Indulge in dark chocolate, open an artery Cardiovascular benefits

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Eating dark chocolate helps blood vessels work better, a small study in Greece has found, increasing the evidence that foods containing cocoa may protect against heart disease.

Scientists said they have demonstrated for the first time how chocolate improved the function of blood vessels, allowing them to dilate, thus preventing the formation of potentially damaging clots.

Charalambos Vlachopoulos, of Athens Medical School, told the annual meeting of the European Society of Cardiology that eating 100 grams of dark chocolate improved function in healthy young adults for at least three hours.

The heart-protecting properties of dark chocolate, which contains high levels of a kind of antioxidant called flavonoids, have been acknowledged for some time.

Last year, a group of Italian and British scientists found plain chocolate increased levels of antioxidants in the blood by nearly 20%. Milk chocolate did not have the same effect, however, possibly because milk interferes with the absorption process.

But the latest research sheds new light on how the mechanism might work, by protecting blood vessels from the damaging effects of unstable oxygen compounds called free radicals. Khosrow Adeli, a nutrition expert at Toronto's Hospital for Sick Children, says sweetened chocolates contain dangerously high levels of refined sugar and fructose and should be eaten in moderation. He says sweetened chocolate bars contain white sugar - the kind usually found on tables and added to coffee - and an artificial fructose syrup.

"We are finding it's the sugar and the fructose in these sweets that's the real health hazard," said Dr. Adeli, an obesity and diabetes researcher. "The sugar content tends to be lower in dark chocolate."

Yet David Lawrence Yeung, a nutrition expert at the University of Toronto, was hesitant about suggesting how often people concerned about their health should eat either dark or sweetened chocolate. "If you consider 2,000 calories a day as a guideline, and you can make it part of those 2,000 calories, then it's probably OK," he said.

The chocolate consumed in the study contained 74% cocoa.

The results showed that functioning of the endothelium, a thin layer covering the innermost surface of blood vessels, was improved in a group of 17 volunteers who ate dark chocolate during the study, but not in the group that ate no chocolate.

The diameter of the arm artery at rest was 0.15 millimetres wider an hour later for those who ate dark chocolate compared with those who did not. A separate measurement showed that the chocolate eaters had fewer signs of stiffening arteries.

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