Surgery for obese adults

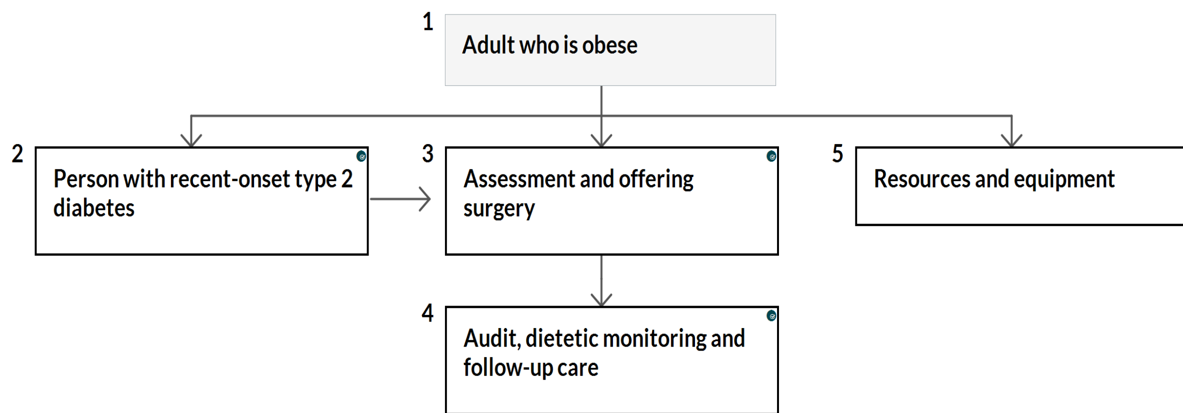
NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/obesity
NICE Pathway last updated: 29 May 2020

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.

© NICE 2020. All rights reserved. Subject to Notice of rights.



© NICE 2020. All rights reserved. Subject to Notice of rights.

1 Adult who is obese

No additional information

2 Person with recent-onset type 2 diabetes

Offer an expedited assessment for bariatric surgery to people with a BMI of 35 and over who have recent-onset type 2 diabetes as long as they are also receiving or will receive assessment in a tier 3 service (or equivalent).

Consider an assessment for bariatric surgery for people with a BMI of 30–34.9 who have recent-onset type 2 diabetes as long as they are also receiving or will receive assessment in a tier 3 service (or equivalent).

Consider an assessment for bariatric surgery for people of Asian family origin who have recent-onset type 2 diabetes at a lower BMI than other populations (see measure and interpret BMI) as long as they are also receiving or will receive assessment in a tier 3 service (or equivalent).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Obesity: clinical assessment and management

4. Referring adults with type 2 diabetes for bariatric surgery assessment

3 Assessment and offering surgery

Bariatric surgery is a treatment option for people with obesity if all of the following criteria are fulfilled:

- They have a BMI of 40 kg/m^2 or more, or between 35 kg/m^2 and 40 kg/m^2 and other significant disease (for example, type 2 diabetes or high blood pressure) that could be improved if they lost weight.
- All appropriate non-surgical measures have been tried but the person has not achieved or maintained adequate, clinically beneficial weight loss.
- The person has been receiving or will receive intensive management in a tier 3 service. (For more information on tier 3 services, see NHS England's report on joined up clinical

© NICE 2020. All rights reserved. Subject to Notice of rights.

- pathways for obesity.)
- The person is generally fit for anaesthesia and surgery.
- The person commits to the need for long-term follow-up.

In addition to the criteria listed above, bariatric surgery is the option of choice (instead of lifestyle interventions or drug treatment) for adults with a BMI of more than 50 kg/m^2 when other interventions have not been effective.

The hospital specialist and/or bariatric surgeon should discuss the following with people who are severely obese if they are considering surgery to aid weight reduction:

- the potential benefits
- the longer-term implications of surgery
- associated risks
- complications
- perioperative mortality.

The discussion should also include the person's family, as appropriate.

Choose the surgical intervention jointly with the person, taking into account:

- the degree of obesity
- comorbidities
- the best available evidence on effectiveness and long-term effects
- the facilities and equipment available
- the experience of the surgeon who would perform the operation.

Carry out a comprehensive preoperative assessment of any psychological or clinical factors that may affect adherence to postoperative care requirements (such as changes to diet) before performing surgery.

For further information, see the NICE Pathway on preoperative tests.

For information on reducing the risk of venous thromboembolism see bariatric and gastrointestinal surgery in the NICE Pathway on venous thromboembolism.

Orlistat

Orlistat may be used to maintain or reduce weight before surgery for people who have been

© NICE 2020. All rights reserved. Subject to Notice of rights.

recommended surgery as a first-line option, if it is considered that the waiting time for surgery is excessive.

Interventional procedures

NICE has published guidance on the following procedures with **special arrangements** for clinical governance, consent and audit or research:

- single-anastomosis duodeno-ileal bypass with sleeve gastrectomy for treating morbid obesity
- laparoscopic gastric plication for the treatment of severe obesity.

NICE has published guidance that implantation of a duodenal–jejunal bypass sleeve for managing obesity should be used only in the **context of research**.

'Depth of anaesthesia' monitors

The following recommendations are from NICE diagnostics guidance on depth of anaesthesia monitors.

