



FIRST OBSERVATIONAL STUDIES FROM PCORNET

# Improving Obesity Prevention and Treatment

In the United States, almost one in five children (12 million) and more than one-third of adults (78 million) are considered obese, according to the Centers for Disease Control and Prevention. The Patient-Centered Outcomes Research Institute (PCORI) has approved \$9 million to fund two observational research studies on preventing and treating obesity. In an observational study, individuals are observed or certain outcomes are measured. Researchers often look at existing data to draw conclusions.

Each study will address different aspects of obesity, including:

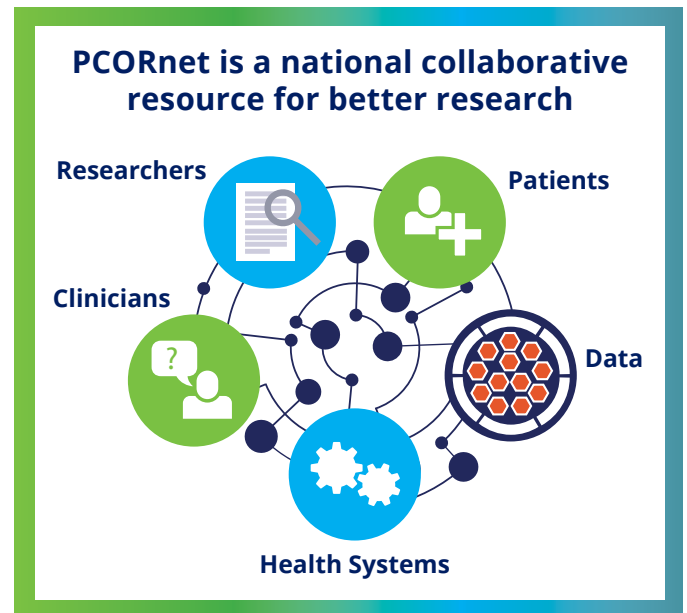
- Which types of bariatric surgery result in the best outcomes with the least risk?
- To what extent does antibiotic use cause excessive weight gain in early childhood? Do the effects vary by age? Is weight gain the only side effect caused by antibiotic use by children?

Findings will help patients, clinicians, and other healthcare stakeholders make better-informed decisions about treatment and prevention.

## Using Health Data to Tackle Obesity

Each of the two large studies described above takes advantage of one of PCORI's biggest investments—PCORnet, the National Patient-Centered Clinical Research Network. This data infrastructure program is designed to help conduct comparative effectiveness research quickly and efficiently.

Because obesity is such a crucial problem, it became the focus for the first observational studies using the PCORnet infrastructure. With information from patients in every state, the network provides data across a wide variety of patient groups so researchers can assess whether treatment methods affect groups differently. This includes looking at the impact of many different factors on a diverse set of patient-centered clinical outcomes.

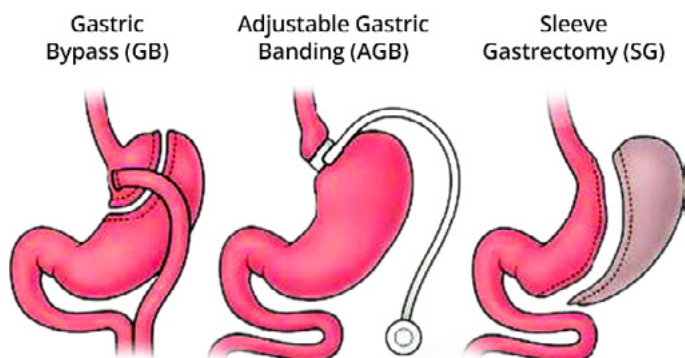


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The National Patient-Centered Clinical Research Network

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## STUDY SPOTLIGHTS

### Bariatric Surgery Study



#### Study Overview

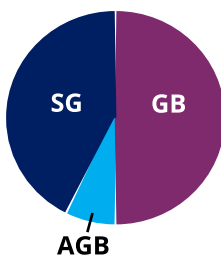
The PCORnet bariatric study examines three common types of bariatric, or weight-loss, surgery: gastric bypass (GB), adjustable gastric banding (AGB), and sleeve gastrectomy (SG). The study compares patients' weight loss and regain, diabetes improvement or relapse, and complications or harms. The study will also explore patient perspectives on their key choices regarding bariatric surgery, such as whether to have surgery, which procedure is right for them, and receipt of follow-up care.

#### Data Overview

The study is assessing data from the records of 60,000 patients who have had one of the forms of bariatric surgery. This group includes 17,000 people with diabetes and 900 adolescents.

#### Initial Findings

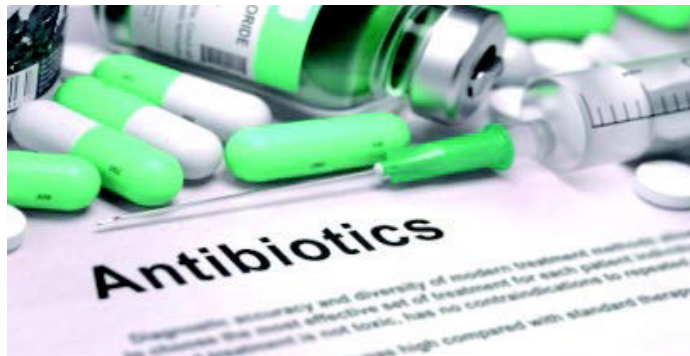
Researchers identified 63,473 individuals who had an initial bariatric procedure between 2005 and 2015. Researchers are working to collect data on diabetes outcomes and adverse events following surgery. Gastric bypass was the most common procedure, followed by sleeve gastrectomy, and then adjustable gastric banding. Results will help inform those considering bariatric surgery and their clinicians about which procedure might be best for them.



#### Participating Networks

ARCH, CAPriCORN, GPC, Mid-South, NYC-CDRN, OneFlorida, PaTH, PEDSnet, PORTAL, pSCANNER, REACHnet, Ar-PoWER, COPD Foundation, and Mood Network

### Study of Impact on Obesity of Antibiotic Use in Infants



#### Study Overview

This study looks at the relationship between antibiotic use in the first two years of life and weight gain in later childhood. Previous research has shown a link between the use of antibiotics, particularly wide-spectrum antibiotics, and an increased risk for obesity. The study looks at how much of an impact antibiotics have on subgroups of the population, such as different racial/ethnic groups. It seeks to determine whether a woman's prenatal use of antibiotics affects her child's risk of obesity. It also looks at the effects of the frequency of the drugs' use as well as other factors that could affect weight.

#### Data Overview

The study is assessing data from the records of roughly 600,000 patients to compare the effects of different types of antibiotics on children's growth and weight at ages 5 and 10.

#### Initial Findings

Researchers suspect a dose-response relationship between the number of antibiotic courses given during the first two years of life and both higher body mass index (BMI) and the probability of obesity at ages 5 and 10 years. Researchers suspect that this relationship will be strongest for broad-spectrum antibiotics prescribed in the first six months of life.

#### Participating Networks

ADVANCE, ARCH, CAPriCORN, GPC, Mid-South, NYC-CDRN, OneFlorida, PEDSnet, PORTAL, REACHnet, CENA, IAN, DuchenneConnect, and SAPCON (Affiliate Network)