Overview (/guidance/cg189)

Recommendations

Recommendations for research (/guidance/cg189/chapter/Recommendations-for-research)

Rationale and impact (/guidance/cg189/chapter/Rationale-and-impact)

Context (/guidance/cg189/chapter/Context)

Finding more information and committee details (/guidance/cg189/chapter/Finding-more-information-and-committee-details)

Update information (/guidance/cg189/chapter/Update-information)

Guidance

Recommendations

1.1 Generic principles of care
1.2 Identifying and assessing overweight, obesity and central adiposity
1.3 Assessment
1.4 Lifestyle interventions
1.5 Behavioural interventions
1.6 Physical activity
1.7 Dietary approaches
1.8 Pharmacological interventions
1.9 Continued prescribing and withdrawal
1.10 Surgical interventions
1.11 Follow-up care
Terms used in this guideline

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care (https://www.nice.org.uk/about/nice-communities/public-involvement/your-care).

Making decisions using NICE guidelines (https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/using-NICE-guidelines-to-make-decisions) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

1.1 Generic principles of care

Adults

1.1.1 Equip specialist settings for treating people who are living with severe obesity with, for example, special seating and adequate weighing and monitoring equipment. Ensure hospitals have access to specialist equipment, such as larger scanners and beds, when providing general care for people who are living with severe obesity. **[2006, amended 2014]**

1.1.2 Discuss the choice of interventions for weight management with the person. The choice of intervention should be agreed with the person. **[2006, amended 2014]**

1.1.3 Tailor the components of the planned weight management programme to the person's preferences, initial fitness, health status and lifestyle. **[2006]**

Children

1.1.4 Coordinate the care of children and young people around their individual and family needs. Comply with the approaches outlined in the Department of Health and Social Care's call to action on obesity in England (https://www.gov.uk/government/publications/healthy-lives-healthy-people-a-call-to-action-on-obesity-in-england).

See also NICE's guideline on managing overweight and obesity in children and young people (https://www.nice.org.uk/guidance/ph47). **[2006, amended 2014]**

1.1.5 Aim to create a supportive environment that helps a child who is overweight or who has obesity, and their family, make lifestyle changes. (The committee noted that 'environment' could include settings other than the home, for example, schools.) **[2006, amended 2014]**

1.1.6 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. **[2006]**

1.1.7 Ensure that interventions for children who are living with overweight or obesity address lifestyle within the family and in social settings. **[2006, amended 2014]**

1.1.8 Encourage parents (or carers) to take main responsibility for lifestyle changes in children who are living with overweight or obesity, 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. **[2006]**

Adults and children

1.1.9 Offer regular, non-discriminatory long-term follow up by a trained professional. Ensure continuity of care in the multidisciplinary team through good record keeping. **[2006]**

1.2 Identifying and assessing overweight, obesity and central adiposity

Identification and assessment in adults

Taking measurements in adults

1.2.1 Use clinical judgement to decide when to measure a person's height and weight. Opportunities include when registering with a GP, consultations for related conditions (such as type 2 diabetes and cardiovascular disease) and other routine health checks. **[2006]**

1.2.2 Encourage adults with a body mass index (BMI) below 35 kg/m^2 to:

- measure their own waist-to-height ratio to assess central adiposity (the accumulation of excess fat in the abdominal area)
- seek advice and further clinical assessments (such as a cardiometabolic risk factor assessment) from a healthcare professional if the measurement indicates an increased health risk.

  Explain to people that to accurately measure their waist and calculate their own waist-to-height ratio, they should follow the advice in box 1. **[2022]**

1.2.3 Direct people to resources that give advice on how to measure waist circumference, such as the NHS BMI healthy weight calculator (https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/). See recommendations 1.2.11 and 1.2.12 for how to interpret waist-to-height ratio. **[2022]**

Box 1 Method for people to measure their own waist and calculate their waist-to-height ratio

Measure

Find the bottom of the ribs and the top of the hips.

Wrap a tape measure around the waist midway between these points (this will be just above the belly button) and breathe out naturally before taking the measurement.

Calculate

Measure waist circumference and height in the same units (either both in centimetres or both in inches). If you know your height in feet and inches, convert it to inches (for example, 5 feet 7 inches is 67 inches).

Divide waist measurement by height measurement. For example:

- 38 inches divided by 67 inches = waist-to-height ratio of 0.57 **or**
- 96.5 cm divided by 170 cm = waist-to-height ratio of 0.57.

Measures of overweight, obesity and central adiposity in adults

1.2.4 Use BMI as a practical measure of overweight and obesity. Interpret it with caution because it is not a direct measure of central adiposity. **[2022]**

1.2.5 In adults with a BMI below 35 kg/m^2, measure and use their waist-to-height ratio, as well as their BMI, as a practical estimate of central adiposity and use these measurements to help assess and predict health risks (for example, type 2 diabetes, hypertension or cardiovascular disease). **[2022]**

1.2.6 Do not use bioimpedance as a substitute for BMI as a measure of general adiposity in adults. **[2006, amended 2014]**

Classifying overweight, obesity and central adiposity in adults

1.2.7 Define the degree of overweight or obesity in adults as follows, if they are not in the groups covered by recommendation 1.2.8:

- healthy weight: BMI 18.5 kg/m^2 to 24.9 kg/m^2
- overweight: BMI 25 kg/m^2 to 29.9 kg/m^2
- obesity class 1: BMI 30 kg/m^2 to 34.9 kg/m^2
- obesity class 2: BMI 35 kg/m^2 to 39.9 kg/m^2
- obesity class 3: BMI 40 kg/m^2 or more.

