

# A little belly fat can double the risk of death in coronary artery disease patients

May 2 2011

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One of the largest studies of its kind has found that people with coronary artery disease who have even a modest beer belly or muffin top are at higher risk for death than people whose fat collects elsewhere. The effect was observed even in patients with a normal Body Mass Index (BMI). The findings of this Mayo Clinic analysis are published in the May 10 issue of the *Journal of the American College of Cardiology*.

Researchers analyzed data from 15,923 people with coronary artery disease involved in five studies from around the world. They found that those with coronary artery disease and central obesity, measured by waist circumference and waist-to-hip ratio, have up to twice the risk of dying. That is equivalent to the risk of smoking a pack of cigarettes per day or having very [high cholesterol](#), particularly for men.

The findings refute the obesity paradox, a puzzling finding in many studies that shows that patients with a higher BMI and chronic diseases such as coronary artery disease have better survival odds than normal-weight individuals.

"We suspected that the obesity paradox was happening because BMI is not a good measure of body fatness and gives no insight into the distribution of [fat](#)," says Thais Coutinho, M.D., the study's lead author and a cardiology fellow at Mayo Clinic. "BMI is just a measure of weight in proportion to height. What seems to be more important is how the fat is distributed on the body," she says.

Francisco Lopez-Jimenez, M.D., the project's lead investigator and director of the Cardiometabolic Program at Mayo Clinic, explains why this type of fat may be more harmful: "Visceral fat has been found to be more metabolically active. It produces more changes in cholesterol, [blood pressure](#) and [blood sugar](#). However, people who have fat mostly in other locations in the body, specifically, the legs and buttocks, don't show this increased risk."

The researchers say physicians should counsel [coronary artery disease](#) patients who have normal BMIs to lose weight if they have a large [waist circumference](#) or a high waist-to-hip ratio. The measure is very easy to use, Dr. Coutinho says: "All it takes is a tape measure and one minute of a physician's time to measure the perimeter of a patient's waist and hip."

The research subjects were diverse, coming from studies in the U.S. (Rochester, Minn. and San Francisco, Calif.), Denmark, France and Korea. The inclusion of different ethnic groups makes the study more applicable to the real world, Dr. Coutinho says.

Provided by Mayo Clinic

Citation: A little belly fat can double the risk of death in coronary artery disease patients (2011, May 2) retrieved 6 May 2024 from <https://medicalxpress.com/news/2011-05-belly-fat-death-coronary-artery.html>

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