

Metabolic–bariatric surgery associated with reduced mortality in over 70s

Metabolic–bariatric surgery (MBS) in those aged 69 and older, delivered in a specialist centre in England, was associated with a 75% mortality reduction compared with matched controls over a median follow-up of 39 months, according to this retrospective cohort study, published in *The Lancet Healthy Longevity*. In this small cohort of 186 people, among the 44 who underwent MBS, complications occurred in 9%, major complications in 7%, and post-surgical 30-day mortality was 2%. MBS has been demonstrated in previous cohort studies to improve long-term survival and reduce obesity-related comorbidities in young and middle-aged adults, but there is a paucity of data to clarify benefits and perioperative risks in older adults. These new findings suggest that age alone should not be a barrier to MBS.

Rates of obesity, and its associated diseases of type 2 diabetes, hypertension, hyperlipidaemia, cardiovascular disease, obstructive sleep apnoea and gastro-oesophageal disease, are increasing in all ages, including older people, as a result of population ageing and improved healthcare in developed countries. Overall, 35% of people aged 65–74 years and 26% of those aged 75 years and older are living with obesity in England (Stiebahl, 2025).

When managing obesity, including in older people, three considerations are important: weight loss, remission of obesity-related comorbidities and the risk–benefit ratio of treatments. Metabolic–bariatric surgery (MBS) is the best long-term, cost-effective intervention, resulting in sustained weight loss, decreased comorbidities, improved quality of life and decreased mortality risk.

Previous studies have highlighted potential muscle loss and frailty risks in older people who undergo intentional weight loss, with some studies suggesting increased mortality risk, whilst others have highlighted improved mobility and function and reduced mortality. Chronological age correlates poorly with frailty.

A recent systematic review and meta-analysis of the efficacy and safety of laparoscopic bariatric surgery in 3923 people aged 70 years and older, 70% of whom were female, demonstrated a mean excess weight loss of 55% at 1 year (Kapala et al, 2025). As expected, there were greater benefits from Roux-en-Y gastric bypass (RYGB) compared with sleeve gastrectomy. Significant

improvements in several obesity-related diseases were observed, and major postoperative morbidity and mortality rates, at 2% and 1%, respectively, were both significantly higher in those over 70 compared with younger people undergoing MBS. Some studies have demonstrated significant excess weight loss (see *Box 1* for definition) in people over age 70 years, including extended follow-up to 5 years, although many have only 1–2 years' follow-up.

Remission or improvement in obesity-related conditions is also an important outcome of MBS at all ages. In their meta-analysis, Kapala et al (2025) demonstrated improvement in 51% of people with type 2 diabetes, 34% of those with hypertension, 50% with gastro-oesophageal reflux disease, 36% with sleep apnoea and 26% with hyperlipidaemia.

A previous nationwide American database study demonstrated longer hospital stay and increased rates of acute kidney injury, myocardial infarction and deep vein thrombosis



Pam Brown
GP in Swansea

Box 1. Definition of “excess weight loss”.

Excess weight loss is calculated by taking the weight for the individual at BMI 25 kg/m² and subtracting this from their current weight, to calculate excess weight. Weight loss is then calculated as a percentage of this excess weight.

In contrast, **percentage weight loss** is a measure of the total weight loss as a percentage of the body weight at baseline.

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in people aged ≥ 70 years versus younger people undergoing RYGB. Other studies have demonstrated higher rates of any complication in those aged ≥ 70 years compared with younger people undergoing RYGB or sleeve gastrectomy, and mortality rates, at 1%, may be higher (Pechman et al, 2019).