Use clinical judgement when interpreting the healthy weight category because a person in this category may nevertheless have central adiposity. See Public Health England's guidance on obesity and weight management for people with learning disabilities (https://www.gov.uk/government/publications/obesity-weight-management-and-people-with-learning-disabilities/obesity-and-weight-management-for-people-with-learning-disabilities-guidance) for information on reasonable adjustments that may need to be made. **[2022]**

1.2.8 People with a South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background are prone to central adiposity and their cardiometabolic risk occurs at a lower BMI, so use lower BMI thresholds as a practical measure of overweight and obesity:

- overweight: BMI 23 kg/m^2 to 27.4 kg/m^2
- obesity: BMI 27.5 kg/m^2 or above.

For people in these groups, obesity classes 2 and 3 are usually identified by reducing the thresholds highlighted in recommendation 1.2.7 by 2.5 kg/m^2. **[2022]**

1.2.9 Interpret BMI with caution in adults with high muscle mass because it may be a less accurate measure of central adiposity in this group. **[2022]**

1.2.10 Interpret BMI with caution in people aged 65 and over, taking into account comorbidities, conditions that may affect functional capacity and the possible protective effect of having a slightly higher BMI when older. **[2022]**

1.2.11 Define the degree of central adiposity based on waist-to-height ratio as follows:

- healthy central adiposity: waist-to-height ratio 0.4 to 0.49, indicating no increased health risks
- increased central adiposity: waist-to-height ratio 0.5 to 0.59, indicating increased health risks
- high central adiposity: waist-to-height ratio 0.6 or more, indicating further increased health risks.

These classifications can be used for people with a BMI under 35 kg/m^2 of both sexes and all ethnicities, including adults with high muscle mass.

The health risks associated with higher levels of central adiposity include type 2 diabetes, hypertension and cardiovascular disease. **[2022]**

1.2.12 When talking to a person about their waist-to-height ratio, explain that they should try to keep their waist to half their height (so a waist-to-height ratio of under 0.5). **[2022]**

Discussing the results

1.2.13 Ask the person's permission before talking about the degree of overweight, obesity and central adiposity, and discuss it in a sensitive manner. **[2022]**

1.2.14 Give adults information about the severity of their overweight or obesity and central adiposity and the impact this has on their risk of developing other long-term conditions (such as type 2 diabetes, cardiovascular disease, hypertension, dyslipidaemia, certain cancers and respiratory, musculoskeletal and other metabolic conditions such as non-alcoholic fatty liver disease). **[2006, amended 2022]**

1.2.15 Discuss and agree the level of intervention with adults who:

- are living with overweight or obesity **or**
- have increased health risk based on their waist-to-height ratio.

Take into account people's individual needs and preferences, and factors such as weight-related comorbidities, ethnicity, socioeconomic status, family medical history, and special educational needs and disabilities (SEND). See the recommendations on lifestyle interventions (recommendations#lifestyle-interventions), behavioural interventions (recommendations#behavioural-interventions), physical activity (recommendations#physical-activity), dietary approaches (recommendations#dietary-approaches), pharmacological interventions (recommendations#pharmacological-interventions) and surgical interventions (recommendations#surgical-interventions). **[2022]**

1.2.16 Offer a higher level of intervention to people with weight-related comorbidities (see recommendation 1.3.6 for details of comorbidities (recommendations#adults-2)). Adjust the approach depending on the person's clinical needs. For people who have recently developed diabetes, see the section on when to offer expedited assessment (recommendations#when-to-offer-expedited-assessment), and for people with a BMI of 50 and over see recommendation 1.3.7 (recommendations#adults-2). **[2022]**

For a short explanation of why the committee made the 2022 recommendations and how they might affect practice, see the rationale and impact section on identifying and assessing overweight, obesity and central adiposity in adults (rationale-and-impact#identifying-and-assessing-overweight-obesity-and-central-adiposity-in-adults).

Full details of the evidence and the committee's discussion are in [evidence review A: accuracy of anthropometric measures in assessing health risks associated with overweight and obesity in adults (https://www.nice.org.uk/guidance/cg189/evidence/a-accuracy-of-anthropometric-measures-in-assessing-health-risks-associated-with-overweight-and-obesity-in-adults-pdf-11198050382)](https://www.nice.org.uk/guidance/cg189/evidence/a-accuracy-of-anthropometric-measures-in-assessing-health-risks-associated-with-overweight-and-obesity-in-adults-pdf-11198050382).

Targeted advice for people from Black, Asian and minority ethnic family backgrounds

1.2.17 Ensure healthcare professionals are aware that people from Black, Asian and minority ethnic family backgrounds are at an increased risk of chronic health conditions at a lower BMI than people from a white family background (below BMI 25 kg/m^2). **[2013]**

1.2.18 Ensure people from Black, Asian and minority ethnic family backgrounds are aware that they face an increased risk of chronic health conditions at a lower BMI than people from a white family background (below BMI 25 kg/m^2). **[2013]**

1.2.19 Use existing local information networks for people of Black and minority ethnic family backgrounds to share information on the increased risks these groups face at a lower BMI. **[2013]**

Identification and assessment in children and young people

Taking measurements in children and young people

1.2.20 Use clinical judgement to decide when to measure a child or young person's height and weight. Opportunities include when registering with a GP, consultations for related conditions (such as type 2 diabetes and cardiovascular disease) and other routine health checks. **[2006]**

Measures of overweight, obesity and central adiposity in children and young people

1.2.21 Use BMI as a practical estimate of overweight and obesity, and ensure that charts used are:

- appropriate for children and young people **and**
- adjusted for age and sex.

