NICE National Institute for Health and Care Excellence

Managing overweight and obesity in adults – lifestyle weight management services

Issued: May 2014

NICE public health guidance 53

guidance.nice.org.uk/ph53

Contents

What is this guideline about?

This guideline makes recommendations on the provision of effective multi-component lifestyle weight management services for adults who are overweight or obese (aged 18 and over). It covers weight management programmes, courses, clubs or groups that aim to change someone's behaviour to reduce their energy intake and encourage them to be physically active.

The aim is to help meet a range of public health goals. These include helping reduce the risk of the main diseases associated with obesity, for example: coronary heart disease, stroke, hypertension, osteoarthritis, type 2 diabetes and various cancers (endometrial, breast, kidney and colon).

The focus is on lifestyle weight management programmes that:

- accept self-referrals or referrals from health or social care practitioners
- are provided by the public, private or voluntary sector
- are based in the community, workplaces, primary care or online.

Usually known as 'tier 2' services (see Tiers of weight management services), these programmes are just 1 part of a comprehensive approach to preventing and treating obesity. Clinical judgement will be needed to determine whether they are suitable for people with conditions that increase the risk of, or are associated with, obesity or who have complex needs.

The guideline is for commissioners, health professionals and providers of lifestyle weight management programmes. (For further details, see Who should take action?) The guideline may also be of interest to overweight and obese adults, their families and other members of the public.

See About this guideline for details of how the guideline was developed and its current status.

1 Recommendations

Recommendation 1 Adopt an integrated approach to preventing and managing obesity

Local authorities, working with other local service providers, clinical commissioning groups and health and wellbeing boards, should:

- Ensure there is an integrated approach to preventing and managing obesity and its associated conditions (see recommendation 1 in Obesity: working with local communities, NICE public health guidance 42). Systems should be in place to allow people to be referred to, or receive support from (or across) the different service tiers of an obesity pathway, as necessary. This includes referrals to and from lifestyle weight management programmes. All the options in the local obesity pathway should be made clear to both professionals and the public.
- Identify local services, facilities or groups that could be included in the local obesity pathway, meet the needs of different groups and address the wider determinants of health. Examples include community walking groups or gardening schemes.
- Ensure staff in local health services are aware of, and make referrals to, the lifestyle weight management service. This includes staff working in: GP teams, pharmacies, health visiting, the NHS Health Check programme and services for smoking cessation, fertility or type 2 diabetes.
- Ensure lifestyle weight management services for adults meet local needs as identified by the joint strategic needs assessment (JSNA) and other local data.

Recommendation 2 Ensure services cause no harm

Public Health England, health and social care professionals, health and wellbeing boards, commissioners of health and social care services and providers of lifestyle weight management services (see Who should take action?) should:

- Be aware of the effort needed to lose weight, prevent weight regain or avoid any further weight gain. Also be aware of the stigma that adults who are overweight or obese may feel or experience. Ensure the tone and content of all communications is respectful and non-judgemental (see recommendation 5 in Obesity: working with local communities, NICE

public health guidance 42). In addition, the terminology used to describe someone's condition should respect how they like to be described.

- Ensure equipment and facilities meet the needs of most adults who are overweight or obese. For example, referrers to, and providers of, lifestyle weight management services should ensure there are large blood pressure cuffs and suitably sized chairs without arms. Any new scales purchased should be able to accurately weigh the heaviest patients seen by the service.

- Be aware that people may feel anxious about being weighed and measured. For example, respect someone's preference for privacy at the weekly weigh-in. (Note, although people may find a waist circumference measurement helpful for self-monitoring, it does not help to assess people with a BMI greater than 35 kg/m^2.)

Recommendation 3 Raise awareness of local weight management issues among commissioners

Local authorities and Public Health England should ensure all those commissioning lifestyle weight management services are aware of:

- the number of adults who are overweight or obese locally, including any variations in rates between different groups

- the effect of the local environment and the wider determinants of health on the prevention and management of obesity

- the local obesity pathway and the role of lifestyle weight management services in the local strategic approach to the prevention and management of obesity

- the range of lifestyle weight management programmes that could be commissioned locally (see recommendation 12)

- continuing professional development or training opportunities on weight management (see recommendation 14).

Recommendation 4 Raise awareness of lifestyle weight management services among health and social care professionals

Clinical commissioning groups, health and wellbeing boards, hospital and community trusts, local authorities, NHS England and Public Health England should:

- Ensure health and social care professionals in contact with adults who are overweight or obese are made aware of:
    - the local obesity pathway and the local strategic approach to preventing and managing obesity
    - the range of local lifestyle weight management services available
    - national sources of accurate information and advice, such as NHS Choices and Change4life
    - continuing professional development or training opportunities on weight management (see recommendation 14).

Recommendation 5 Raise awareness of lifestyle weight management services among the local population

Local authorities and Public Health England should:

- Ensure sources of information and advice about local lifestyle weight management services are included in any communications about being overweight or obese. This includes information provided by health and social care professionals working with adults (such as GPs, practice nurses, health visitors and pharmacists).

