

Liver transplant, weight-loss surgery combination benefits obese patients in long term

2 October 2018, by Heather Carlson Kehren

Obese patients who underwent a life-saving liver transplant and weight-loss surgery at the same time were better able to keep the weight off long term and had fewer metabolic complications than those who lost weight on their own before undergoing a liver transplant, Mayo Clinic research shows. The findings were recently published in *Hepatology*.

"This study shows that the combined approach of [liver transplantation](#) and weight-loss surgery is safe and effective over the long term," says senior author Julie K. Heimbach, M.D., a transplant surgeon and division chair of Transplant Surgery at Mayo Clinic.

As obesity rates in the U.S. have soared, so have the number of people diagnosed with nonalcoholic fatty liver disease—a range of [liver diseases](#) that affects people who drink little to no alcohol and results in too much fat stored in [liver cells](#). An estimated 80 to 100 million Americans have been diagnosed with this [chronic liver disease](#). Historically, severely obese patients who are unable to lose the necessary weight have been denied access to a liver transplant because obesity can increase surgical risks and is a potential risk factor for post-transplant complications. In other instances, the transplants are performed without addressing a patient's weight problem, which can lead to liver disease in the future and jeopardize the success of the transplant.

The study involved a total of 49 adults with a body mass index of more than 35 kg/m² who were referred to Mayo Clinic for a liver transplant since 2006. Of those patients, 36 were able to lose enough weight to achieve a BMI of less than 35 kg/m² and underwent a liver transplant alone. Overall, there were 29 patients who were unable to lose sufficient weight prior to transplant and thus

underwent a combined liver transplant and sleeve gastrectomy, with 13 of them being at least three years or more from the time of the surgery, which was the focus of the study. Sleeve gastrectomy is a type of weight-loss surgery that reduces the size of the stomach by about 80 percent.

Researchers found that, while patients who underwent the liver transplant alone experienced significant weight loss before surgery, they steadily gained weight afterwards. The percentage of total body weight gained ended up being higher among those patients who had the liver transplant alone compared to those who underwent both a liver transplant and [sleeve gastrectomy](#). Three years after surgery, patients who had the liver transplant alone maintained a weight loss of a median of 3.9 percent of their total body weight compared to 34.8 percent for patients who had the transplant and [weight-loss surgery](#). In addition, those patients who had the dual surgery were less likely to have high blood pressure, insulin resistance and fatty liver. They needed less medication to lower blood pressure and cholesterol.

"Obesity-related liver disease is one of the most common and rapidly increasing reasons that people need a [liver transplant](#). Even though most obese people will not need a transplant, for those who develop advanced liver disease, we need to have an approach that treats not only the liver disease but the cause of the liver disease," says Dr. Heimbach.

Provided by Mayo Clinic

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