The present study

In this retrospective, matched cohort study published in *The Lancet Healthy Longevity*, Ortega and colleagues looked at 186 people aged 69 years and over, managed in a London tertiary bariatric surgery unit between 2015 and 2024. Median age and BMI were 71 years and 41 kg/m^2 , respectively, with a median follow-up of 39 months. Forty-four people underwent MBS, and these were matched with 34 control participants who did not undergo surgery. It was hoped that the study would clarify MBS survival rates and other outcomes to inform future discussions regarding pharmacological versus surgical treatment of obesity in this age group. An [accompanying comment](#) highlights that this is the first long-term, matched cohort study to use English data (Dowgiallo-Gornowicz et al, 2025).

Results

Of the 186 people attending the bariatric surgery centre between 2015 and 2024, 44 underwent MBS (laparoscopic RYGB [64%] or sleeve gastrectomy [36%]). Of those who did not undergo surgery, 86% declined this themselves after counselling and only 14% were deemed too high-risk for surgery.

When those undergoing MBS were compared with the matched controls, there was a 75% reduction in all-cause mortality on multivariate analysis. The 30-day morbidity rate was 9%, with significant complications occurring in three of the 44 patients, and the 30-day readmission rate was 7% (two cases of dehydration and one of pneumonia). There was one death (2%) in the surgical group, on day 5 postoperatively, from aspiration pneumonia. In the matched control group, 11 people (31%) died during the follow-up, with a minimum time to death of 12 months and median time to death of 35 months.

Mean weight loss of 22% was achieved at last follow-up across the group who underwent MBS: 25.4% with RYGB and 20.0% with sleeve gastrectomy. The difference between the surgery types was not significant.

The morbidity rate and short-term risk profiles were comparable to those in other studies exploring risks and benefits of MBS in people aged 70 years and over, although rates were higher than those seen in other registries that had a median age of 46 years.

Discussion

Based on these results, MBS may be thought of as potentially life-extending even in a population aged 69 years and over, as well as in younger people. The study authors stress that chronological age alone should thus not be an absolute contraindication to surgery. Although older people might have higher perioperative risk due to comorbidities and frailty, careful patient selection, optimisation around surgery and multidisciplinary team management can reduce these risks. Comprehensive geriatric assessment, including frailty, is recommended as part of the MBS work-up in US guidelines (Zietlow et al, 2022).

It is postulated that MBS reduces mortality by a variety of mechanisms, including weight loss, improving metabolic measurements and improving obesity-related comorbidities such as hypertension, hyperglycaemia and hyperlipidaemia. It also appears to improve proinflammatory and prothrombotic pathways associated with visceral fat, with benefits becoming apparent around 6 months post-surgery.

The authors conclude that larger cohorts and prospective studies will be needed to confirm these results and help clinicians clarify the optimal criteria for selecting people aged 70 years and over for MBS.

Implications for practice

With wider availability and NHS access to GLP-1 receptor agonists, dual incretin therapies such as tirzepatide and future obesity drugs targeting multiple receptors, and given the significant weight loss benefits of these drugs, it is likely that fewer people with obesity will choose to pursue

MBS. As well as providing significant weight loss, these drugs appear to have an acceptable safety profile and improve metabolic parameters, all of which are useful. Since tirzepatide does not currently have restrictions on duration of NHS use, people could potentially persist with pharmacological therapy for several years, meaning that the age at which MBS is considered or recommended may increase over the next few years. It is, therefore, useful to know that age alone, rather than physical frailty, does not seem to necessarily equate to increased risks of surgery or negate long-term benefits of MBS on obesity-related complications or increased mortality.

Although we all have to refer within our local MBS guidance, it is hoped that this study will help us to consider MBS referral in older people and make it easier for us to argue that those without signs of frailty who are just above our local unit's age cut-off might be considered if the risk–benefit ratio is favourable, and that the age cut-offs may be individualised or based on more holistic assessments in the longer term.

In the meantime, with permission, we can start conversations with people living with obesity to find out what support they need. We can signpost or refer to services for weight loss.

And perhaps most important, for those who have successfully lost significant weight with privately funded incretin drugs but have had to stop due to financial pressure, we can offer support with weight maintenance. ■

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