

Study says patients with type 2 diabetes should be prioritized for obesity surgery

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New research published in *The Lancet Diabetes & Endocrinology* suggests that, when considering overall costs of healthcare, obese patients with type 2 diabetes, especially those with recent disease onset, should be prioritised for obesity surgery over those without type 2 diabetes, since many patients see a reversal of diabetes after surgery and thus need fewer expensive diabetes medications or treatment for complications in future.

The research is based on the Swedish Obese Subjects (SOS) study from Sahlgrenska Academy, Gothenburg, Sweden, and performed in collaboration with Dr Martin Neovius, Karolinska Institutet, Stockholm, Sweden, Dr Lena Carlsson, Chief SOS Investigator, University of Gothenburg, Sweden, and Dr Catherine Keating, Deakin University and Baker IDI Heart and Diabetes Institute, Melbourne, Australia.

Currently most healthcare systems prioritise access to obesity surgery based on a person's body-mass index (BMI), and in general, those with the highest BMI are prioritised. Patients with lower BMIs and comorbidities such as type 2 [diabetes](#) can also be considered eligible for surgery, but different countries have different guidelines.

Several groups have recommended that a person's diabetes status (rather than BMI alone), be used to prioritise obese patients to receive bariatric surgery. But so far, the long-term effect of bariatric surgery (relative to conventional therapy) on healthcare [costs](#) in [obese patients](#) according to their diabetes status has not been assessed using real-world data.

The SOS study was conducted in the Swedish healthcare system and including 2010 adults who underwent obesity surgery and 2037 matched controls recruited between 1987 and 2001. The data showed that accumulated drug costs over 15 years did not differ between the surgery and control group in patients without diabetes at the

time of surgery, but were lower in surgery patients who had prediabetes (on average, -US\$3329 per patient) or diabetes (-\$5487 per patient). However, hospital costs were higher in all patients who had surgery. No differences in outpatient costs were observed.

Compared with patients treated conventionally, total healthcare costs (accounting for costs of surgery, inpatient and outpatient hospital care and prescription drugs) were higher in surgery patients who did not have diabetes at the beginning of the study (by \$22,390 per patient) or who had prediabetes (\$26,292), but not in patients with diabetes, most likely because the remission of diabetes that often occurs after bariatric surgery means that patients need fewer diabetes medications and hospital appointments in the subsequent years. Remission of diabetes also means that diabetes complications are lessened, further reducing future healthcare costs.

"To our knowledge, this is the first prospectively controlled study to assess long-term healthcare costs in obesity surgery patients according to their preoperative diabetes status versus matched controls," say the authors.

Because previous studies have assessed the entire eligible obese population, they have likely underestimated the cost benefits of [obesity surgery](#) for those with type 2 diabetes, while overestimating them for patients without type 2 diabetes. They conclude: "we show that for obese [patients](#) with type 2 diabetes, the upfront costs of bariatric surgery seem to be largely offset by prevention of future health-care and drug use. This finding of cost neutrality is seldom noted for health-care interventions, nor is it a requirement of funding in most settings. Usually, buying of health benefits at an acceptable cost (eg, £20 000 per quality-adjusted lifeyear in the UK) is the economic benchmark adopted by payers when new interventions are assessed. Bariatric surgery

should be held to the same economic standards as other medical interventions."

Writing in a linked Comment, Dr Ricardo Cohen, Director of the Center of Excellence for Metabolic and Bariatric Surgery, Hospital Oswaldo Cruz, São Paulo, Brazil, says: "BMI should...not be the only indication for bariatric surgery. Thus, individuals that do not have their diabetes under control with the best pharmacological approach and lifestyle interventions should be prioritised for bariatric [surgery](#), irrespective of their BMI."

More information: *The Lancet Diabetes & Endocrinology*, www.thelancet.com/journals/lan... (15)00290-9/abstract

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