

# Adolescents with severe obesity lost weight, kept it off, and erased comorbidities after bariatric surgery

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Adolescents suffering with severe obesity who underwent bariatric surgery before the age of 22 had significant and lasting reductions in

weight and comorbidities after surgery, according to researchers from UTHealth Houston and the University of Miami.

The results of the study were published early online in the *Journal of the American College of Surgeons*.

The study contains the longest follow-up data currently available on adolescents suffering with [severe obesity](#) after [weight-loss surgery](#), revealing that they lost 31.3% of their weight and kept it off more than a decade later. They also had a 100% remission in diabetes, asthma, and elevated lipids.

"There are long-term benefits to completing [bariatric surgery](#) before the age of 22," said Sarah Messiah, Ph.D., MPH, senior author of the study and professor and director of the Center for Pediatric Population Health at UTHealth School of Public Health-Dallas. "The durability of the positive health outcomes isn't well known this far out at this young age. It's been a gap in understanding that this research has helped fill."

Messiah has been working with lead author and bariatric surgeon Nestor de la Cruz-Munoz, MD, at the University of Miami, for 15 years on research examining outcomes of bariatric surgery for adolescents.

"It's like a deep sigh of relief to see results that validated we have been doing good for 20 years for these patients, even if they were lost to follow-up," de la Cruz-Munoz said. "Some of these children are severely depressed, and if we can change these kids' lives while they are in [high school](#) or before they go to college, it can give them a fresh start and hope for a better life."

While many patients in the study were lost to the bariatric team because of insurance coverage issues or relocations, study results revealed they were followed by pediatricians and [primary care physicians](#) for any

health issues and complications were rare

"What sets this study apart is that 74% of the patients who underwent surgery are Hispanic, and 84% are Hispanic or non-Hispanic Black. We know that [minority groups](#) are disproportionately impacted by obesity, and this shows that they benefited from the surgery, and thus surgery can be a tool to address these disparities," Messiah said.

In the U.S., nearly 12% of non-Hispanic Black adolescents, 9% of Hispanic adolescents, and 7% of non-Hispanic white adolescents ages 12 to 19 suffer from severe obesity, meaning a [body mass index](#) (BMI) percentile at or above the 99th percentile for their age and gender. This puts them at higher risk for developing cancer and [chronic diseases](#) including cardiovascular disease, diabetes, kidney disease, and liver disease.

Of the 96 respondents enrolled in the study, 86.5% reported improved [dietary habits](#) since surgery, 60.4% engaged in regular physical activity, and more than half of the women, 67%, went on to have a successful pregnancy and birth.

Patients' BMI rates dropped from 44.9 before surgery to the lowest BMI of 25.2 after surgery, a 44.4% decrease.

Prior to surgery, 14.6% of patients had hyperlipidemia (high levels of fat in the blood), 10.4% had asthma, and 5.2% had diabetes or hyperglycemia. After surgery, remission was 100%. Hypertension, [sleep apnea](#), anxiety, gastroesophageal reflux disease, and depression also dropped significantly.

"Adolescents are the fastest-growing segment of the severe obesity epidemic in the U.S., and the COVID-19 pandemic has exacerbated the problem," Messiah said. "The evidence from this study supports recent

recommendations from the American Academy of Pediatrics to increase access to surgery for adolescents. We hope this data could change barriers to access for these children."

**More information:** Nestor de la Cruz-Muñoz et al, Long-Term Outcomes after Adolescent Bariatric Surgery, *Journal of the American College of Surgeons* (2022). [DOI: 10.1097/XCS.0000000000000325](https://doi.org/10.1097/XCS.0000000000000325)

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