
Exercise helps after high-fat meal, researchers say

By Barb Berggoetz

If you need another reason to take a brisk walk or bike ride after a big dinner, Indiana University kinesiology researchers have one for you.

They found that physical activity after eating a high-fat meal not only reverses the damage to arteries but also improves their functioning compared to before the meal.

"What happens four hours after that high-fat meal is that your artery looks just like the arteries of a person who has heart disease," said Janet P. Wallace, professor in IU Bloomington's Department of Kinesiology and co-author of the study.

"What our study showed is that when you exercise after that meal, it doesn't look like a sick artery anymore," she said.

Wallace, along with doctoral student Jaume Padilla and other researchers, studied eight 25-year-olds who were physically active and healthy. They walked on treadmills for 45 minutes two hours after eating a 940-calorie breakfast of eggs, sausage patty and hash browns. The food had 48 grams of fat, including 16.5 grams of saturated fat and 4.5 grams of trans fat.

The same people also ate a breakfast of 945 calories that included no fat. It consisted of a large amount of cereal, skim milk and orange juice. The study tested the brachial artery because it is similar to the coronary arteries.

The research, conducted in the summer of 2005, is reported in the current issue of the European Journal of Applied Physiology.

Previous research has shown that high-fat meals cause the arteries to appear unhealthy during a four- to six-hour period after eating, generally just in time for the next meal, said Wallace.

During that time, known as the postprandial state, arteries lose the ability to expand in response to an increase in blood flow. If the artery stays in that condition for long periods, that's when cholesterol starts to build up.

The oxidation of high-fat meals causes stress markers that harm the arteries and contribute to heart disease, diabetes, Alzheimer's and cancer.

Healthy arteries can better withstand the trauma of high-fat meals or other causes of heart disease, she said.

Wallace said showing the impact of exercise soon after a high-fat meal has not been studied previously. "This is kind of cutting-edge," she said.

However, Wallace added, more research needs to be done to find out how sedentary people and those with diabetes and other health problems react to exercising after a high-fat meal. She also wants to vary the time of the exercise after a high-fat meal, although she believes exercise could take place more than two hours after a meal with the same impact.

The research results, though, shouldn't be interpreted as giving people the green light to eat high-fat meals, she said.

"You still shouldn't eat high-fat meals," Wallace said. "But if you do, make sure you exercise afterward."



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