

Could bariatric surgery change metabolic gene expression?

Every week, about 20 people visit the University of Pittsburgh Medical Center in Pennsylvania to be evaluated for weight-loss surgery. They tell a nurse their medical history and have a routine physical examination. Then they sit down with a surgeon to discuss their options.

Anita Courcoulas, head of minimally invasive bariatric and general surgery at the centre, has had thousands of these conversations in the past 25 years. During that time, the information she shares with her patients has changed dramatically. Thanks to clinical trials, she can now tell them with some confidence that surgery not only spurs remarkable weight loss in most people, but also significantly lowers the risk of heart attack, stroke, cancer and death. And with the most popular procedure — Roux-en-Y gastric bypass, which shrinks the stomach to the size of an egg — up to 60% of patients with diabetes go into remission for at least several years after the operation.

In the 1980s, some patients were found to show rapid changes in their metabolism after surgery, suggesting that other factors are at play. Now, a slew of high-profile animal studies is identifying potential mechanisms in how the gut adapts to its strange new configuration: with sweeping changes in bacterial populations, bile acids, hormone secretions and tissue growth. The hope is that more research on what happens after bariatric surgery will enable physicians to identify who will respond best — and even lead to ways of altering metabolism without resorting to the knife.

Read the full, original story: [Weight-loss surgery: A gut-wrenching question](#)