Interpret BMI with caution because it is not a direct measure of central

adiposity. The Royal College of Paediatrics and Child Health UK-World Health Organization (WHO) growth charts (https://www.rcpch.ac.uk/resources/uk-who-growth-charts-2-18-years) and BMI charts (https://www.rcpch.ac.uk/resources/body-mass-index-bmi-chart) should be used to plot and classify BMI centile. The childhood and puberty close monitoring (CPCM) form (https://www.rcpch.ac.uk/resources/uk-who-growth-charts-childhood-puberty-close-monitoring-cpcm) can also be used for continued BMI monitoring in children aged 2 and over, especially in instances where puberty is either premature or delayed. Refer to special BMI growth charts for children and young people with Down's syndrome, if needed. **[2022]**

1.2.22 Consider using waist-to-height ratio in children and young people aged 5 and over to assess and predict health risks associated with central adiposity (such as type 2 diabetes, hypertension or cardiovascular disease). See box 1 for information on how the waist should be measured and how to calculate waist-to-height ratio (recommendations#taking-measurements-in-adults). **[2022]**

1.2.23 Do not use bioimpedance as a substitute for BMI as a measure of general adiposity in children and young people. **[2006, amended 2014]**

Classifying overweight, obesity and central adiposity in children and young people

1.2.24 Define the degree of overweight or obesity in children and young people using the following classifications:

- overweight: BMI 91st centile + 1.34 standard deviations (SDs)
- clinical obesity: BMI 98th centile + 2.05 SDs
- severe obesity: BMI 99.6th centile + 2.68 SDs.

Use clinical judgement when interpreting BMI below the 91st centile, especially the healthy weight category in BMI charts because a child or young person in this category may nevertheless have central adiposity. **[2022]**

1.2.25 Define the degree of central adiposity based on waist-to-height ratio in children and young people as follows:

- healthy central adiposity: waist-to-height ratio 0.4 to 0.49, indicating no increased health risk
- increased central adiposity: waist-to-height ratio 0.5 to 0.59, indicating increased health risk

- high central adiposity: waist-to-height ratio 0.6 or more, indicating further increased health risk.

  These classifications can be used for children and young people of both sexes and all ethnicities.

  The health risks associated with higher central adiposity levels include type 2 diabetes, hypertension and cardiovascular disease. **[2022]**

1.2.26 When talking to a child, young person, and their families and carers, explain that they should try to keep their waist to half their height (so a waist-to-height-ratio of under 0.5). **[2022]**

Discussing the results

1.2.27 Ask permission from children, young people, and their families and carers before talking about the degree of overweight, obesity and central adiposity, and discuss it in a sensitive and age-appropriate manner. **[2022]**

Choosing interventions

1.2.28 Consider tailored interventions for children and young people:

- who are living with overweight or obesity **or**
- have increased health risk based on their waist-to-height ratio.

  Take into account their individual needs and preferences, and factors such as weight-related comorbidities, ethnicity, socioeconomic status, social complexity (for example, looked-after children and young people), family medical history, mental and emotional health and wellbeing, developmental age, and special educational needs and disabilities (SEND). See the recommendations on lifestyle interventions (recommendations#lifestyle-interventions), behavioural interventions (recommendations#behavioural-interventions), physical activity (recommendations#physical-activity), dietary approaches (recommendations#dietary-approaches), pharmacological interventions (recommendations#pharmacological-interventions) and surgical interventions (recommendations#surgical-interventions). **[2022]**

1.2.29 Offer a higher level of intervention to children with weight-related comorbidities (see recommendation 1.3.9 for details of comorbidities (recommendations#children-2)). Adjust the approach depending on the child's clinical needs. For pharmacological treatment in children with

comorbidities, see recommendations 1.8.5 and 1.8.6 (recommendations#children-7) and for surgical interventions in young people with exceptional circumstances, see recommendations 1.10.21 and 1.10.22 (recommendations#children-9). **[2022]**

For a short explanation of why the committee made the 2022 recommendations and how they might affect practice, see the rationale and impact section on identifying and assessing overweight, obesity and central adiposity in children and young people (rationale-and-impact#identifying-and-assessing-overweight-obesity-and-central-adiposity-in-children-and-young-people).

Full details of the evidence and the committee's discussion are in evidence review B: accuracy of anthropometric measures in assessing health risks associated with overweight and obesity in children and young people (https://www.nice.org.uk/guidance/cg189/evidence/b-accuracy-of-anthropometric-measures-in-assessing-health-risks-associated-with-overweight-and-obesity-in-children-and-young-people-pdf-11198050383).

