NICE National Institute for Health and Care Excellence

NICE Pathways

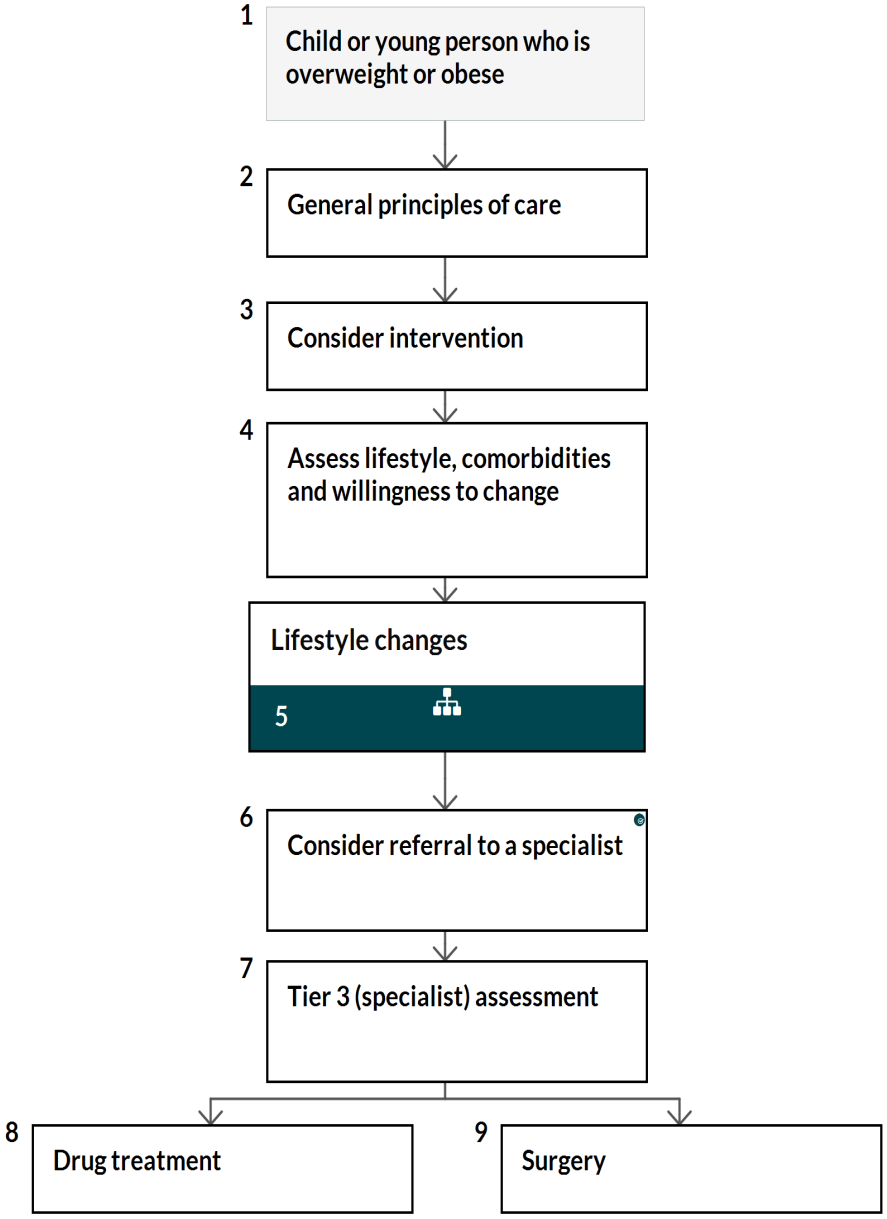
Obesity management in children and young people

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: 20 August 2021

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



1 Child or young person who is overweight or obese

No additional information

2 General principles of care

Coordinate the care of children and young people around their individual and family needs. Comply with the approaches outlined in the Department of Health's a call to action on obesity in England.

Aim to create a supportive environment that helps a child who is overweight or who has obesity, and their family, make lifestyle changes. (The Guideline Development Group noted that 'environment' could include settings other than the home, for example, schools.)

Make decisions about the care of a child who is overweight or has obesity (including assessment and agreeing goals and actions) together with the child and family. Tailor interventions to the needs and preferences of the child and the family.

Ensure that interventions for children who are overweight or have obesity address lifestyle within the family and in social settings.

Encourage parents (or carers) to take main responsibility for lifestyle changes in children who are overweight or obese, especially if they are younger than 12 years. Take into account the age and maturity of the child, and the preferences of the child and the parents.

Offer regular, non-discriminatory long-term follow-up by a trained professional. Ensure continuity of care in the multidisciplinary team through good record-keeping.

3 Consider intervention

Consider tailored clinical intervention for children with a BMI at or above the 91st centile, depending on the needs of the individual child and family.

4 Assess lifestyle, comorbidities and willingness to change

Make an initial assessment, then use clinical judgement to investigate comorbidities and other

factors to an appropriate level of detail, depending on the person, the timing of the assessment, the degree of overweight or obesity, and the results of previous assessments.

Manage comorbidities when they are identified; do not wait until the person has lost weight.

Offer people who are not yet ready to change the chance to return for further consultations when they are ready to discuss their weight again and willing or able to make lifestyle changes. Give them information on the benefits of losing weight, healthy eating and increased physical activity.

Recognise that surprise, anger, denial or disbelief about their health situation may diminish people's ability or willingness to change. Stress that obesity is a clinical term with specific health implications, rather than a question of how people look; this may reduce any negative feelings.

