

# Metabolic surgery cuts likelihood of recurrent and fatal heart attacks

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Metabolic surgery patients with a history of coronary artery disease were about two times less likely to have a recurrent and fatal heart attack or develop systolic heart failure compared to closely matched patients who did not have the surgery, according to a new study from Cleveland Clinic Florida researchers who presented their findings today at the 36th American Society for Metabolic and Bariatric Surgery (ASMBS) Annual Meeting at [ObesityWeek 2019](#).

Patients who did not have metabolic or [bariatric surgery](#) were 1.87 times more likely to develop [systolic heart failure](#), compared to those who had [surgery](#). The study also found that metabolic surgery had a protective effect against dying from recurrent myocardial infarction or [heart attack](#), with the surgical patients having two and half times less risk compared to patients who never had metabolic or bariatric surgery. A history of diabetes, which improves in most patients after metabolic surgery, considerably increased the probability of developing systolic [heart](#) failure in those with a history of previous myocardial infarction.

The study compared the cardiovascular outcomes of about 8,200 metabolic surgery patients with more than 79,000 nonsurgical patients with severe obesity and a history of [heart disease](#) using the National Inpatient Sample (NIS), the largest all-payer inpatient healthcare database. Nearly half of the metabolic surgery patients also had a history of some form of diabetes and 73.3 percent had hypertension, while the nonsurgical patients had higher rates of both diseases, which are risk factors for heart disease. Obesity is also a major risk factor heart disease and fatal heart attacks. All patients had a body mass index (BMI) of 35 or higher.

"Our findings suggest for the first time, that bariatric surgery can prevent the development of systolic heart failure and remarkably reduce death from recurrent myocardial infarction or heart attack

in patients with a higher cardiovascular risk than the average population," said study author David Funes, MD, research fellow at the Bariatric and Metabolic Institute at the Cleveland Clinic Weston, Florida.

Systolic heart failure occurs when the heart beats with too little force to push enough blood into circulation to meet the body's needs for blood and oxygen. According to the U.S. Centers for Disease Control and Prevention (CDC), about 5.7 million adults have heart failure and about half of people who develop the condition die within five years of the diagnosis. The American Heart Association estimates one in five people who have a heart attack will be readmitted to the hospital for a second one within five years. Each year, there are about 335,000 recurrent heart attacks in the United States. Heart disease is the nation's No. 1 cause of death.

"Metabolic surgery has been proven to have significant cardiovascular benefits and needs to be considered as part of the treatment plan for patients with severe obesity and coronary artery disease," said Eric J. DeMaria, MD, President, ASMBS and Professor and Chief, Division of General/Bariatric Surgery, Brody School of Medicine, East Carolina University Greenville, NC, who was not involved in the study. "The key is to treat obesity sooner rather than later to slow the progression of heart [disease](#), reduce other [risk factors](#) including hypertension and diabetes, and preserve heart function."

The Centers for Disease Control and Prevention (CDC) reports 93.3 million or 39.8 percent of adults in the U.S. had obesity in 2015-2016. The ASMBS estimates about 24 million have severe obesity, which for adults means a BMI of 35 or more with an obesity-related condition like diabetes or a BMI of 40 or more. According to the ASMBS, 228,000 bariatric procedures were performed in the U.S. in 2017, which is about 1 percent of the population eligible for surgery based on BMI.

Metabolic/bariatric surgery has been shown to be the most effective and long-lasting treatment for [severe obesity](#) and many related conditions and results in significant weight loss. The Agency for Healthcare Research and Quality (AHRQ) reported significant improvements in the safety of metabolic/bariatric surgery due in large part to improved laparoscopic techniques. The risk of death is about 0.1 percent and the overall likelihood of major complications is about 4 percent. According to a study from the Cleveland Clinic's Bariatric and Metabolic Institute, laparoscopic bariatric surgery has complication and mortality rates comparable to some of the safest and most commonly performed surgeries in the U.S., including gallbladder surgery, appendectomy and knee replacement.

Provided by American Society for Metabolic and Bariatric Surgery

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