1.3 Assessment

Adults and children

1.3.1 Make an initial assessment (see recommendations 1.3.6 and 1.3.8), 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. **[2006]**

1.3.2 Manage comorbidities when they are identified; do not wait until the person has lost weight. **[2006]**

1.3.3 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. **[2006]**

1.3.4 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, 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. **[2006, amended 2014]**

1.3.5 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. **[2006, amended 2014]**

Adults

1.3.6 Take measurements (see [section 1.2 (recommendations#identifying-and-assessing-overweight-obesity-and-central-adiposity)](recommendations#identifying-and-assessing-overweight-obesity-and-central-adiposity)) to determine degree of overweight or obesity and discuss the implications of the person's weight. Then, assess:

- any presenting symptoms
- any underlying causes of overweight or obesity
- eating behaviours
- any comorbidities (for example, type 2 diabetes, hypertension, cardiovascular disease, osteoarthritis, dyslipidaemia and sleep apnoea)
- any risk factors assessed using lipid profile (preferably done when fasting), blood pressure measurement and HbA1c measurement

- the person's lifestyle (diet and physical activity)
- any psychosocial distress
- any environmental, social and family factors, including family history of overweight and obesity, and comorbidities
- the person's willingness and motivation to change lifestyle
- the potential of weight loss to improve health
- any psychological problems
- any medical problems and medication
- the role of family and care workers in supporting individuals with learning disabilities to make lifestyle changes.

See also NICE's guideline on managing overweight and obesity in children and young people (https://www.nice.org.uk/guidance/ph47). **[2006, amended 2014]**

1.3.7 Consider referral to tier 3 services if:

- the underlying causes of overweight or obesity need to be assessed
- the person has complex disease states or needs that cannot be managed adequately in tier 2 (for example, the additional support needs of people with learning disabilities)
- conventional treatment has been unsuccessful
- drug treatment is being considered for a person with a BMI of more than 50 kg/m^2
- specialist interventions (such as a very-low-calorie diet) may be needed
- surgery is being considered.

For more information on tier 3 services, see NHS England's report on joined up clinical pathways for obesity (https://www.england.nhs.uk/2014/03/comm-obesity-serv/). **[2006, amended 2014]**

Children

1.3.8 Assessment of comorbidity should be considered for children with a BMI at or above the 98th centile. **[2006]**

1.3.9 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 overweight or obesity
- 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 assessed using lipid profile (preferably done when fasting), blood pressure measurement and HbA1c measurement
- psychosocial distress, such as low self-esteem, teasing and bullying (see also NICE's guideline on managing overweight and obesity in children and young people (https://www.nice.org.uk/guidance/ph47))
- family history of overweight or obesity and comorbidities
- the child and family's willingness and motivation to change lifestyle
- lifestyle (diet and physical activity)
- environmental, social and family factors that may contribute to overweight or obesity, and the success of treatment
- growth and pubertal status
- any medical problems and medication
- the role of family and care workers in supporting people with learning disabilities to make lifestyle changes. **[2006, amended 2014]**

1.3.10 Consider referral to an appropriate specialist for children who are living with overweight or obesity and have significant comorbidities or complex needs (for example, learning disabilities or other additional support needs). **[2006, amended 2014]**

1.3.11 In tier 3 services, assess associated comorbidities and possible causes for children and young people who are living with overweight or 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 the level of the child's overweight or obesity is, the child's age, history of comorbidities, possible genetic causes and any family history of metabolic disease related to overweight or obesity. **[2006, amended 2014]**

1.3.12 Make arrangements for transitional care for children and young people who are moving from paediatric to adult services. **[2006]**

1.4 Lifestyle interventions

Adults and children

1.4.1 Multicomponent interventions are the treatment of choice. Ensure weight management programmes include behaviour change strategies (see recommendations 1.5.1 to 1.5.3 (recommendations#behavioural-interventions)) to increase people's physical activity levels or decrease inactivity, improve eating behaviour and the quality of the person's diet, and reduce energy intake. **[2006, amended 2014]**

1.4.2 When choosing treatments, take into account:

- the person's individual preference and social circumstance, and the experience and outcome of previous treatments (including whether there were any barriers)
- the person's degree of overweight and obesity or increased health risk based on their waist-to-height ratio (see recommendations 1.2.11 and 1.2.15 (recommendations#classifying-overweight-obesity-and-central-adiposity-in-adults))
- any comorbidities. **[2006, amended 2022]**

1.4.3 Document the results of any discussion. Keep a copy of the agreed goals and actions (ensure the person also does this) or put this in the person's notes. **[2006, amended 2014]**

1.4.4 Offer support depending on the person's needs and be responsive to changes over time. **[2006]**

1.4.5 Ensure any healthcare professionals who deliver interventions for weight management have relevant competencies and have had specific training. **[2006, amended 2014]**

1.4.6 Provide information in formats and languages that are suited to the person. Use everyday, jargon-free language and explain any technical terms when talking to the person and their family or carers. Take into account the person's:

- age and stage of life
- gender
- cultural needs and sensitivities
- ethnicity
- social and economic circumstances
- specific communication needs (for example, because of learning disabilities, physical disabilities or cognitive impairments due to neurological conditions). **[2006, amended 2014]**

1.4.7 Praise successes – however small – at every opportunity to encourage the person through the difficult process of changing established behaviour. **[2006]**

1.4.8 Give people who are living with overweight or obesity, and their families and/or carers, relevant information on:

- being overweight, and obesity in general, including related health risks
- realistic targets for weight loss; for adults, see NICE's guideline on managing overweight and obesity in adults (https://www.nice.org.uk/guidance/ph53)
- the distinction between losing weight and maintaining weight loss, and the importance of developing skills for both; advise them that the change from losing weight to maintenance typically happens after 6 to 9 months of treatment
- realistic targets for outcomes other than weight loss, such as increased physical activity and healthier eating
- diagnosis and treatment options

- healthy eating in general (more information on healthy eating can be found on the eat well pages of the NHS website (https://www.nhs.uk/live-well/eat-well/))
- medication and side effects
- surgical treatments
- self-care
- voluntary organisations and support groups and how to contact them.

