NHS
National Institute for Health and Clinical Excellence

Quick reference guide 2

For the NHS

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Obesity

Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children

Sibutramine (Reductil): marketing authorisation suspended
On 21 January 2010, the MHRA announced the suspension of the marketing authorisation for the obesity drug sibutramine (Reductil). This follows a review by the European Medicines Agency which found that the cardiovascular risks of sibutramine outweigh its benefits. Emerging evidence suggests that there is an increased risk of non-fatal heart attacks and strokes with this medicine.
The MHRA advises that:
- Prescribers should not issue any new prescriptions for sibutramine (Reductil) and should review the treatment of patients taking the drug.
- Pharmacists should stop dispensing Reductil and should advise patients to make an appointment to see their doctor at the next convenient time.
- People who are currently taking Reductil should make a routine appointment with their doctor to discuss alternative measures to lose weight, including use of diet and exercise regimens. Patients may stop treatment before their appointment if they wish.

NICE clinical guideline 43 recommended sibutramine for the treatment of obesity in certain circumstances. These recommendations have now been withdrawn and healthcare professionals should follow the MHRA advice.

NICE clinical guideline 43
Developed by the National Collaborating Centre for Primary Care and the Centre for Public Health Excellence at NICE

About this booklet

This booklet summarises recommendations that NICE has made for the NHS in 'Obesity: guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children' (*NICE clinical guideline* 43).

NICE's recommendations about obesity for local authorities, schools and early years providers, workplaces and the public are summarised in another booklet (see inside back cover for details).

Who should read this booklet?

The booklet is for staff and managers in the NHS. It contains what you need to know to put the guideline's recommendations into practice.

Who wrote the guideline?

The guideline was developed by the Centre for Public Health Excellence at NICE, and the National Collaborating Centre for Primary Care, which is based at the Royal College of General Practitioners and the Department of Health Sciences, University of Leicester. The Centres worked with a group of professionals from local authorities, education, employers and the NHS, consumer representatives, and technical staff, to review the evidence and draft the recommendations. The recommendations were finalised after public consultation.

For information on how NICE clinical guidelines are developed, go to www.nice.org.uk/guidelinesmanual

Where can I get more information about the guideline on obesity?

The NICE website has the recommendations in full, summaries of the evidence they are based on, summaries of the guideline for the public, patients and carers, and tools to support implementation (see inside back cover for more details).

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This guidance is written in the following context

This guidance represents the view of the Institute, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, 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.

Contents

Introduction

This is the first national guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children in England and Wales. The guidance aims to:

- stem the rising prevalence of obesity and diseases associated with it
- increase the effectiveness of interventions to prevent overweight and obesity
- improve the care provided to adults and children with obesity, particularly in primary care.

Person-centred care

Treatment and care should take into account people's individual needs and preferences. Good communication is essential, supported by evidence-based information, to allow people to reach informed decisions about their care. Carers and relatives should have the chance to be involved in discussions unless the patient thinks it inappropriate.

Key priorities for implementation

Public health

- Managers and health professionals in all primary care settings should ensure that preventing and managing obesity is a priority, at both strategic and delivery levels. Dedicated resources should be allocated for action.
- Primary care organisations and local authorities should recommend to patients, or consider endorsing, self-help, commercial and community weight management programmes only if they follow best practice (see page 22 for details of best practice standards).

Clinical care

- Multicomponent interventions are the treatment of choice. Weight management programmes should include behaviour change strategies 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.

Children

- Interventions for childhood overweight and obesity should address lifestyle within the family and in social settings.
- Body mass index (BMI) (adjusted for age and gender) is recommended as a practical estimate of overweight in children and young people, but needs to be interpreted with caution because it is not a direct measure of adiposity.
- Referral to an appropriate specialist should be considered for children who are overweight or obese and have significant comorbidity or complex needs (for example, learning or educational difficulties).

Adults

- The decision to start drug treatment, and the choice of drug, should be made after discussing with the patient the potential benefits and limitations, including the mode of action, adverse effects and monitoring requirements and their potential impact on the patient's motivation. When drug treatment is prescribed, arrangements should be made for appropriate health professionals to offer information, support and counselling on additional diet, physical activity and behavioural strategies. Information about patient support programmes should also be provided.
- Bariatric surgery is recommended as a treatment option for adults 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 have failed to achieve or maintain adequate, clinically beneficial weight loss for at least 6 months.
  - The person has been receiving or will receive intensive management in a specialist obesity service, is generally fit for anaesthesia and surgery, and commits to the need for long-term follow-up.
- Bariatric surgery is also recommended as a first-line option (instead of lifestyle interventions or drug treatment) for adults with a BMI of more than 50 kg/m^2 in whom surgical intervention is considered appropriate.

Preventing overweight and obesity

Strategy: for PCTs and primary and secondary care settings

These recommendations apply to senior managers, GPs, commissioners and directors of public health. Implementing them will involve working with other organisations.

