

Obesity and the Heart

The definition of obesity is based on **body mass index (BMI)**, a number calculated from a person's height and weight.

A normal BMI is between 18 and 25, and a BMI higher than 30 is considered obese. Obesity has been increasing as a problem in the United States, and currently more than 30% of US adults are obese. Obesity has been linked to many different health concerns, including heart disease, diabetes, sleep apnea, cancer, and arthritis.

Heart Problems Related to Obesity

Several different types of heart problems are related to obesity.

Coronary artery disease: Obesity is a risk factor for coronary artery disease (CAD), which results from cholesterol plaque buildup in the arteries of the heart. Although obesity is linked to many other risk factors for CAD, such as diabetes, high cholesterol, high blood pressure, and metabolic syndrome, obesity is also a risk factor for CAD. The risk for CAD is higher in people with "central" or "visceral" obesity that is concentrated in the abdomen.

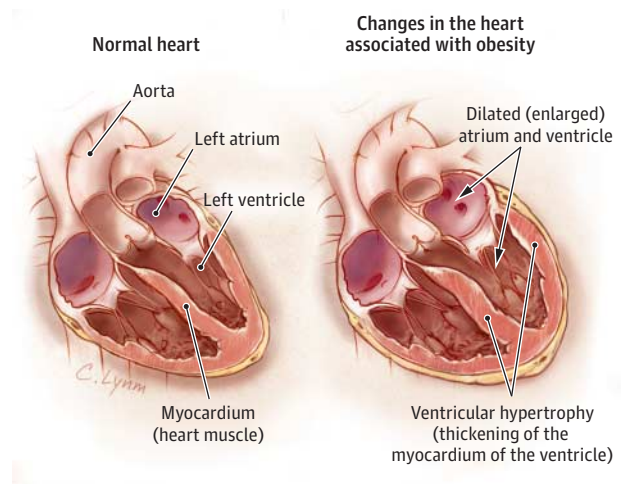
Heart failure: Obesity is a risk factor for heart failure even in people without CAD. The exact way in which obesity might cause heart failure in the absence of CAD is not known, but there are 2 main explanations. First, obese individuals tend to have greater amounts of blood, which makes the heart pump harder and can lead to heart failure over time. Because the heart works harder, its muscle size increases, a condition called ventricular hypertrophy (see Figure). Second, obesity is linked to **sleep apnea**, which causes lung problems as well as high blood pressure, both of which can eventually lead to heart failure.

Atrial fibrillation: Many studies have shown that obesity is a risk factor for atrial fibrillation, a type of abnormal heart rhythm. In many cases, atrial fibrillation is seen in heart failure. Therefore, the pathways among obesity, heart failure, and atrial fibrillation are all closely related. This issue of *JAMA* has an article describing how weight loss can reduce problems related to atrial fibrillation.

Sudden cardiac death: Some studies have shown that obesity is linked to a higher chance of sudden cardiac death, even in individuals without CAD, heart failure, or other types of heart disease.

Prevention and Treatment

Heart problems related to obesity can be improved or even resolved with weight loss. A healthy diet combined with aerobic exercise should be the first approach to weight loss, but if these lifestyle modifications are not effective, bariatric surgery (gastric bypass or banding) may be an option. Talk to your doctor if you have questions or concerns about heart problems related to obesity.



FOR MORE INFORMATION

- American Heart Association
http://www.heart.org/HEARTORG/GettingHealthy/WeightManagement/Obesity/Obesity-Information_UCM_307908_Article.jsp

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Author: Jill Jin, MD, MPH

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Abed HS, Wittert GA, Leong DP, et al. Effect of weight reduction and cardiometabolic risk factor management on symptom burden and severity in patients with atrial fibrillation: a randomized clinical trial. *JAMA*. doi:10.1001/jama.2013.280521.

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