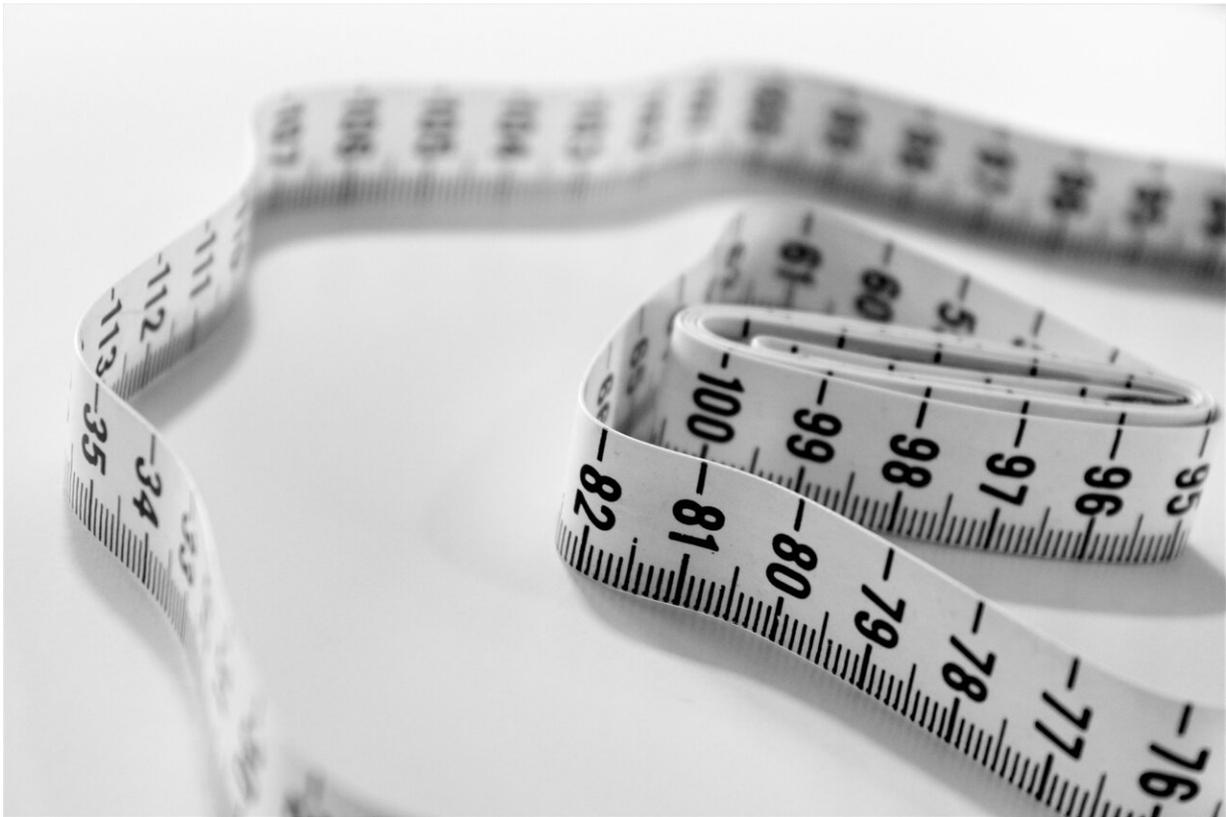


Pediatric patients have good 10-year results from gastric sleeve weight loss procedure

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Results from a 10-year study of children and adolescents who underwent a common weight loss operation to treat severe obesity show they safely have long-lasting major weight loss and improvement of their obesity-

related medical problems without stunting their growth in height. The study, involving the longest known follow-up of pediatric patients after laparoscopic sleeve gastrectomy, is published online by the *Journal of the American College of Surgeons* ahead of print.

Insufficient information existed on results of this weight loss operation in children and adolescents beyond five years, according to study authors from Saudi Arabia, where the research took place. Also called the gastric sleeve procedure, sleeve gastrectomy is now more popular than gastric bypass because of lower complication rates.