Target	Recommended action
Getting all staff involved	Ensure there are systems in place and dedicated resources to implement the local obesity strategy, so that health professionals, including health promotion specialists, in all settings can prevent and manage obesity.
Partnership working	Give staff the opportunity to foster effective partnerships with a range of organisations, and to develop multidisciplinary teams.
Training	Identify appropriate professionals to train in: • the benefits of interventions to prevent obesity • best practice, including tailored support to meet people's long-term needs • use of motivational and counselling techniques.
Weight loss programmes	Work with local authorities to ensure self-help, commercial and community weight-management programmes are recommended only if they meet best practice standards (see page 22 for details of standards).

The NHS as an employer: for all NHS organisations

As an employer, the NHS should set an example in developing public health policies to prevent and manage obesity. These recommendations apply to senior managers, health and safety managers, occupational health staff, unions and staff representatives.

Target	Recommended action
Policies and working practices	Ensure policies encourage activity and healthy eating; for example, travel expenses should encourage walking and cycling to work and between work sites.
Building design	Provide showers and secure cycle parking to encourage active travel. Improve stairwells to encourage use of stairs.
Physical activity	Support out-of-hours activities such as lunchtime walks and the use of local leisure facilities.
Workplace food provision	Actively promote healthy choices in restaurants, hospitality, vending machines and shops, in line with Food Standards Agency advice. For example, use signs, posters, pricing and positioning of products to encourage healthy choices.
Education and promotion	Any incentive schemes should be sustained and part of a wider programme. Examples include travel expenses policies, policies on pricing food and drink, contributions to gym membership. **Large organisations**: offer tailored education and promotion programmes to support any action to improve food and drink in the workplace.
Health checks	**Large organisations**: if employee health checks are offered, they should address weight, diet and activity, and provide ongoing support.

Delivery: for health professionals

These recommendations apply to all health professionals who provide interventions in primary or secondary care, including public health practitioners, nurses, behavioural psychologists, physiotherapists, GPs, pharmacists, trained counsellors, registered dietitians, public health nutritionists and specifically trained exercise specialists.

Advice should be tailored to address potential barriers (such as cost, personal tastes, availability, and the views of family and community members), particularly for people from black and ethnic minority groups, in vulnerable groups (such as those on a low income), or at a life stage when weight gain is likely.

Target or type of intervention	Recommended action
For all health professionals	
All interventions to improve diet and increase physical activity	Offer tailored advice based on individual preferences and needs. Provide ongoing support – by telephone, post or internet. Involve parents and carers in actions aimed at children and young adults. Include promotional, awareness-raising activities as part of long-term interventions, not as one-off activities.
Interventions at specific times	Discuss weight, diet and activity at times when weight gain is more likely, for example: • women – during and after pregnancy, the menopause • anyone who is trying to stop smoking.
Improving physical activity levels	Focus interventions on activities that fit easily into people's everyday lives, such as walking.
Improving diet	Use multicomponent interventions such as dietary assessment and targeted advice, family involvement and goal setting.
For health professionals in primary care	
Smoking cessation interventions	People often put on weight when giving up smoking, so tell them about services that advise on prevention and management of obesity if appropriate. Offer general advice on weight management to people who are concerned about their weight, and encourage increased physical activity.
For health professionals in community settings	
Addressing local people's concerns	In community programmes to prevent obesity, address concerns about: • the availability of services • the cost of changing behaviour • the taste of healthier foods • the safety of walking and cycling.
Local retail and catering schemes	Support and promote retail and catering schemes that promote healthy choices.
Improving physical activity levels	Support and promote schemes and facilities that encourage physical activity, including cycling and walking routes (combined with tailored information), based on an audit of local needs. Support and promote behavioural change programmes and tailored advice to help motivated people to be more physically active, for example by walking or cycling instead of driving or taking the bus.

Target or type of intervention	Recommended action
For health professionals in community settings *continued*	
Children and young people identified as being at high risk of obesity	For families of children at risk – for example, if one or both parents are obese: • offer individual counselling and ongoing support • consider family-based as well as individual interventions, depending on the age and maturity of the child.
For health professionals working in early years settings	
Any programme to prevent obesity in early years and family settings	Use a range of components (not just parental education); for example: • diet – offer interactive cookery demonstrations, videos and discussions on meal planning and shopping for food and drink • physical activity – offer interactive demonstrations, videos and group discussions on physical activities, opportunities for active play, safety and local facilities.
Family programmes to prevent obesity	Provide ongoing tailored support and incorporate behaviour change techniques.
For health professionals working with businesses	
Helping businesses prevent obesity	Support implementation of workplace programmes on obesity.

Recommendations for the public

Staying a healthy weight improves health and reduces the risk of diseases associated with being overweight or obese, such as coronary heart disease, type 2 diabetes, osteoarthritis and some cancers. Health professionals should reinforce the messages in this section.

General advice

- Check your weight or waist measurement every now and then, or keep track of the 'fit' of your clothes, to make sure you are not gaining weight.
- Discuss any concerns about your (or your family's) diet, activity levels or weight with a GP or practice nurse, health visitor, school nurse or pharmacist.
- **Adults**: use a weight loss programme (such as a commercial or self-help group, book or website) only if it is based on a balanced diet, encourages regular exercise, and expects weight loss of no more than 0.5–1 kg per week. People with certain medical conditions – such as type 2 diabetes, heart failure or uncontrolled hypertension or angina – should check with their GP's surgery or hospital specialist before starting a weight loss programme.

