PROJECT INFORMATION

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Comparing Three Types of Weight Loss Surgery -- The PCORnet® Bariatric Study

Principal investigator

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Organization

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What was the research about?

Some adults and youth with severe obesity can't lose enough weight with diet and exercise to improve their health. Different types of surgery may help people lose weight and improve problems related to obesity like diabetes. But surgery has risks, including needing more surgery to reverse or fix the original surgery.

In this study, the research team compared three types of weight-loss surgery:

- In **Roux-en-Y gastric bypass, or RYGB**, a surgeon uses part of the stomach to create a pouch that holds a small amount of food. The surgeon attaches this pouch to the small intestine. With this bypass, the body absorbs fewer calories.
- In **adjustable gastric banding, or AGB**, a surgeon places a band around the upper part of the stomach. This band limits how much a person can eat.
- In **sleeve gastrectomy, or SG**, a surgeon removes a large part of the stomach, which also limits the amount of food a person can eat.

The research team looked at patients' health records to see how surgery affected

- Weight loss in 46,510 adults and in 544 youth ages 12–19
- Effects on diabetes in 10,019 adults with type 2 diabetes

- The need for more surgery in 34,714 adults

What were the results?

Weight loss in adults. With all three types of surgery, patients lost weight and then regained some weight over five years. At five years, adult patients who had RYGB lost 26 percent of their total weight compared with before surgery. Patients who had SG lost 19 percent and patients who had AGB lost 12 percent.

Diabetes. Diabetes went away at some point in the five years after surgery for 86 percent of patients with diabetes who had RYGB, 84 percent of patients who had SG, and 65 percent of patients who had AGB.

Need for more surgery. Adults who had SG had a 9 percent chance of needing another surgery in five years compared with 12 percent of people who had RYGB and 41 percent who had AGB.

Weight loss in youth. One year after surgery, youth who had RYGB lost an average of 31 percent of their body mass index, or BMI. Youth who had SG lost an average of 28 percent of BMI, and youth who had AGB lost an average of 10 percent.

What did the research team do?

The research team looked at health data for patients who had a BMI of at least 35 and had surgery between 2005 and 2015. Patient data came from 41 health systems around the country that were part of PCORnet®.

Patients, advocacy groups, surgeons, and health insurers helped plan the study.

What were the limits of the study?

Patients and their doctors chose what type of surgery to have. Results may have differed if the research team had assigned patients by chance to the type of surgery. The study didn't include outpatient surgery centers, which may do more AGB surgeries.

Future research could track patients' weight regularly.

How can people use the results?

Patients with obesity and their doctors can use these results when considering surgery for weight loss.

To learn more about this project, visit www.pcori.org/Arterburn218.

The PCORnet® Study reported in this results summary was conducted using PCORnet®, the National Patient-Centered Clinical Research Network. PCORnet® is intended to improve the nation's capacity to conduct health research, particularly comparative effectiveness research (CER), efficiently by creating a large, highly representative network for conducting clinical outcomes research. PCORnet® has been developed with funding from the Patient-Centered Outcomes Research Institute® (PCORI®).