During this operation, surgeons divide and remove part of the stomach, leaving the remaining stapled portions to create a "sleeve" in the form of a banana-sized stomach. This smaller tubelike new stomach enables patients to eat less food and lose weight. It's also effective because surgeons remove the part of the stomach containing the "hunger" hormone that stimulates appetite.

"Lack of long-term data and some pediatricians' fears that [bariatric surgery](#) might affect children's linear growth has led to worldwide resistance to performing weight loss procedures for children below 14 or 15 years of age," said principal author Aayed R. Alqahtani, MD, FACS, FRCSC, professor of bariatric and minimally invasive surgery at King Saud University and chief executive officer of New You Medical Center in Riyadh, Saudi Arabia.

Their long-term study results showed that patients lost nearly 30 percent of their total weight, on average, and had widespread reversal of type 2 diabetes and key heart disease risk factors, with no procedure-related deaths or major complications, Dr. Alqahtani reported.

"Our findings present clear evidence that should remove hesitance to perform bariatric surgical treatment in children and young adolescents

who could benefit from the operation," he said. "We have a proven solution for severe obesity and its comorbidities [related diseases]."

Largest study of pediatric sleeve gastrectomy

This study is the largest of its kind to date in this age group, with more than 2,500 participants aged 5 to 21 years, reported Dr. Alqahtani. Nearly one-third were under age 15 at the time of their operation, which he said is younger than in many U.S. studies.

All patients had [severe obesity](#), which is at least 120 percent of the 95th percentile for age and sex on the Centers for Disease Control and Prevention's growth charts.

The patients reportedly had been unable to lose substantial weight despite a six-month weight loss program involving dietary and behavioral counseling.

Between 2008 and 2021, the patients underwent sleeve gastrectomy. Before the operation, approximately one in 10 patients had type 2 diabetes or abnormal lipids (blood fats). High blood pressure was even more prevalent at 15 percent of these young patients. Obesity, which affects 18.5 percent of U.S. youth, raises the risk of these serious medical conditions as well as [fatty liver disease](#), sleep apnea, and depression, among others.

Long-lasting weight loss and health improvement

The pediatric patients continued to have good results seven to 10 years after the operation:

- They maintained an average 71 percent loss of excess weight.

- Type 2 diabetes resolved in more than seven of every 10 affected patients.
- Lipids and blood pressure became normal in more than 57 percent each of patients who previously had abnormal lipids and [high blood pressure](#), both risk factors for heart disease.

Because many of their patients had not yet reached their full adult height, the researchers could compare growth velocity—the speed of growth in height—between younger and older pediatric patients. They found growth velocity was unaffected and did not differ between patients 14 or younger versus older than 14.

Results consistent with current guidelines

Their findings correspond with current scientific evidence recommending early surgical intervention, Dr. Alqahtani said. The most recent guidelines from the American Academy of Pediatrics and the American Society for Metabolic and Bariatric Surgery do not advise waiting until a child reaches maturity if the operation is recommended for the child based on their weight and obesity-related diseases.

"If you surgically intervene early, you can cure children's obesity-related diseases early and improve their quality of life, and if you wait longer, their diseases might become irreversible," Dr. Alqahtani said.

Dr. Al-Qahtani attributed their good results to factors including the following:

- The surgeon used differences in the gastric sleeve they created, which he believes made it less likely to regain weight.
- Patients had permanent access to follow-up care and phone contact with the surgical and medical team.
- The patient's family helped ensure their child's compliance with

post-surgery operative recommendations.

Another strength of the study, Dr. Alqahtani said, is their patient population had a more even sex-based distribution than previous studies. Girls are likelier than boys to have a weight loss operation, but male patients comprised 45 percent of their sample.

More information: Aayed R. Alqahtani et al, Ten-Year Outcomes of Children and Adolescents Who Underwent Sleeve Gastrectomy: Weight Loss, Comorbidity Resolution, Adverse Events, and Growth Velocity, *Journal of the American College of Surgeons* (2021). [DOI: 10.1016/j.jamcollsurg.2021.08.678](https://doi.org/10.1016/j.jamcollsurg.2021.08.678)

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