During the consultation:

- Assess the person's view of their weight and the diagnosis, and possible reasons for weight gain.
- Explore eating patterns and physical activity levels.
- Explore any beliefs about eating and physical activity and weight gain that are unhelpful if the person wants to lose weight.
- Be aware that people from certain ethnic and socioeconomic backgrounds may be at greater risk of obesity, and may have different beliefs about what is a healthy weight and different attitudes towards weight management.
- Find out what the person has already tried and how successful this has been, and what they learned from the experience.
- Assess the person's readiness to adopt changes.
- Assess the person's confidence in making changes.

Give people and their families and/or carers information on the reasons for tests, how the tests are done and their results and meaning. If necessary, offer another consultation to fully explore the options for treatment or discuss test results.

Consider assessing comorbidities for children with a BMI at or above the 98th centile.

Take measurements to determine degree of overweight or obesity and raise the issue of weight with the child and family, then assess:

- presenting symptoms and underlying causes of being overweight or obese
- willingness and motivation to change

- comorbidities (such as hypertension, hyperinsulinaemia, dyslipidaemia, type 2 diabetes, psychosocial dysfunction and exacerbation of conditions such as asthma)
- any risk factors (assess using lipid profile preferably done when fasting, blood pressure measurement and HbA_{1c} measurement)
- psychosocial distress, such as low self-esteem, teasing and bullying
- family history of being overweight or obese and comorbidities
- the child and family's willingness and motivation to change lifestyle
- lifestyle (diet and physical activity [See page 12])
- environmental, social and family factors that may contribute to being overweight or obese, and the success of treatment
- growth and pubertal status
- any medical problems and medication
- the role of family and paid carers in supporting individuals with learning disabilities to make lifestyle changes.

5 Lifestyle changes

See Obesity / Lifestyle changes for children and young people who are overweight or obese

6 Consider referral to a specialist

Consider referral to an appropriate specialist for children who are overweight or obese and have significant comorbidities or complex needs (for example, learning disabilities or other additional support needs).

See the NICE Pathways on depression in children and young people and social and emotional wellbeing for children and young people.

Quality standards

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

Obesity: clinical assessment and management

3. Referring children and young people for specialist care

7 Tier 3 (specialist) assessment

In tier 3 services, assess associated comorbidities and possible causes for children and young people who are overweight or who have obesity. Use investigations such as:

- blood pressure measurement
- lipid profile, preferably while fasting
- fasting insulin
- fasting glucose levels and oral glucose tolerance test
- liver function
- endocrine function.

Interpret the results of any tests used in the context of how overweight or obese the child is, the child's age, history of comorbidities, possible genetic causes and any family history of metabolic disease related to being overweight or obese.

Make arrangements for transitional care for children and young people who are moving from paediatric to adult services.

See the NICE Pathway on transition from children's to adult's services.

8 Drug treatment

Indications and initiation

Drug treatment is not generally recommended for children younger than 12 years.

In children younger than 12 years, drug treatment may be used only in exceptional circumstances, if severe comorbidities are present. Prescribing should be started and monitored only in specialist paediatric settings.

Orlistat

In children aged 12 years and older, treatment with orlistat is recommended only if physical comorbidities (such as orthopaedic problems or sleep apnoea) or severe psychological comorbidities are present. Treatment should be started in a specialist paediatric setting, by multidisciplinary teams with experience of prescribing in this age group. In October 2014, this was an off label use of orlistat. See prescribing medicines at NICE website.

Do not give orlistat to children for obesity unless prescribed by a multidisciplinary team with expertise in:

- drug monitoring
- psychological support
- behavioural interventions
- interventions to increase physical activity [See page 12]
- interventions to improve diet.

Drug treatment may be continued in primary care for example with a shared care protocol if local circumstances and/or licensing allow.

Continued prescribing and withdrawal

Pharmacological treatment may be used to maintain weight loss, rather than to continue to lose weight.

If there is concern about micronutrient intake adequacy, a supplement providing the reference nutrient intake for all vitamins and minerals should be considered, particularly for vulnerable groups such as older people (who may be at risk of malnutrition) and young people (who need vitamins and minerals for growth and development).

Offer support to help maintain weight loss to people whose drug treatment is being withdrawn; if they did not reach their target weight, their self-confidence and belief in their ability to make changes may be low.

Orlistat

If orlistat is prescribed for children, a 6 to 12-month trial is recommended, with regular review to assess effectiveness, adverse effects and adherence. In October 2014, this was an off label use of orlistat. See prescribing medicines at NICE website.

9 Surgery

Surgical intervention is not generally recommended in children or young people.

Bariatric surgery may be considered for young people only in exceptional circumstances, and if they have achieved or nearly achieved physiological maturity.

Child 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 to 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).

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

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.

Coordinate surgical care and follow-up around the child or young person and their family's needs. Comply with the approaches outlined in the Department of Heath's a call to action on obesity in England.

Ensure all young people have had a comprehensive psychological, educational, family and social assessment before undergoing bariatric surgery.

Perform a full medical evaluation, including genetic screening or assessment before surgery to exclude rare, treatable causes of obesity.

For guidance on preoperative tests for people aged 16 and 17 see the NICE Pathway on preoperative tests.

Resources and equipment

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

- 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) when appropriate
- access to suitable equipment, including scales, theatre tables, Zimmer frames, commodes, hoists, bed frames, pressure-relieving mattresses and seating suitable for children and young people undergoing bariatric surgery, and staff trained to use them.

The surgeon in the multidisciplinary team should:

- 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).

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:

- 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.

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

The full range of human movement, from active hobbies, walking, cycling and the other physical activities involved in daily living, such as walking up stairs, gardening and housework to competitive sport and exercise.

Glossary

BIS

Bispectral Index

EEG

electroencephalography

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

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 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.