How to have a healthy balanced diet

- Base meals on starchy foods such as potatoes, bread, rice and pasta, choosing wholegrain where possible.
- Eat plenty of fibre-rich foods – such as oats, beans, peas, lentils, grains, seeds, fruit and vegetables, as well as wholegrain bread, brown rice and pasta.
- Eat at least five portions of fruit and vegetables a day in place of foods higher in fat and calories.
- Eat a low-fat diet, and avoid increasing your fat and/or calorie intake.
- Eat as little as possible of: fried foods; drinks and confectionery high in added sugars; and other food and drinks high in fat and sugar, such as some take away and fast foods.
- Eat breakfast.
- Watch the portion size of meals and snacks, and how often you are eating.
- Avoid taking in too many calories in the form of alcohol.
- **Children and young people**: should have regular meals in a pleasant, sociable environment with no distractions (such as television); parents and carers should join them as often as possible.

How to keep physically active

- Make activities you enjoy – such as walking, cycling, swimming, aerobics or gardening – part of your everyday life. Small everyday changes can make a difference.
- At work, take the stairs instead of the lift, or go for a walk at lunchtime.
- Avoid sitting too long in front of the television, computer or playing video games.
- **For children**:
  - gradually reduce the time they are sitting in front of a screen
  - encourage games that involve running around, such as skipping, dancing or ball games
  - be more active as a family, by walking or cycling to school, going to the park, or swimming
  - encourage children to take part in sport inside and outside school.

Summary of prevention recommendations for non-NHS audiences

NICE has made recommendations for local authorities, early years providers, schools and workplaces about how they should help people stay a healthy weight. Following these recommendations will often involve working in partnership with NHS organisations and staff. There is more information in the quick reference guide for local authorities, schools and early years providers, workplaces and the public (see www.nice.org.uk/CG043).

Local authorities and their partners

- Work with the community to identify barriers to physical activity.
- Ensure design of buildings and open spaces encourages people to be more active.
- Encourage active travel, and promote and support physical activity schemes.
- Encourage local shops and caterers to promote healthy food choices.

Early years settings

- Provide regular opportunities for enjoyable active play and structured physical activity sessions.
- Ensure children eat regular, healthy meals in a supervised, pleasant, sociable environment, free from distractions.

Schools

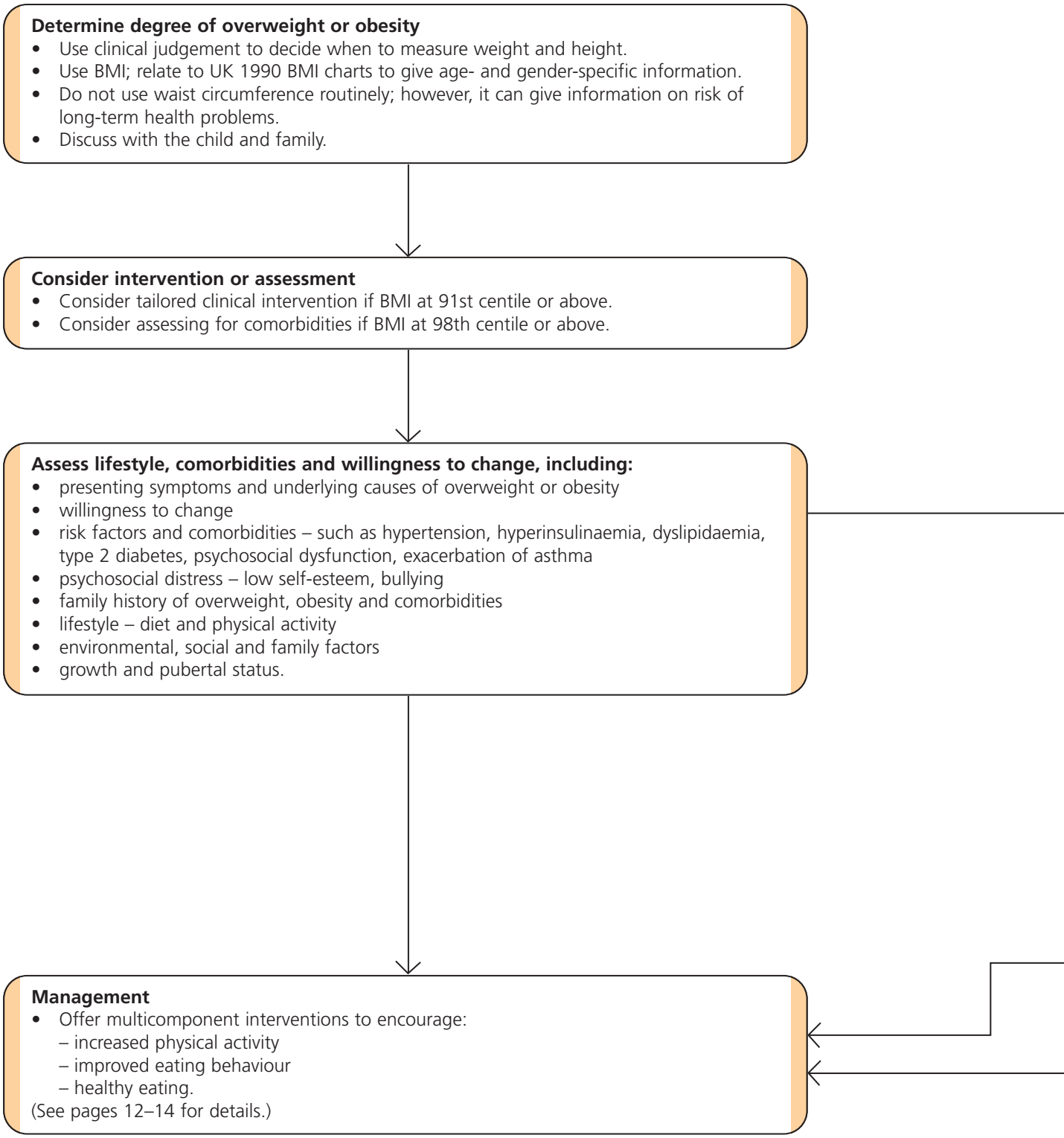
- Ensure school policies and the whole school environment encourage physical activity and a healthy diet.
- Train all staff in how to implement healthy school policies.
- Create links with sports clubs and partnerships.
- Promote physical activities that children can enjoy outside school and into adulthood.
- Ensure children and young people eat meals in a pleasant, sociable environment, free from distractions.