Ensure there is adequate time in the consultation to provide information and answer questions. **[2006, amended 2014]**

1.4.9 If a person (or their family or carers) does not feel this is the right time for them to take action, explain that advice and support will be available in the future whenever they need it. Provide contact details so that the person can get in touch when they are ready. **[2006, amended 2014]**

Adults

1.4.10 Encourage the person's partner or spouse to support any weight management programme. **[2006]**

1.4.11 Base the level of intensity of the intervention on the level of risk and the potential to gain health benefits (see recommendations 1.2.15 and 1.2.16 (recommendations#discussing-the-results)). **[2006]**

Children

1.4.12 Be aware that the aim of weight management programmes for children and young people can vary. The focus may be on either weight maintenance or weight loss, depending on the person's age and stage of growth. **[2006, amended 2014]**

1.4.13 Encourage parents of children and young people who are living with overweight or obesity to lose weight if they are also living with overweight or obesity. **[2006]**

1.5 Behavioural interventions

Adults and children

1.5.1 Deliver any behavioural intervention with the support of an appropriately trained professional. **[2006]**

Adults

1.5.2 Include the following strategies in behavioural interventions for adults, as appropriate:

- self-monitoring of behaviour and progress
- stimulus control
- goal setting
- slowing rate of eating
- ensuring social support
- problem solving
- assertiveness
- cognitive restructuring (modifying thoughts)
- reinforcement of changes
- relapse prevention
- strategies for dealing with weight regain. **[2006]**

Children

1.5.3 Include the following strategies in behavioural interventions for children, as appropriate:

- stimulus control
- self-monitoring
- goal setting
- rewards for reaching goals
- problem solving.

Give praise to successes and encourage parents to role-model desired behaviours. **[2006, amended 2014]**

1.6 Physical activity

Adults

1.6.1 Encourage adults to increase their level of physical activity even if they do not lose weight as a result, because of the other health benefits it can bring (for example, reduced risk of type 2 diabetes and cardiovascular disease). Encourage adults to meet the recommendations in the UK Chief Medical Officers' physical activity guidelines (https://www.gov.uk/government/collections/physical-activity-guidelines) for weekly activity. **[2006]**

1.6.2 Advise that to prevent obesity, most people may need to do 45 to 60 minutes of moderate-intensity activity a day, particularly if they do not reduce their energy intake. Advise people who have been living with obesity and have lost weight that they may need to do 60 to 90 minutes of activity a day to avoid regaining weight. **[2006]**

1.6.3 Encourage adults to build up to the recommended activity levels for weight maintenance, using a managed approach with agreed goals.

Recommend types of physical activity, including:

- activities that can be incorporated into everyday life, such as brisk walking, gardening or cycling (see also NICE's guideline on walking and cycling (https://www.nice.org.uk/guidance/ph41))
- supervised exercise programmes
- other activities, such as swimming, aiming to walk a certain number of steps each day, or stair climbing.

Take into account the person's current physical fitness and ability for all activities. Encourage people to also reduce the amount of time they spend inactive, such as watching television, using a computer or playing video games. **[2006]**

Children

1.6.4 Encourage children and young people to increase their level of physical activity, even if they do not lose weight as a result, because of the other health benefits exercise can bring (for example, reduced risk of type 2 diabetes and cardiovascular disease). Encourage children to meet the

recommendations in the UK Chief Medical Officers' physical activity guidelines (https://www.gov.uk/government/collections/physical-activity-guidelines) for daily activity. **[2006]**

1.6.5 Be aware that children who are already living with overweight may need to do more than 60 minutes of activity. **[2006, amended 2014]**

1.6.6 Encourage children to reduce inactive behaviours, such as sitting and watching television, using a computer or playing video games. **[2006]**

1.6.7 Give children the opportunity and support to do more exercise in their daily lives (for example, walking, cycling, using the stairs and active play; see also NICE's guideline on walking and cycling (https://www.nice.org.uk/guidance/ph41)). Make the choice of activity with the child and ensure it is appropriate to the child's ability and confidence. **[2006]**

1.6.8 Give children the opportunity and support to do more regular, structured physical activity (for example, football, swimming or dancing). Make the choice of activity with the child, and ensure it is appropriate to the child's ability and confidence. **[2006]**

1.7 Dietary approaches

Adults and children

1.7.1 Tailor dietary changes to food preferences and allow for a flexible and individual approach to reducing calorie intake. **[2006]**

1.7.2 Do not use unduly restrictive and nutritionally unbalanced diets, because they are ineffective in the long term and can be harmful. **[2006, amended 2014]**

1.7.3 Encourage people to improve their diet even if they do not lose weight, because there can be other health benefits. **[2006]**

Adults

1.7.4 The main requirement of a dietary approach to weight loss is that total energy intake should be less than energy expenditure. **[2006]**

1.7.5 Diets that have a 600 kcal/day deficit (that is, they contain 600 kcal less than the person needs to stay the same weight) or that reduce calories by lowering the fat content (low-fat diets), in combination with expert support

and intensive follow up, are recommended for sustainable weight loss. **[2006]**

1.7.6 Consider low-calorie diets (800 to 1,600 kcal/day), but be aware these are less likely to be nutritionally complete. **[2006, amended 2014]**

