed from meat, dairy products and nuts. In contrast, the low-fat diet consisted of no more than 30 percent of calories from fat and 55 percent from carbs.

Stewart notes that participants on the low-carb diet lost more weight and at a faster pace, on average, which has also been seen in several other studies. He says eating higher amounts of carbohydrates can slow down the rate of body fat loss while on a weight reduction diet.

The findings were consistent with early results presented by Stewart in June 2011 at the annual meeting of the American College of Sports Medicine in Denver. That initial report was based on results after participants in the study had lost their first 10 pounds. These longer-term results show that weight loss, along with exercise, is important for improving vascular health, and suggests following a [low-carb diet](#) rather than the conventionally recommended low-fat [diet](#) for [weight loss](#) is not a concern in terms of vascular health.

Provided by Johns Hopkins Medical Institutions

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