Workplaces

- Follow the recommendations on page 5 for creating healthy workplaces.

Management of overweight and obesity in children

Assessment and classification



General principles of care for children and young people

- Offer regular long-term follow-up by a trained professional.
- Ensure continuity of care through good record keeping.
- Coordinate care around the individual and family needs of children and young people.
- Comply with national core standards as defined in the Children's NSFs for England and Wales.
- Aim to create a supportive environment that helps children and their families make lifestyle changes.
- Make decisions on management in partnership with the child and family, and tailor to their needs and preferences.
- Address lifestyle within the family and in social settings.
- Encourage parents (or carers) to take the main responsibility for lifestyle changes for children, especially children younger than 12 years. But take the age and maturity of the child, and the preferences of the child and the parents into account.

Consider referral to a specialist

If the child has:

- significant comorbidity or
- complex needs such as learning or educational difficulties.

Assessment in secondary care

- Assess comorbidities and possible aetiology; carry out investigations such as:
  - blood pressure
  - fasting lipid profile
  - fasting insulin and glucose levels
  - liver function tests
  - endocrine investigations.
- Take into account the degree of overweight or obesity, the child's age, comorbidities, family history of metabolic diseases and possible genetic causes.

Specialist management

- Drug treatment (see page 15 for details).
- Surgery (see page 16 for details).

Make arrangements for transitional care when young people move to adult services.

The first steps in managing overweight and obesity

Comorbidities and risk factors

- After the initial assessment, use clinical judgement to decide how far to investigate.
- Manage comorbidities when they are identified; do not wait for the child to lose weight.

Readiness to change

- If a child or family is unwilling to make changes, give them:
  - information about the benefits of losing weight, healthy eating and increased physical activity
  - details of someone they can contact when they are ready to change.
- Stress that obesity is a clinical term with health implications, rather than a question of how a person looks.
- During the consultation:
  - assess the child and family's view of the diagnosis, and why they have gained weight
  - ask about their diet and activity levels, and their beliefs about eating, activity and weight
  - be aware that children and families from some ethnic and socioeconomic backgrounds may be at greater risk from obesity, and may have different attitudes and beliefs about weight management
  - find out what they have already tried and what they learned from this
  - assess their readiness to make changes and confidence in making changes.

Explanation

- Give children and their families information on any tests.
- Offer another consultation if needed to explore treatment options or discuss test results.

Lifestyle changes

- Interventions should:
  - be multicomponent – single-strategy approaches are not recommended for children or young people
  - include behaviour change strategies to increase children's physical activity levels, and improve eating behaviour or quality of diet (see below)
  - be delivered by healthcare professionals who have relevant competencies and specific training
  - aim for either weight maintenance or weight loss, depending on the child's age and stage of growth.
- Behavioural interventions should:
  - be delivered with the support of an appropriately trained professional
  - include the following strategies, as appropriate for the child:
    - stimulus control
    - self monitoring
    - goal setting
    - rewards for reaching goals
    - problem solving
  - involve giving praise and encouraging parents to provide a role model of desired behaviours.

Implementing lifestyle change

- When choosing treatment, take into account:
  - the child's preference, social circumstances, and the results of any previous treatments
  - their level of risk (based on BMI and waist circumference)
  - any comorbidities.
- Allow enough time in the consultation to provide information and answer questions.
- Encourage the parents to lose weight if they are also overweight or obese.
- Document the discussion and give a copy of the agreed goals and actions to the child and family.
- Tailor the level of support to the child's needs, and respond to changes over time.
- Praise successes – however small – at every opportunity.

Provide relevant information on:

- overweight and obesity, and related health risks
- realistic targets for weight loss
- the importance of developing skills for both losing weight and maintaining lost weight
- realistic targets for physical activity and healthy eating
- healthy eating in general
- diagnosis and treatment options
- medication and side effects
- surgical treatments
- self care
- voluntary organisations and support groups.

