

Weight is significant factor in the recurrence of atrial fibrillation, research finds

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This is an image of a weight scale. Credit: CDC/Debora Cartagena

Researchers have found that the recurrence of atrial fibrillation increases in patients who are overweight and decreases when patients are able to lose weight, and keep it off, following a cardiac ablation, according to two new studies.

Though the outcomes of these studies seem like common sense, Jared

Bunch, MD, heart-rhythm specialist and director of electrophysiology at the Intermountain Medical Center Heart Institute in Salt Lake City, and lead researcher in the studies, says these findings are significant and will allow him to better treat his [patients](#) and prevent long-term cardiac events.

"Cardiac ablation, which is a procedure that corrects heart rhythm irregularities, remains the most aggressive way we treat [atrial fibrillation](#)," said Dr. Bunch. "Despite advances in the technology, approximately 30 percent of patients need a repeat procedure to remain atrial fibrillation-free. Both physicians and patients often ask what else can be done to make the procedure more effective and the results from these studies give us a convincing answer.

"Since one of the most common causes of atrial fibrillation in the United States is obesity, we wanted to confirm if [weight](#) loss would improve ablation success," he said.

Atrial fibrillation is a rapid chaotic heartbeat involving the upper two heart chambers, which causes poor blood flow throughout the body. Some of its common causes include high blood pressure, sleep apnea, diabetes, heart attacks, heart failure, inactivity, and heart defects you're born with.

Researchers have long known that obesity is also a common cause of atrial fibrillation, and a dominant driver in its recurrence, but the specifics on what weight limit has the most negative effects or how much weight needs to be lost and kept off isn't known.

Dr. Bunch will present his findings at the upcoming 2015 American Heart Association Scientific Sessions in Orlando on Sunday, Nov. 8, at 9 a.m. EDT.

In the first study, Dr. Bunch and his team wanted to know what effect weight loss would have on the recurrence of atrial fibrillation. He hypothesized that a patient's long-term outcomes after AF ablation will be better for obese patients who achieve sustained weight loss.

"This study shows one of the most powerful ways to improve outcomes after a [cardiac ablation](#) is in the patient's control," said Dr. Bunch. "In patients who are overweight at the time of their ablation, losing 10 pounds or more leads to significant improvements in the ablation success rates.

"As with all heart conditions, losing weight is only one piece of the puzzle. The patients also have to keep the weight off for up to a year. Patients who quickly gained the weight back or even gained more than they weighed at their ablation had the worst outcomes."

Over the course of three years, Dr. Bunch followed more than 400 patients who had had the ablation procedure. He separated his patients into three separate groups: Patients who lost 3 percent of their body weight, those who maintained their body weight, and those who gained 3 percent of their body weight.

The overall takeaway was that patients who maintained their weight and those who gained weight were more likely to have AF recurrence compared to those who lost weight. Dr. Bunch also found that patients who initially lost weight, but then gained it back, had the highest rates of AF recurrence.

In the second study, Dr. Bunch studied a gap in current research about what effects weight in general has on the recurrence of atrial fibrillation. Being overweight is a risk factor for AF, and there are tremendous efforts underway to help people lose weight. However, little is known about the point at which weight loss may be harmful for the heart.

In multiple long-term studies, patients with the highest risk for heart disease and death are the severely underweight and overweight. It's unknown if these weight trends also apply to people with atrial fibrillation.

"We know people who are severely overweight and underweight are more likely to die in general and die of cardiac disease," he said. "With atrial fibrillation, obesity drives the disease. We try to have people lose weight to reduce their risk of atrial fibrillation recurrence, but we don't know if there's a tipping point at which weight loss may actually cause harm in relation to atrial fibrillation."

Over the course of three years, Dr. Bunch studied more than 1,500 patients and separated them into different segments based upon their body mass index (BMI): less than 20, 21-25, 26-30, and greater than 30 kg/m². He found that long-term death rates tended to increase inversely with BMI status and heart failure rates were greatest in the highest and lowest BMI groups. At the same time, atrial fibrillation recurrences after ablation decreased as the BMI decreased in an almost linear manner.

"We found that when it comes to atrial fibrillation, weight loss in general appears to be beneficial across all levels," Dr. Bunch said. "However, people who become underweight despite having lower rates of atrial fibrillation have higher rates of stroke and death, similar to people who are very overweight.

"This study tells us that [weight loss](#) in moderation is helpful, but at the same time, we need to focus on other drivers of cardiac disease and death as well. For example, people need to become more active, exercise daily, use blood thinners that protect them as much as possible from stroke, and be mindful, even if they are very slender, of the possibility of other [heart](#) diseases that may develop," he added.

Provided by Intermountain Medical Center

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