1.7.7 Do not routinely use very-low-calorie diets (800 kcal/day or less) to manage obesity. **[2014]**

1.7.8 Only consider very-low-calorie diets, as part of a multicomponent weight management strategy, for people who are living with obesity and who have a clinically assessed need to rapidly lose weight (for example, people who need joint replacement surgery or who are seeking fertility services). Ensure that:

- the diet is nutritionally complete
- the diet is followed for a maximum of 12 weeks (continuously or intermittently)
- the person following the diet is given ongoing clinical support. **[2014]**

1.7.9 Before starting someone on a very-low-calorie diet as part of a multicomponent weight management strategy:

- Consider counselling and assess for eating disorders or other psychopathology to make sure the diet is appropriate for them.
- Discuss the risks and benefits with them.
- Tell them that this is not a long-term weight management strategy, and that regaining weight may happen and is not because of their own or their clinician's failure.
- Discuss the reintroduction of food following a liquid diet with them. **[2014]**

1.7.10 Provide a long-term multicomponent strategy to help the person maintain their weight after the use of a very-low-calorie diet (see recommendation 1.4.1 (recommendations#lifestyle-interventions)). **[2014]**

1.7.11 Encourage people to eat a balanced diet in the long term, consistent with other healthy eating advice.

More information on healthy eating can be found on the eat well pages of the NHS website (https://www.nhs.uk/live-well/eat-well/). **[2006, amended 2014]**

Children

1.7.12 A dietary approach alone is not recommended. It is essential that any dietary recommendations are part of a multicomponent intervention. **[2006]**

1.7.13 Any dietary changes should be age appropriate and consistent with healthy eating advice. **[2006]**

1.7.14 For children and young people living with overweight or obesity, total energy intake should be below their energy expenditure. Changes should be sustainable. **[2006, amended 2014]**

1.8 Pharmacological interventions

Adults

1.8.1 Consider pharmacological treatment (see table 1) only after dietary, exercise and behavioural approaches have been started and evaluated. NICE has not recommended naltrexone–bupropion (see NICE's technology appraisal guidance on naltrexone–bupropion for managing overweight and obesity (https://www.nice.org.uk/guidance/ta494)). **[2006, amended 2023]**

1.8.2 Consider drug treatment (see table 1) for people who have not reached their target weight loss or have reached a plateau on dietary, activity and behavioural changes. **[2006]**

1.8.3 Make the decision to start drug treatments after discussing the potential benefits and limitations with the person, including the mode of action, adverse effects and monitoring requirements, and the potential impact on the person's motivation. Make arrangements for appropriate healthcare professionals to offer information, support and counselling on additional diet, physical activity and behavioural strategies when drug treatment is prescribed. Provide information on patient support programmes. **[2006, amended 2014]**

Table 1 Medicines recommended by NICE for weight loss in adults

Medicine	Starting criteria

Medicine	Starting criteria
Liraglutide, see NICE's technology appraisal guidance on liraglutide for managing overweight and obesity (https://www.nice.org.uk/guidance/ta664)	BMI of: • at least 35 kg/m^2 **or** • at least 32.5 kg/m^2 for members of minority ethnic groups known to be a equivalent risk of the consequences obesity at a lower BMI than the white population **and** Non-diabetic hyperglycaemia (HbA1c of 42 mmol/mol to 47 mmol/mol [6.0 6.4%] or a fasting plasma glucose lev 5.5 mmol/litre to 6.9 mmol/litre) **and** High risk of cardiovascular disease b on risk factors such as hypertension dyslipidaemia **and** Prescribe in secondary care by a specialist weight management servic (recommendations#specialist-weigh management-service) **and** The company provides it according t commercial arrangement (https://www.nice.org.uk/guidance/ta
Orlistat	BMI of: • 30 kg/m^2 or more **or** • 28 kg/m^2 or more with associated ris factors. Use with other drugs aimed at weigh reduction is not recommended.

Medicine	Starting criteria
Semaglutide, see NICE's technology appraisal guidance on semaglutide for managing overweight and obesity (https://www.nice.org.uk/guidance/ta875)	BMI of: • at least 35.0 kg/m^2 **or** • 30.0 kg/m^2 to 34.9 kg/m^2 and meet t criteria for referral to specialist weigl management services in recommendation 1.3.7 (recommendations#adults-2). Use lower BMI thresholds (usually reduced by 2.5 kg/m^2) for people fro South Asian, Chinese, other Asian, M Eastern, Black African or African-Caribbean family backgrounds **and** At least 1 weight-related comorbidity **and** Use within a specialist weight management service.