Physical activity – advice for children and families

- Children should:
  - take more exercise even if this does not lead to weight loss, because it has other health benefits, such as reduced risk of type 2 diabetes and cardiovascular disease
  - take a total of 60 minutes of at least moderate activity each day, in one session or several shorter ones lasting 10 minutes or more; children who are overweight may need to take more than this
  - spend less time sitting down, watching television, using a computer or playing video games
  - have the opportunity to take more exercise in their daily lives, such as walking, cycling, using the stairs and active play; the choice should be made with the child
  - have the opportunity to do more regular, structured physical activity, such as sports, swimming or dancing; the choice of activity should be made with the child.

Dietary advice

Do not use a dietary approach alone. It is essential that any dietary recommendations are part of a multicomponent intervention.

- Dietary advice should be:
  - individualised, tailored to food preferences and allow for flexible approaches to reducing calorie intake
  - age appropriate and consistent with healthy eating advice
  - aim to reduce the child's total energy intake to below their energy expenditure
  - aim to produce sustainable changes.
- Do not use unduly restrictive and nutritionally unbalanced diets because they are ineffective in the long term and can be harmful.
- Encourage children and families to improve their diet even if they do not lose weight, because there can be other health benefits.

Drug treatments

When to consider drug treatment

- Consider drug treatment only after dietary, exercise and behavioural approaches have been started and evaluated.
- *For children younger than 12 years:*
  - drug treatment is not generally recommended
  - prescribe only in exceptional circumstances, if there are severe life-threatening comorbidities (such as sleep apnoea or raised intracranial pressure)
  - prescribing should be started and monitored only in specialist paediatric settings.
- *For children aged 12 years and older:*
  - drug treatment is recommended only if there are physical comorbidities (such as orthopaedic problems or sleep apnoea) or severe psychological comorbidities
  - prescribing should be started by a specialist multidisciplinary team with experience of prescribing for this age group.

- Multidisciplinary teams prescribing orlistat or sibutramine should have expertise in:
  - drug monitoring
  - psychological support
  - behavioural interventions
  - interventions to increase physical activity
  - interventions to improve diet.
- After drug treatment has been started in specialist care, it may be continued in primary care if local circumstances and/or licensing allow.

Continued prescribing and withdrawal

- Offer a 6–12-month trial of orlistat or sibutramine, with regular review of effectiveness, adverse effects and adherence.
- Drug treatment may be used to help the child or young person to maintain weight loss, as well as to continue to lose weight.
- If concerned about micronutrient intake, consider a supplement providing the reference nutrient intake for all vitamins and trace elements.
- If a child or young person's drug treatment is withdrawn because they have not reached their target weight, offer support to help maintain weight loss because their self-confidence and belief in their ability to make changes may be low.

The marketing authorisation for sibutramine has been suspended. See front cover for details.

Surgery

When to consider surgery

- Surgery is not generally recommended for children or young people.
- Consider surgery for young people only in exceptional circumstances, and if:
  - they have achieved or nearly achieved physiological maturity
  - 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, high blood pressure) that could be improved if they lost weight
  - all appropriate non-surgical measures have failed to achieve or maintain adequate clinically beneficial weight loss for at least 6 months
  - they are receiving or will receive intensive specialist management
  - they are generally fit for anaesthesia and surgery
  - they commit to the need for long-term follow-up.

- Discuss with the young person and their family in detail the potential benefits, long-term implications and risks, including complications and perioperative mortality.
- Do a comprehensive psychological, education, family and social assessment before performing the surgery.
- Carry out a full medical evaluation, including genetic screening to exclude rare, treatable causes of the obesity.
- Chose the intervention jointly with the young person, taking into account:
  - the degree of obesity
  - comorbidities
  - evidence on effectiveness and long-term effects
  - the facilities and equipment available
  - the experience of the surgeon who would perform the operation.

Surgery should be performed by a multidisciplinary team

- The surgeon in the team should:
  - have undertaken a supervised training programme
  - have specialist experience in bariatric surgery
  - be willing to submit data for a national clinical audit scheme.
- The team should have paediatric expertise in:
  - preoperative assessment, including risk-benefit analysis, and specialist assessment for eating disorders
  - providing information on the procedures, including potential weight loss and risks
  - postoperative assessment, including dietetic and surgical follow-up
  - management of comorbidities
  - psychological support before and after surgery
  - providing information on, or access to, plastic surgery
  - access to suitable equipment, including scales, theatre tables, hoists, bed frames and pressure-relieving mattresses, and staff trained to use them.

During and after the operation

- Coordinate care and follow-up around the needs of the young person and their family, and comply with national core standards defined in the Children's NSFs for England and Wales.
- After the operation, provide regular specialist dietetic monitoring, covering:
  - information on the appropriate diet for the procedure
  - monitoring of micronutrient status
  - information on patient support groups
  - individualised nutritional supplementation, support and guidance for long-term weight loss and weight maintenance.
- Make arrangements for prospective audit for short- and long-term monitoring of outcomes and complications of different procedures, and the impact on quality of life, nutritional status and comorbidities.