The use of EEG-based depth of anaesthesia monitors is recommended as an option during any type of general anaesthesia in patients considered at higher risk of adverse outcomes. This includes patients at higher risk of unintended awareness and patients at higher risk of excessively deep anaesthesia. The BIS depth of anaesthesia monitor is therefore recommended as an option in these patients.

The use of EEG-based depth of anaesthesia monitors is also recommended as an option in all patients receiving total intravenous anaesthesia. The BIS monitor is therefore recommended as an option in these patients.

Although there is greater uncertainty of clinical benefit for the E-Entropy and Narcotrend-Compact M depth of anaesthesia monitors than for the BIS monitor, the Committee concluded that the E-Entropy and Narcotrend-Compact M monitors are broadly equivalent to BIS. These monitors are therefore recommended as options during any type of general anaesthesia in patients considered at higher risk of adverse outcomes. This includes patients at higher risk of unintended awareness and patients at higher risk of excessively deep anaesthesia. The E-Entropy and Narcotrend-Compact M monitors are also recommended as options in patients receiving total intravenous anaesthesia.

Anaesthetists using EEG-based depth of anaesthesia monitors should have appropriate training

© NICE 2020. All rights reserved. Subject to Notice of rights.

and experience with these monitors and understand the potential limitations of their use in clinical practice.

Medtech innovation briefings

NICE has published medtech innovation briefings on:

- End-tidal Control software for use with Aisys closed circuit anaesthesia systems for automated gas control during general anaesthesia
- AccuVein AV400 for vein visualisation.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Obesity: clinical assessment and management

5. Referring adults for bariatric surgery assessment

4 Audit, dietetic monitoring and follow-up care

Audit and dietetic monitoring

Provide regular, specialist postoperative dietetic monitoring, including:

- information on the appropriate diet for the bariatric procedure
- monitoring of the person's micronutrient status
- information on patient support groups
- individualised nutritional supplementation, support and guidance to achieve long-term weight loss and weight maintenance.

Arrange prospective audit so that the outcomes and complications of different procedures, the impact on quality of life and nutritional status, and the effect on comorbidities can be monitored in both the short and the long term. (The National Bariatric Surgery Registry is now available to conduct national audit for a number of agreed outcomes.)

Follow-up care

Offer people who have had bariatric surgery a follow-up care package for a minimum of 2 years within the bariatric service. This should include:

© NICE 2020. All rights reserved. Subject to Notice of rights.

- nutritional monitoring, including screening for protein, vitamin and mineral deficiencies
- monitoring for comorbidities
- medication review
- dietary and nutritional assessment, advice and support
- physical activity advice and support
- psychological support tailored to the individual
- information about professionally led or peer-support groups.

After discharge from bariatric surgery service follow-up, ensure that all people are offered at least annual monitoring of nutritional status and appropriate supplementation according to need following bariatric surgery, as part of a shared care model of chronic disease management.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

Obesity: clinical assessment and management

6. Follow-up care after bariatric surgery

7. Nutritional monitoring after discharge from the bariatric surgery service

5 Resources and equipment

Surgery for obesity should be undertaken only by a multidisciplinary team that can provide:

- preoperative assessment, including a risk–benefit analysis that includes preventing complications of obesity, and specialist assessment for eating disorder(s)
- information on the different procedures, including potential weight loss and associated risks
- regular postoperative assessment, including specialist dietetic and surgical follow-up
- management of comorbidities
- psychological support before and after surgery
- information on, or access to, plastic surgery (such as apronectomy) where appropriate
- access to suitable equipment, including scales, theatre tables, Zimmer frames, commodes, hoists, bed frames, pressure-relieving mattresses and seating suitable for patients undergoing bariatric surgery, and staff trained to use them.

The surgeon in the multidisciplinary team should:

© NICE 2020. All rights reserved. Subject to Notice of rights.

- have had a relevant supervised training programme
- have specialist experience in bariatric surgery
- submit data for a national clinical audit scheme. (The National Bariatric Surgery Registry is now available to conduct national audit for a number of agreed outcomes.)

Revisional surgery

Revisional surgery (if the original operation has failed) should be undertaken only in specialist centres by surgeons with extensive experience because of the high rate of complications and increased mortality.

© NICE 2020. All rights reserved. Subject to Notice of rights.

BIS

Bispectral Index

CPCM

childhood and puberty close monitoring

EEG

electroencephalography

Monitoring

routine collection, analysis and reporting of a set of data to assess the performance of a weight management programme according to the service specification and intended health outcomes

National Child Measurement Programme

measures the weight and height of children in reception class (aged 4 to 5) and Year 6 (aged 10 to 11). The aim is to assess the prevalence of obesity and overweight among children of primary school age, by local authority area. These data can be used at a national level to support local public health initiatives and inform local services for children

Recent-onset type 2 diabetes

considered to include those people whose diagnosis has been made within a 10-year timeframe

Sources

Obesity: identification, assessment and management (2014) NICE guideline CG189

Depth of anaesthesia monitors - Bispectral Index (BIS), E-Entropy and Narcotrend-Compact M (2012) NICE diagnostics guidance 6

© NICE 2020. All rights reserved. Subject to Notice of rights.

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to

© NICE 2020. All rights reserved. Subject to Notice of rights.

have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

© NICE 2020. All rights reserved. Subject to Notice of rights.