

# Bariatric surgery associated with improved mobility, less walking pain

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A new study published online by *JAMA Pediatrics* suggests bariatric surgery was associated with faster walking by teens, less walking-related musculoskeletal pain and lower heart rates as soon as six months following surgery and as long as two years after surgery.

Like adults, teens are not immune to the consequences of severe obesity, which can exacerbate functional mobility limitations and lead to a decline in physical activity because of the resulting [musculoskeletal pain](#).

Justin R. Ryder, Ph.D., of the University of Minnesota Medical School, Minneapolis, and coauthors examined the effect of [bariatric surgery](#) on functional mobility and musculoskeletal pain in adolescents enrolled in the Teen-Longitudinal Assessment of Bariatric Surgery (Teen-LABS) study up to two years after surgery.

The study enrolled 242 teens (19 years old or younger), who had bariatric surgery from 2007 to 2012, at five U.S. adolescent bariatric surgery centers. Among the teens, 161 had Roux-en-Y gastric bypass, 67 had gastrectomy and 14 had laparoscopic adjustable gastric band.

Participants (n=206) completed a 400-meter walk test (about a quarter of a mile) prior to surgery and at six months (n=195), 12 months (n=176) and 24 months (n=149) after surgery. Outcomes measured were the time it took to complete the walk, resting heart rate (HR), posttest HR, and the difference of the resting and posttest HRs. Musculoskeletal pain during and after the walking test also was documented.

Of the 206 participants, the majority (n=156) were female, the average age was 17 and the average body-mass index (BMI) was 51.7.

At six months after surgery compared with before surgery, the time to complete the walk improved from an average of 376 seconds (about 6.3 minutes) to 347 seconds (about 5.8 minutes), resting HR improved from an average of 84 beats per minute (bpm) to 74 bpm and posttest HR declined from an average of 128 bpm to 113 bpm; and the HR difference went from an average of 40 bpm to 34 bpm, according to the results.

Changes in time to complete the walk, resting HR and HR differences persisted at one and two years after surgery. Concerns about musculoskeletal pain were reduced at all measures of time in the study.

Study limitations included the lack of a group of adolescents who did not have bariatric [surgery](#) to serve as a control group for comparison.

"Whether these positive changes in [functional mobility](#) and musculoskeletal [pain](#) persist over the long-term and lead to further improvements in cardiometabolic risk requires evaluation," the authors conclude.

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