Management of overweight and obesity in adults

Assessment and classification

Determine degree of overweight or obesity

- Use clinical judgement to decide when to measure weight and height
- Use BMI to classify degree of obesity (see table 1, below) but use clinical judgement:
  - BMI may be less accurate in highly muscular people
  - for Asian adults, risk factors may be of concern at lower BMI
  - for older people, risk factors may become important at higher BMIs
- Use waist circumference in people with a BMI less than 35 kg/m^2 to assess health risks (see table 2, bottom left)
- Bioimpedance is not recommended as a substitute for BMI
- Tell the person their classification, and how this affects their risk of long-term health problems

Table 1 Classifying overweight and obesity

Classification	BMI (kg/m^2)
Healthy weight	18.5–24.9
Overweight	25–29.9
Obesity I	30–34.9
Obesity II	35–39.9
Obesity III	40 or more

Assess lifestyle, comorbidities and willingness to change, including:

- presenting symptoms and underlying causes of overweight or obesity
- eating behaviour
- risk factors and comorbidities – such as type 2 diabetes, hypertension, cardiovascular disease, dyslipidaemia, osteoarthritis and sleep apnoea; check lipid profile and blood glucose (preferably fasting) and blood pressure
- lifestyle – diet and physical activity
- psychosocial distress
- environmental, social and family factors, including family history of overweight and obesity and comorbidities
- willingness and motivation to change
- potential of weight loss to improve health
- psychological problems
- medical problems and medication.

Table 2 Assessing risks from overweight and obesity

BMI classification	Waist circumference		
	Low	High	Very high
Overweight	No increased risk	Increased risk	High risk
Obesity I	Increased risk	High risk	Very high risk

For men, waist circumference of less than 94 cm is low, 94–102 cm is high and more than 102 cm is very high.

For women, waist circumference of less than 80 cm is low, 80–88 cm is high and more than 88 cm is very high.

Management

- Offer multicomponent interventions to encourage:
  - increased physical activity
  - improved eating behaviour
  - healthy eating (see pages 20–22 for details).
- Drug treatment (see page 23–24 for details).

General principles of care for adults

- Offer regular long-term follow-up by a trained professional.
- Ensure continuity of care through good record keeping.
- Make the choice of any intervention through negotiation with the person.
- Tailor the weight-management programme to the person's preferences, initial fitness, health status and lifestyle.
- In specialist settings, ensure there is equipment for treating people who are severely obese, such as special seating, and adequate weighing and monitoring equipment.
- Hospitals should have access to specialist equipment for general care of people who are severely obese, including larger scanners and beds.

A guide to deciding the initial level of intervention to discuss

BMI classification	Waist circumference			Co-morbidites present
	Low	High	Very high	
Overweight				
Obesity I				
Obesity II				
Obesity III				

☐ General advice on healthy weight and lifestyle.
Diet and physical activity.
Diet and physical activity; consider drugs.
■ Diet and physical activity; consider drugs; consider surgery.

The first steps in managing overweight and obesity

Comorbidities and risk factors

- After the initial assessment, use clinical judgement to decide how far to investigate.
- Manage comorbidities when they are identified; do not wait for the person to lose weight.

Readiness to change

- If the person is unwilling to make changes, give them:
  - information about the benefits of losing weight, healthy eating and increased physical activity
  - details of someone they can contact when they are ready to change.
- Stress that obesity is a clinical term with health implications, rather than a question of how a person looks.
- During the consultation:
  - assess the person's view of the diagnosis, and why they have gained weight
  - ask about their diet and activity levels, and beliefs about eating, activity and weight
  - be aware that people from some ethnic and socioeconomic backgrounds may be at greater risk from obesity, and may have different attitudes and beliefs about weight management
  - find out what they have already tried and what they learned from this
  - assess readiness to make changes and confidence in making changes.

Explanation

- Give people information on any tests.
- Offer another consultation if needed to explore treatment options or discuss test results.

Consider referral:

- for assessment of the underlying causes of overweight or obesity
- if the person has complex disease states or needs that cannot be managed in primary or secondary care
- if conventional treatment has failed
- if considering drug therapy for a person with a BMI more than 50 kg/m^2
- if specialist interventions (such as a very-low-calorie diet for extended periods) may be needed
- if surgery is being considered.

Specialist assessment and management

- Assessment and management as needed.
- Surgery and follow-up (see pages 25–26).

Lifestyle changes

- Interventions should:
  - be multicomponent
  - include behaviour change strategies to increase people's physical activity levels, and improve eating behaviour or quality of diet (see below)
  - be delivered by healthcare professionals who have relevant competencies and specific training.
- Behavioural interventions should:
  - be delivered with the support of an appropriately trained professional
  - include the following strategies, as appropriate for the person:
    - 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.

Implementing lifestyle change

- When choosing treatment, take into account:
  - the person's preference, social circumstances, degree of overweight or obesity, and any previous treatments
  - their level of risk (based on BMI and waist circumference)
  - any comorbidities.
- Base the intensity of treatment on the person's level of risk and potential for health benefits from losing weight.
- Allow enough time in the consultation to provide information and answer questions.
- Encourage the person's spouse or partner to lose weight if they are also overweight or obese.
- Document the discussion and give the person a copy of the agreed goals and actions.
- Tailor the level of support to the person's needs, and respond to changes over time.
- Praise successes – however small – at every opportunity.