Children

1.8.4 Drug treatment is not generally recommended for children younger than 12 years. **[2006]**

1.8.5 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. **[2006, amended 2014]**

1.8.6 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 NICE's information

on prescribing medicines (https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/making-decisions-using-nice-guidelines#prescribing-medicines). **[2006, amended 2014]**

1.8.7 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
- interventions to improve diet. **[2006, amended 2014]**

1.8.8 Drug treatment may be continued in primary care, for example with a shared care protocol if local circumstances and/or licensing allow. **[2006, amended 2014]**

1.9 Continued prescribing and withdrawal

Adults and children

1.9.1 Pharmacological treatment may be used to maintain weight loss rather than to continue to lose weight. **[2006]**

1.9.2 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). **[2006]**

1.9.3 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. **[2006]**

Adults

1.9.4 Monitor the effect of drug treatment and reinforce lifestyle advice and adherence through regular review. **[2006, amended 2014]**

1.9.5 Consider withdrawing drug treatment in people who have not reached weight loss targets (see recommendation 1.9.8 and table 1 for details). **[2006]**

1.9.6 Rates of weight loss may be slower in people with type 2 diabetes, so less strict goals than those for people without diabetes may be appropriate. Agree the goals with the person and review them regularly. **[2006]**

1.9.7 Only prescribe orlistat as part of an overall plan for managing obesity in adults who meet 1 of the following criteria:

- a BMI of 28 kg/m^2 or more with associated risk factors
- a BMI of 30 kg/m^2 or more. **[2006]**

1.9.8 Continue orlistat therapy beyond 3 months only if the person has lost at least 5% of their initial body weight since starting drug treatment (see also recommendation 1.9.6 for advice on targets for people with type 2 diabetes.) **[2006]**

1.9.9 Make the decision to use drug treatment for longer than 12 months (usually for weight maintenance) after discussing potential benefits and limitations with the person. **[2006]**

1.9.10 The co-prescribing of orlistat with other drugs aimed at weight reduction is not recommended. **[2006]**

Children

1.9.11 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 NICE's information on prescribing medicines (https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/making-decisions-using-nice-guidelines#prescribing-medicines). **[2006, amended 2014]**

1.10 Surgical interventions

When to refer adults for assessment for bariatric surgery

1.10.1 Offer adults a referral for a comprehensive assessment by specialist weight management services (recommendations#specialist-weight-management-service) providing multidisciplinary management of obesity to see whether bariatric surgery is suitable for them if they:

- have a BMI of 40 kg/m^2 or more, or between 35 kg/m^2 and 39.9 kg/m^2 with a significant health condition that could be improved if they lost weight (see box 2 for examples) **and**
- agree to the necessary long-term follow up after surgery (for example, lifelong annual reviews). **[2023]**

1.10.2 Consider referral for people of South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background using a lower BMI threshold (reduced by 2.5 kg/m^2) than in recommendation 1.10.1 to account for the fact that these groups are prone to central adiposity and their cardiometabolic risk occurs at a lower BMI. **[2023]**

Box 2 Examples of common health conditions that can improve after bariatric surgery

Some conditions that can improve after bariatric surgery include:

- cardiovascular disease
- hypertension
- idiopathic intracranial hypertension
- non-alcoholic fatty liver disease with or without steatohepatitis
- obstructive sleep apnoea
- type 2 diabetes.

These examples are based on the evidence identified for this guideline and the list is not exhaustive.

When to offer expedited assessment

1.10.3 Offer an expedited assessment for bariatric surgery to people:

- with a BMI of 35 kg/m^2 or more who have recent-onset (diagnosed within the past 10 years) type 2 diabetes **and**
- as long as they are also receiving, or will receive, assessment in a specialist weight management service. **[2014]**

1.10.4 Consider an expedited assessment for bariatric surgery for people:

- with a BMI of 30 kg/m^2 to 34.9 kg/m^2 who have recent-onset (diagnosed within the past 10 years) type 2 diabetes **and**

- who are also receiving, or will receive, assessment in a specialist weight management service. **[2014]**

1.10.5 Consider an expedited assessment for bariatric surgery for people of South Asian, Chinese, other Asian, Middle Eastern, Black African or African-Caribbean family background using a lower BMI threshold (reduced by 2.5 kg/m^2) than in recommendation 1.10.4, to account for the fact that these groups are prone to central adiposity and their cardiometabolic risk occurs at a lower BMI. **[2014, amended 2023]**

Initial assessment and discussions with the multidisciplinary team

1.10.6 Ensure the multidisciplinary team within a specialist weight management service includes or has access to health and social care professionals who have expertise in conducting medical, nutritional, psychological and surgical assessments in people living with obesity and are able to assess whether surgery is suitable. **[2023]**

1.10.7 Carry out a comprehensive, multidisciplinary assessment for bariatric surgery based on the person's needs. As part of this, assess:

- the person's medical needs (for example, existing comorbidities)
- their nutritional status (for example, dietary intake, and eating habits and behaviours)
- any psychological needs that, if addressed, would help ensure surgery is suitable and support adherence to postoperative care requirements
- their previous attempts to manage their weight, and any past response to a weight management intervention (such as one provided by a specialist weight management service)
- any other factors that may affect their response after surgery (for example, language barriers, learning disabilities and neurodevelopmental conditions, deprivation and other factors related to health inequalities)
- whether any individual arrangements need to be made before the day of the surgery (for example, if they need additional dietary or psychological support, or support to manage existing or new comorbidities)
- fitness for anaesthesia and surgery. **[2023]**

1.10.8 The hospital specialist or bariatric surgeon should discuss the following with people who are thinking about having bariatric surgery:

- the potential benefits

- plans for conception and pregnancy (if someone is of childbearing age)
- the longer-term implications and requirements of surgery
- the potential risks, including perioperative mortality, and complications.

Include the person's family and carers in the discussion, if appropriate. **[2006, amended 2023]**

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

- the severity of obesity and any 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. **[2006]**

1.10.10 Give the person information on:

- appropriate dietary intake after the bariatric procedure
- monitoring their macronutrient and micronutrient status
- patient support groups
- individualised nutritional supplementation, and sources of support and guidance for long-term weight loss and weight maintenance. **[2006, amended 2023]**

For a short explanation of why the committee made the 2023 recommendations and how they might affect practice, see the rationale and impact section on surgical interventions ❯ (rationale-and-impact#surgical-interventions-2).

