

# Research identifies new link between tart cherries and risk factors for heart disease

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New research continues to link tart cherries, one of today's hottest "Super Fruits," to lowering risk factors for heart disease. In addition to lowering cholesterol and reducing inflammation, the study being presented by University of Michigan researchers at next week's American Dietetic Association annual meeting, found that a cherry-enriched diet lowered body weight and fat – major risk factors for heart disease.

In the study, at-risk, obese rats that were fed a cherry-enriched diet saw significant decreases in body weight and fat (especially the important "belly" fat with known risk for heart disease) while maintaining lean muscle mass. After twelve weeks, the cherry-fed rats had 14 percent lower body fat compared to the other rats who did not consume cherries (cherry-fed rats were approximately 54% body fat; rats eating the Western diet alone were 63% body fat). The researchers suggested cherry consumption could have an effect on important fat genes and genetic expression. According to the American Heart Association, being overweight or obese, in particular when the weight is concentrated in the middle, is a major risk factor for heart disease . Nearly two out of three Americans are overweight.

The animals were fed a "Western diet," characterized by high fat and moderate carbohydrate – in line with the typical American diet – with or without added whole tart cherry powder, as 1 percent of the diet. The study was funded by the Cherry Marketing Institute, which provided an unrestricted grant to the University of Michigan to conduct the research

and was not directly involved in the design, conduct or analysis of the project.

"Heart disease is the number one killer of Americans today, so it's important we continue researching ways people can improve their diet to help reduce key risk factors," said study co-author Dr. Steven F. Bolling, a cardiac surgeon at the University of Michigan Cardiovascular Center who also heads the U-M Cardioprotection Research Laboratory, where the study was performed. "We know excess body fat increases the risk for heart disease. This research gives us one more support point suggesting that diet changes, such as including cherries, could potentially lower heart disease risk."

Cherry-enriched diets in the study also reduced total cholesterol levels by about 11 percent and two known markers of inflammation – commonly produced by abdominal fat and linked to increased risk for heart disease. Inflammation marker TNF-alpha was reduced by 40 percent and interleukin 6 (IL-6) was lowered by 31 percent. In their genetic analysis, the researchers found that the cherry-enriched diets reduced the genes for these two inflammation compounds, suggesting a direct anti-inflammation effect. While inflammation is a normal process the body uses to fight off infection or injury, according to recent science, a chronic state of inflammation could increase the risk for diseases and may be especially common for those who are overweight or obese, at least in part because of excess weight around the middle. Researchers say the animal study is encouraging and will lead to further clinical studies in humans to explore the link between diet, weight, inflammation and lowering heart disease risk.

## **The Power of Eating Red**

Tart cherries, frequently sold as dried, frozen or juice, contain powerful antioxidants known as anthocyanins, which provide the bright, rich red

color. Studies suggest these colorful plant compounds may be responsible for cherries' anti-inflammatory properties and other health benefits.

This new research is the latest linking this red hot "Super Fruit" to protection against heart disease and inflammation. In fact, research suggests the red compounds in cherries that deliver the anti-inflammatory benefits may also help ease the pain of arthritis and gout. There have been more than 65 published studies on the potential health benefits which can be found in the Cherry Nutrition Report posted on [www.choosecherries.com](http://www.choosecherries.com).

Ref: Seymour EM, Lewis A, Kirakosyan A, Bolling S. The Effect of Tart Cherry-Enriched Diets on Abdominal Fat Gene Expression in Rats. American Dietetic Association FNCE 2008.

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