Provide relevant information on:

- overweight and obesity, and related health risks
- realistic targets for weight loss, usually
  - maximum weekly weight loss of 0.5–1 kg
  - aim to lose 5–10% of original weight
- the importance of developing skills for both losing weight and maintaining lost weight (the change to maintenance typically happens after about 6–9 months of treatment)
- realistic targets for physical activity and healthy eating
- healthy eating in general
- diagnosis and treatment options
- medication and side effects
- surgical treatments
- self care
- voluntary organisations and support groups.

Physical activity

- Adults should:
  - take more exercise even if this does not lead to weight loss, because it has other health benefits, such as reduced risk of type 2 diabetes and cardiovascular disease
  - do at least 30 minutes of at least moderate-intensity physical activity on 5 or more days a week, in one session or several shorter ones lasting 10 minutes or more; 45–60 minutes may be needed to prevent obesity; people who have lost weight may need to do 60–90 minutes to avoid regaining weight
  - build up to the recommended levels, using a managed approach with agreed goals
  - reduce the time they spend inactive, such as watching television, or using a computer.
- Recommended types of physical activity include:
  - activities that can be incorporated into everyday life, such as brisk walking, gardening or cycling
  - supervised exercise programmes
  - other activities, such as swimming, walking a certain number of steps each day, or stair climbing.
- Take the person's current physical fitness and ability into account.

Dietary advice

- Encourage people to improve their diet even if they do not lose weight, because there can be other health benefits.
- Dietary advice should be individualised, tailored to food preferences and allow for flexible approaches to reducing calorie intake.
- Do not use unduly restrictive and nutritionally unbalanced diets because they are ineffective in the long term and can be harmful.
- In the longer term, people should move towards eating a balanced diet, consistent with other healthy eating advice.
- Total energy intake should be less than energy expenditure.

Different types of diet

- For sustainable weight loss, recommend 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.
- Low-calorie diets (1000–1600 kcal/day) may also be considered, but are less likely to be nutritionally complete.
- Very-low-calorie diets (less than 1000 kcal/day) may be used for a maximum of 12 weeks continuously, or intermittently with a low-calorie diet (for example for 2–4 days a week), if the person is obese and has reached a plateau in weight loss.
- Any diet of less than 600kcal/day should be used only under clinical supervision.

Commercial, self-help and community organisations

- Discuss the range of weight management options and help people decide what is best for them in the long term.
- If recommending commercial, community and/or self-help weight management programmes, continue to monitor patients and provide support and care.
- Check that any you recommend to patients meet best-practice standards by:
  - helping people decide on a realistic healthy target weight (usually to lose 5–10% of their weight)
  - aiming for a maximum weekly weight loss of 0.5–1 kg
  - focusing on long-term lifestyle changes
  - addressing both diet and activity, and offering a variety of approaches
  - using a balanced, healthy-eating approach
  - offering practical, safe advice about being more active
  - including some behaviour-change techniques, such as keeping a diary and advice on how to cope with ‘lapses’ and ‘high-risk’ situations
  - recommending and/or providing ongoing support.

Drug treatments

When to consider drug treatment

- Consider only after dietary, exercise and behavioural approaches have been started and evaluated.
- Consider for patients who have not reached their target weight loss or have reached a plateau on dietary, activity and behavioural changes alone.

- Before deciding to start treatment, and choosing the drug, discuss with the patient the potential benefits and limitations, including the mode of action, adverse effects and monitoring requirements, and their potential impact on the patient's motivation.
- When prescribing, make arrangements for appropriate healthcare professionals to offer information, support and counselling on additional diet, physical activity and behavioural strategies.
- Give information on patient support programmes.
- Follow the drug's summary of product characteristics.

Continued prescribing and withdrawal

- Review regularly, to monitor the effect of drug treatment, and to reinforce lifestyle advice and need for adherence.
- Drug treatment may be used to help people to maintain weight loss, as well as to continue to lose weight.
- Consider withdrawing drug treatment if the person does not lose enough weight (see box on page 24 for details).
- Consider less strict goals for people with type 2 diabetes, because they may lose weight more slowly. Agree goals with the person and review regularly.
- If concerned about micronutrient intake, consider giving a supplement providing the reference nutrient intake for all vitamins and trace elements, particularly for vulnerable groups such as older people, who may be at risk of malnutrition.
- If withdrawing a person's drug treatment, offer support to help maintain weight loss because their self-confidence and belief in their ability to make changes may be low.

Specific advice on drugs

Orlistat

- Prescribe only as part of an overall plan for managing obesity in adults who have:
  - a BMI of 28.0 kg/m^2 or more with associated risk factors, or
  - a BMI of 30.0 kg/m^2 or more.
- Continue treatment for longer than 3 months only if the person has lost at least 5% of their initial body weight since starting drug treatment (less strict goals may be appropriate for people with type 2 diabetes).
- Continue for longer than 12 months (usually for weight maintenance) only after discussing potential benefits and limitations with the patient.
- Co-prescribing with other drugs for weight reduction is not recommended.

Sibutramine

- Prescribe only as part of an overall plan for managing obesity in adults who have:
  - a BMI of 27.0 kg/m^2 or more and other obesity-related risk factors such as type 2 diabetes or dyslipidaemia, or
  - a BMI of 30.0 kg/m^2 or more.
- Prescribe only if there are adequate arrangements for monitoring both weight loss and adverse effects (specifically pulse and blood pressure).
- Continue treatment for longer than 3 months only if the person has lost at least 5% of their initial body weight since starting drug treatment (less strict goals may be appropriate for people with type 2 diabetes).
- Treatment is not recommended beyond the licensed duration of 12 months.
- Co-prescribing with other drugs aimed at weight reduction is not recommended.