Full details of the evidence and the committee's discussion are in evidence review C: referral for bariatric surgery (https://www.nice.org.uk/guidance/cg189/evidence/evidence-review-c-referral-for-bariatric-surgery-pdf-13124752670).

Preoperative assessment and discussions

1.10.11 Carry out a comprehensive preoperative assessment of any psychological or clinical factors that may affect adherence to postoperative care requirements (such as changes to dietary intake, eating habits and taking nutritional supplements) before performing surgery. **[2006, amended 2014]**

Medicines while waiting for surgery

1.10.12 Drug treatments may be used to maintain or reduce weight before surgery for people who have been recommended surgery, if the waiting time is excessive. See the sections on pharmacological interventions (recommendations#pharmacological-interventions) and continued prescribing and withdrawal (recommendations#continued-prescribing-and-withdrawal). **[2006, amended 2023]**

Qualifications of the weight management multidisciplinary team

1.10.13 The surgeon in the multidisciplinary team should have:

- had relevant, supervised training
- specialist experience in bariatric surgery. **[2006, amended 2014]**

1.10.14 Ensure the multidisciplinary team carrying out bariatric surgery can provide:

- preoperative assessment, including a risk-benefit analysis that includes preventing complications of obesity
- specialist assessment for eating disorders (and, if appropriate, referral or signposting to specialist eating disorder services)
- information on the different procedures, including potential weight loss and possible risks
- regular postoperative assessment, including specialist dietetic and surgical follow up (see recommendation 1.10.17)
- management of comorbidities
- specialist psychological support before and after surgery (for example, a psychological assessment before surgery and, if appropriate, referral to specialist mental health services either before or after surgery)
- information on plastic surgery (such as apronectomy) if appropriate. **[2006, amended 2023]**

1.10.15 Hospitals undertaking bariatric surgery should ensure there is access to, and staff trained to use, suitable equipment, including but not limited to weighing scales, blood pressure cuffs, theatre tables, walking frames, commodes, hoists, bed frames, pressure-relieving mattresses and seating suitable for people having bariatric surgery. **[2006, amended 2023]**

1.10.16 Only surgeons with extensive experience should undertake revisional surgery (if the first operation has not been effective) in specialist centres because of the higher rate of complications and increased mortality of revision surgery compared with primary surgery. **[2006]**

Postoperative follow-up care

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

- monitoring nutritional intake, including macronutrient and micronutrient status
- monitoring for comorbidities
- medications review
- individualised dietary and nutritional assessment, advice and support
- advice and support on physical activity
- psychological support tailored to the person
- information about professionally led or peer-support groups. **[2014]**

1.10.18 After discharge from follow up by the bariatric surgery service, ensure people are offered at least annual monitoring of nutritional status and appropriate supplementation after bariatric surgery, as part of a shared care model with primary care. **[2014]**

Audit

1.10.19 Arrange a 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 (http://nbsr2.e-dendrite.com/) conducts national audits for agreed outcomes.) **[2006, amended 2014]**

1.10.20 The surgeon in the multidisciplinary team should submit data for a national clinical audit scheme such as the National Bariatric Surgery Registry. **[2006, amended 2014]**

Children

1.10.21 Surgical intervention is not generally recommended in children or young people. **[2006]**

1.10.22 Bariatric surgery may be considered for young people only in exceptional circumstances, and if they have achieved or nearly achieved physiological maturity. **[2006]**

1.10.23 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
- specialist assessment for eating disorders (and, if appropriate, referral or signposting to specialist eating disorder services)
- information on the different procedures, including potential weight loss and possible risks
- regular postoperative assessment, including specialist dietetic and surgical follow up (see recommendation 1.10.17)
- management of comorbidities
- specialist psychological support before and after surgery (for example, a psychological assessment before surgery and, if appropriate, referral to specialist mental health services either before or after surgery)
- information on plastic surgery (such as apronectomy) if appropriate. **[2006, amended 2023]**

1.10.24 Hospitals undertaking paediatric bariatric surgery should ensure there is access to, and staff trained to use, suitable equipment, including scales, theatre tables, Zimmer frames, commodes, hoists, bed frames, pressure-relieving mattresses and seating suitable for children and young people having bariatric surgery. **[2006, amended 2023]**

1.10.25 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 and Social Care's call to action on obesity in England (https://www.gov.uk/government/publications/healthy-lives-healthy-people-a-call-to-action-on-obesity-in-england). **[2006, amended 2014]**

1.10.26 Ensure all young people have had a comprehensive psychological, educational, family and social assessment before undergoing bariatric surgery. **[2006, amended 2014]**

1.10.27 Perform a full medical evaluation, including genetic screening or assessment before surgery to exclude rare, treatable causes of obesity. **[2006]**

1.11 Follow-up care

1.11.1 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:

- monitoring nutritional intake (including protein and vitamins) 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. **[2014]**

1.11.2 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. **[2014]**

Terms used in this guideline

Specialist weight management service

A specialist primary, community or secondary care-based multidisciplinary team offering a combination of surgical, dietetic, pharmacological and psychological obesity management interventions, including but not limited to tier 3 and tier 4 services.