Public Health England, local authorities, health and wellbeing boards and clinical commissioning groups should ensure the local adult population is aware of:

- The health benefits for adults who are overweight or obese of losing even a relatively small amount of weight and keeping it off in the long term (or avoiding any further weight gain). (See recommendation 7.)
- The range of lifestyle weight management services available locally.
- Local sources of information and advice such as GPs, practice nurses, health visitors and pharmacists.
- National sources of accurate information and advice such as NHS Choices and Change4life.

Recommendation 6 Refer overweight and obese adults to a lifestyle weight management programme

GP practices and other health or social care professionals who give advice about, or refer people to, lifestyle weight management programmes (see Who should take action?) should:

- Raise the issue of weight loss in a respectful and non-judgemental way. Recognise that this may have been raised on numerous occasions and respect someone's choice not to discuss it further on this occasion.
- Identify people eligible for referral to lifestyle weight management services by measuring their body mass index (BMI). Also measure waist circumference for those with a BMI less than 35 kg/m^2. Consider any other locally agreed risk factors.
- For funded referrals, note that:
  - programmes may particularly benefit adults who are obese (that is, with a BMI over 30 kg/m^2, or lower for those from black and minority ethnic groups) or with other risk factors (comorbidities such as type 2 diabetes)
  - where there is capacity, access for adults who are overweight should not be restricted (that is, for people with a BMI between 25 to 30 kg/m^2, or lower for those from black and minority ethnic groups) or with other risk factors (comorbidities such as type 2 diabetes)
  - there should be no upper BMI or upper age limit for referral.
- Provide information on programmes available locally, where possible, taking people's preferences and previous experiences into account. Be clear that no programme holds the 'magic bullet' or can guarantee long-term success.
- Refer people to a group rather than an individual programme if they express no preference because, on average, group programmes tend to be more cost effective.
- Ensure people who are overweight or obese who are not referred (for whatever reason) have an opportunity to discuss and reconsider attending a programme in the future. Discuss making a follow-up appointment at an agreed date (for example, in 3 to 6 months). Provide them with sources of information about how to make gradual, long-term changes to their dietary habits and physical activity levels (for example, NHS Choices).

- Give people the opportunity for a re-referral, as necessary, because weight management is a long-term process. Use clinical judgement, taking into account the person's circumstances, previous experiences of weight management and commitment to change.

Recommendation 7 Address the expectations and information needs of adults thinking about joining a lifestyle weight management programme

GPs and other health or social care professionals advising or referring adults to lifestyle weight management programmes, and providers advising people who are thinking about joining programmes (see Who should take action?) should:

- Discuss the importance and wider benefits of adults who are overweight or obese making gradual, long-term changes to their dietary habits and physical activity levels.
- Discuss what the programme does and does not involve.
- Discuss realistic weight-loss goals. People should be aware that:
  - The more weight they lose, the greater the health benefits, particularly if someone loses more than 5% of their body weight and maintains this for life.
  - On average, people attending a lifestyle weight management programme lose around 3% of their body weight, but this varies a lot.
  - Preventing future weight gain and maintaining a lower weight trajectory leads to health benefits.
- Discuss the effort and commitment needed to lose weight and prevent weight regain, and the benefit of receiving long-term support. Discuss sources of long term support, such as from the practice nurse, pharmacist, local support group or weight management programme, online groups or networks, and friends or family.

Providers of lifestyle weight management services (see Who should take action?) should:

- Discuss any previous or ongoing weight management strategies (acknowledge what the person has already achieved); any positive or negative experiences of weight management programmes; any concerns or barriers they may have about joining the programme; the process of change and meeting their personal goals.

- Discuss other local services that may provide additional support (for example, local walking or gardening groups).
- Discuss any financial costs (including any costs once a funded referral period has ended).

Recommendation 8 Improve programme uptake, adherence and outcomes

Providers of lifestyle weight management services (see Who should take action?) should:

- At the outset, discuss with adults considering a lifestyle weight management programme:
  - what the programme does and does not involve
  - realistic goals they might hope or expect to achieve and the wider benefits of the programme
  - other local services that may provide additional support (for example, local walking or gardening groups)
  - any financial costs (including any costs once a funded referral has ended).
- Explore with participants any issues that may affect their likelihood of benefiting from the programme. Discussions should take place at the outset and at other times, if someone is having difficulty attending or participating in the programme. Discussions may include:
  - any previous or ongoing strategies to manage their weight (acknowledge what the person has already achieved)
  - any positive or negative experiences of weight management programmes
  - any concerns they may have, or barriers they may face, in relation to joining the programme, the process of change or meeting their personal goals.
- Agree with each person whether the programme is suitable for them at this time.
- Use the regular weigh-in as an opportunity to monitor and review progress toward individual goals.
- If it has not been possible to resolve someone's difficulties with the programme (for example, their attendance or participation), agree what should happen next. For example, they could

be referred to another service, leave the programme at an agreed time, or think about being re-referred at a future date.