The marketing authorisation for sibutramine has been suspended. See front cover for details.

Surgery

When to consider surgery

- Consider surgery for people with severe obesity if:
  - 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, high blood pressure) that could be improved if they lost weight
  - all appropriate non-surgical measures have failed to achieve or maintain adequate clinically beneficial weight loss for at least 6 months
  - they are receiving or will receive intensive specialist management
  - they are generally fit for anaesthesia and surgery
  - they commit to the need for long-term follow-up.
- Consider surgery as a first-line option for adults with a BMI of more than 50 kg/m^2 in whom surgical intervention is considered appropriate; consider orlistat or sibutramine before surgery if the waiting time is long.

- The hospital specialist or surgeon should discuss in detail with the person (and their family if appropriate) the potential benefits, long-term implications and risks, including complications and perioperative mortality.
- Before performing surgery, carry out a comprehensive assessment of any psychological or clinical factors that could affect adherence to postoperative care needs, such as changes to diet.
- Make the choice of intervention jointly with the person, taking into account:
  - the degree of obesity
  - comorbidities
  - evidence on effectiveness and long-term effects
  - the facilities and equipment available
  - the experience of the surgeon who would perform the operation.

The marketing authorisation for sibutramine has been suspended. See front cover for details.

Surgery should be performed by a multidisciplinary team

- The surgeon in the multidisciplinary team should:
  - have undertaken a supervised training programme
  - have specialist experience in bariatric surgery
  - be willing to submit data for a national clinical audit scheme.
- The team should have expertise in:
  - preoperative assessment, including risk-benefit analysis, and specialist assessment for eating disorders
  - providing information on the procedures, including potential weight loss and risks
  - postoperative assessment, including dietetic and surgical follow-up
  - management of comorbidities
  - psychological support before and after surgery
  - providing information on, or access to, plastic surgery
  - access to suitable equipment, including scales, theatre tables, hoists, bed frames and pressure-relieving mattresses, and staff trained to use them.

During and after the operation

- After the operation, provide regular specialist dietetic monitoring, covering:
  - information on the appropriate diet for the procedure
  - monitoring of micronutrient status
  - information on patient support groups
  - individualised nutritional supplementation, support and guidance for long-term weight loss and weight maintenance.
- Make arrangements for prospective audit for short-and long-term monitoring of outcomes and complications of different procedures, and the impact on quality of life, nutritional status and comorbidities.
- 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.

Implementation

NICE has developed tools to help organisations implement this guidance (listed below). These are available on our website (www.nice.org.uk/CG043).

- Slides highlighting key messages for local discussion.
- A signposting document on how to put the guidance into practice and national initiatives that support this locally.
- Costing tools:
  - costing report to estimate the national savings and costs associated with implementation
  - costing template to estimate the local costs and savings involved.
- Audit criteria to monitor local practice.

Further information

Ordering information

You can download the following versions of the NICE guidance on obesity from www.nice.org.uk/CG043

- Two quick reference guides – summaries of the recommendations for professionals:
  - Quick reference guide 1, for local authorities, schools and early years providers, workplaces and the public (this document)
  - Quick reference guide 2, for the NHS.
- Two booklets of information for the public – 'Understanding NICE guidance':
  - Preventing obesity and staying a healthy weight
  - Treatment for people who are overweight or obese.
- The NICE guideline – all the recommendations.
- The full guideline – all the recommendations, details of how they were developed, and summaries of the evidence they were based on.

For printed copies of the quick reference guides or information for the public, phone the NHS Response Line on 0870 1555 455 and quote:

- N1152 (quick reference guide 1)
- N1154 (quick reference guide 2.)
- N1153 (information for the public: 'Preventing obesity and staying a healthy weight')
- N1155 (information for the public: 'Treatment for people who are overweight or obese')

Related NICE guidance

This guidance has updated, and replaces, the NICE technology appraisals on:

- orlistat for obesity in adults (*NICE technology appraisal guidance* no. 22)
- sibutramine for obesity in adults (*NICE technology appraisal guidance* no. 31)
- surgery to aid weight reduction for people with morbid obesity (*NICE technology appraisal guidance* no. 46)

NICE has published related guidance on:

- four commonly used methods to increase physical activity (*NICE public health intervention guidance* no. 2)
- eating disorders (*NICE clinical guideline* no. 9)

The marketing authorisation for sibutramine has been suspended. See front cover for details.

- managing blood pressure and blood lipids in type 2 diabetes (*NICE guideline* H)
- nutrition support in adults (*NICE clinical guideline* no. 32)

NICE is developing guidance on:

- the nutrition of pregnant and breastfeeding mothers and children in low income households
- the promotion and creation of physical environments that support increased levels of physical activity
- the promotion of physical activity in children.

For details of all related NICE guidance, see the website (www.nice.org.uk).

Updating the guideline

This guideline will be updated as needed, and information about the progress of any update will be posted on the NICE website (www.nice.org/CG043).

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