

Losing weight substantially reduces atrial fibrillation

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Obese patients with atrial fibrillation who lost at least 10 percent of their body weight were six times more likely to achieve long-term freedom from this common heart rhythm disorder compared to those who did not lose weight, according to a study presented at the American College of Cardiology's 64th Annual Scientific Session.

The study is the first to track the long-term effects of [weight loss](#) and the degree of [weight](#) fluctuation on [atrial fibrillation](#) burden. Patients who lost more weight and maintained a more stable weight over four years showed marked reductions in atrial fibrillation burden and severity, the study's primary endpoints.

"Previous studies have shown that weight management can reduce atrial fibrillation symptoms in the short term and improve outcomes of ablation [a surgical treatment for atrial fibrillation]," said Rajeev Pathak, M.D., a cardiologist and electrophysiology fellow at the University of Adelaide, Adelaide, Australia and the study's lead author. "We sought to shed light on the long-term outcomes of sustained weight loss, the effects of the amount of weight lost and the impact of changes in weight over time."

An estimated 5.6 million U.S. adults have atrial fibrillation, which can cause episodes of weakness, shortness of breath and palpitations and increases the risk of more serious problems such as stroke. Obesity, seen in more than one-third of U.S. adults, is associated with an increased risk of atrial fibrillation.

"We found that sustained weight loss is achievable in [obese patients](#) and that it can significantly reduce the burden of atrial fibrillation," Pathak said. "Weight loss also led to favorable changes in cardiovascular risk factors such as high blood pressure, obstructive sleep apnea and diabetes, along with improvements in the structure and function of the heart."

Researchers enrolled 355 participants in a dedicated weight loss clinic and tracked their health annually for an average of four years. All participants were obese and had atrial fibrillation at the start of the study. To encourage weight loss, the clinic used a motivational, goal-directed approach that included three in-person visits per month, detailed dietary guidance, low-intensity exercise, support counseling and maintenance of a daily diet and physical activity diary.

Participants returned to the clinic annually for a health exam and atrial fibrillation monitoring. To assess the frequency, duration and severity of symptoms, patients completed questionnaires and wore a Holter monitor, a machine that tracks the heart's rhythms, for seven days. An echocardiogram, a sonogram of the heart, was also conducted to assess measures of heart health including the volume of the left atrium and the thickness of the left ventricular wall.

After an average of four years, 45 percent of patients who lost 10 percent or more of their body weight and 22 percent of patients who lost 3 to 9 percent of their weight achieved freedom from atrial fibrillation symptoms without the use of any atrial fibrillation surgery or medication. Only 13 percent of patients who lost less than 3 percent of their [body weight](#) were free of symptoms without these treatments. Even with the use of surgery or medication, those who lost more weight were substantially more likely to achieve freedom from atrial fibrillation symptoms.

Sustained weight management and a linear weight loss trajectory were

also associated with greater freedom from atrial fibrillation. Patients who lost and then regained weight, causing a fluctuation of more than 5 percent between annual visits, were twice as likely to have recurrent rhythm problems than those who did not experience such fluctuations.

Weight loss was also associated with significant beneficial structural changes in the heart and significantly improved other markers of heart health including blood pressure, cholesterol and blood sugar levels. In an analysis that took all of these factors into account, patients who lost at least 10 percent of their weight were six times more likely to achieve freedom from atrial fibrillation than patients who lost less than 3 percent of their weight or gained weight.

Patients with permanent atrial fibrillation, a previous ablation or a severe medical illness were excluded from participating in the study. While the researchers used standardized procedures and follow up to reduce bias in the patient selection and evaluation process, all [patients](#) voluntarily opted to participate in the [weight loss program](#) and this may contribute to some level of bias, Pathak said. Future studies that involve a more diverse patient population could help to further refine understanding of the relationships between obesity and atrial fibrillation.

Provided by American College of Cardiology

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