

Apple shaped obesity as bad for heart as other obesity

11 March 2011



(PhysOrg.com) -- An international study of 220,000 people has challenged the idea that obese people who have an "apple shape" (fat deposits on the middle section of the body) are at higher risk of heart attacks and strokes than obese people with other types of fat distribution.

These are the conclusions of an Article published Online First and in an upcoming Lancet, from the Emerging Risk Factors Collaboration, a consortium of 200 scientists from 17 countries led from the University of Cambridge, UK.

Some earlier studies had claimed that people with "central [obesity](#)" (as assessed by the ratio of the waist to hip circumference, or "waist-to-hip" ratio) have 3 times greater risk of heart attack than people with general obesity (as assessed by the body-mass index (BMI), or the weight divided by the height squared). However, these earlier studies had major design limitations.

The current study involved over 220,000 adults, each monitored for almost a decade, of whom over 14,000 developed a heart attack or stroke during monitoring. The researchers confirmed that obesity

is a major determinant of [cardiovascular disease](#), but that body mass index (BMI), waist circumference, and waist-to-hip ratio each had a similar impact on the risk of subsequent heart attack and strokes.

A further finding of this study is that BMI, waist circumference, and waist-to-hip ratio, whether assessed singly or in combination, do not improve cardiovascular disease risk prediction in people in developed countries when additional information is available for systolic blood pressure, history of diabetes, and lipids.

This result highlights the value of GPs continuing to measure blood cholesterol and blood pressure levels. The findings should also help guide medical practice worldwide because national and international guidelines have provided differing recommendations about the value of clinical measures of obesity for prediction of cardiovascular disease risk in primary prevention.

The authors conclude: "Whether assessed singly or in combination, body-mass index, waist circumference, and waist-to-hip ratio do not improve prediction of first-onset cardiovascular disease when additional information exists on blood pressure, history of diabetes, and cholesterol measures"; This finding applies to a wide range of circumstances and clinically relevant subgroups."

But they add: "The main finding of this study does not, of course, diminish the importance of adiposity as a major modifiable determinant of cardiovascular disease."

In a linked Comment, Dr. Rachel R Huxley and Dr. David R Jacobs Jr, School of Public Health, University of Minnesota, conclude: "BMI used with good clinical judgment is highly appropriate in adults because it is so strongly associated with chronic disease risk, although we caution that it is

correlated with height in children. Many overweight or obese adolescent, young adult, and middle-aged individuals with few risk factors for cardiovascular disease will develop that risk relatively soon, so BMI should serve as an early warning, both to them and their general practitioners. But discriminating which overweight individuals without current risk factors for cardiovascular disease will go on to develop those risk factors, and ultimately clinical cardiovascular disease, remains a challenge-here, blood tests continue to be helpful."

Provided by University of Cambridge

APA citation: Apple shaped obesity as bad for heart as other obesity (2011, March 11) retrieved 7 July 2022 from <https://medicalxpress.com/news/2011-03-apple-obesity-bad-heart.html>

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