

Rapid Reversal of Diabetes after Gastric Banding Surgery

Garvan Institute

Clinical researchers from Sydney's Garvan Institute of Medical Research and St. Vincent's Hospital have shown that a form of weight loss surgery, known as 'gastric banding', brings about reversal of diabetes in some patients, and dramatic improvement of glucose tolerance in others, within 12 weeks.

Type 2 diabetes is a complex metabolic disorder that develops over time, with the body becoming progressively less able to control blood sugar levels. High blood sugars cause damage to tissues and organs, and can lead to very serious complications such as kidney failure and blindness.

Roughly 7% of adult Australians have diabetes, and about 1 in 4 have pre-diabetes, meaning that they are at high risk of developing diabetes. Often referred to as a 'lifestyle disease', type 2 diabetes is prevalent in societies with sedentary lifestyles and high-fat, high-sugar, diets.

Gastric banding involves placing an inflatable ring between the oesophagus and stomach, making it possible to eat only small amounts of food slowly.

Weight loss surgery in obese people with type 2 diabetes has been shown to be more effective at optimising diabetes control than the standard diabetes treatments currently available. Very rapid improvements in diabetes have previously been shown for more invasive and riskier forms of surgery, but not for gastric banding.

The current study, now reported online in [Diabetologia](#) [1], was undertaken by Professor Katherine Samaras from the Garvan Institute and St. Vincent's Hospital. It followed 15 morbidly obese patients (body mass index over 40) after gastric banding surgery. All had had type 2 diabetes for at least 5 years, and most patients required anti-diabetic medications.

"We've known for many years that weight reduction improves diabetes, with recent strong evidence that bariatric surgery substantially improves diabetes. This is the first study to show such dramatic benefits within two weeks using gastric banding," said Professor Samaras.

"The other significant finding in our study was that all patients showed significantly reduced inflammation. The numbers of circulating pro-inflammatory immune cells were much reduced, mirroring the degree by which glucose levels fell."

"As a treatment, I suspect that bariatric surgery works by giving people a means of consistently keeping their calorie intake down. That's why it's so effective for rapid diabetes control and for weight loss in the longer term. For diabetes, diet is the

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cornerstone for management and control of the disease.”

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[1] <http://link.springer.com/article/10.1007/s00125-013-3033-7>