Recommendation 9 Commission programmes that include the core components for effective weight loss

Commissioners of lifestyle weight management services (see Who should take action?) should commission or recommend lifestyle weight management programmes that:

- Are multi-component that is, they address dietary intake, physical activity levels and behaviour change.
- Are developed by a multidisciplinary team. This includes input from a registered dietitian, registered practitioner psychologist and a qualified physical activity instructor.
- Ensure staff are trained to deliver them and they receive regular professional development sessions.
- Focus on life-long lifestyle change and the prevention of future weight gain.
- Last at least 3 months, and that sessions are offered at least weekly or fortnightly and include a 'weigh-in' at each session.
- Ensure achievable goals for weight loss are agreed for different stages – including within the first few weeks, for the end of the programme or referral period (as appropriate) and for 1 year (see recommendation 8).
- Ensure specific dietary targets are agreed (for example, for a clear energy [calorie] intake or for a specific reduction in energy intake) tailored to individual needs and goals. Note: it is preferable not to 'ban' specific foods or food groups – and the price of any recommended dietary approaches should not be prohibitive. Individual advice from a registered dietitian may be beneficial, but is not essential.
- Ensure discussions take place about how to reduce sedentary behaviour and the type of physical activities that can easily be integrated into everyday life and maintained in the long term (for example, walking).
- Ensure any supervised physical activity sessions are led by an appropriately qualified physical activity instructor and take into account any medical conditions people may have.

Instructors should be on the Register of Exercise Professionals (or equivalent) at level 3 or above.

- Use a variety of behaviour-change methods. These should address: problem solving; goal setting; how to carry out a particular task or activity; planning to provide social support or make changes to the social environment; self-monitoring of weight and behaviours that can affect weight; and feedback on performance.
- Tailor programmes to support the needs of different groups. For example, programmes should provide men- or women-only sessions as necessary; provide sessions at a range of times and in venues with good transport links or used by a particular community; and consider providing childcare for attendees.
- Monitor weight, indicators of behaviour change and participants' personal goals throughout the programme.
- Adopt a respectful, non-judgemental approach (see recommendation 2).

Recommendation 10 Commission programmes that include the core components to prevent weight regain

Commissioners should:

- Commission or recommend lifestyle weight management programmes that address the prevention of weight regain by:
  - Fostering independence and self-management (including self-monitoring).
  - Discussing opportunities for ongoing support once the programme or referral period has ended. Sources of ongoing support may include the programme itself, online resources or support groups, other local services or activities, and family or friends.
  - Stressing the importance of maintaining new dietary habits and increased physical activity levels in the long term to prevent weight re-gain and discussing strategies to overcome any difficulties in maintaining the new behaviours.
  - Encouraging dietary habits that will support weight maintenance and are sustainable in the long term. For example, programmes should emphasise how following national advice on healthy eating can support weight management. (For example, see NHS Choices.)

- Promoting ways of being more physically active and less sedentary that are sustainable in the long term (for example, walking). The wider benefits of physical activity should also be emphasised.

Recommendation 11 Provide lifestyle weight management programmes based on the core components for effective weight loss and to prevent weight regain

Providers of lifestyle weight management programmes should:

- ensure programmes are based on the core components for effective weight loss (see recommendation 9)
- ensure programmes are based on the core components to prevent weight regain (see recommendation 10).

Recommendation 12 Provide a national source of information on effective lifestyle weight management programmes

Public Health England and other national agencies with an interest in the effectiveness of lifestyle weight management programmes should:

- Work together to establish a national source of information on programmes suitable for commissioning. Any national database should be regularly updated.
- Work with providers and commissioners of lifestyle weight management programmes to agree a standard format and process for providing robust, consistent and regularly updated information on programmes.

Providers of lifestyle weight management programmes (public, private or voluntary organisations) should demonstrate that their programmes:

- Are effective at 12 months or beyond. (The following programmes currently available in the UK have been shown to be effective at 12 to 18 months: [in alphabetical order] Rosemary Conley, Slimming World and Weight Watchers.)
- Meet best practice criteria for commissioning (see recommendation 13).

- Meet the core components for weight loss and the prevention of weight regain (see recommendations 9 and 10).

Recommendation 13 Ensure contracts for lifestyle weight management programmes include specific outcomes and address local needs

Clinical commissioning groups, health and wellbeing boards and local authorities should:

- Commission a range of lifestyle weight management programmes. For example, both group and individual programmes might be needed to meet the needs and preferences of different groups).
- Use the Department of Health's best practice guidance for weight management services. In particular, commission programmes that:
    - at least 60% of participants are likely to complete
    - are likely to lead to an average weight loss of at least 3%, with at least 30% of participants losing at least 5% of their initial weight.
- Ensure contracts clearly specify:
    - The geographic areas and population groups that the programme should cover. Adequate provision should be made for disadvantaged groups, such as those on a lower income.
    - The additional efforts that may be needed to get specific groups involved (based on discussions with providers and referrers).
    - Who will undertake routine evaluation and what measures will be collected. (Adherence to data protection and information governance requirements should not stop services from providing this data – see recommendations 16 and 17.)
- Ensure monitoring takes place 12 months after the programme is completed. This may involve working with providers of lifestyle weight management programmes or commissioning an additional service.
- Consider commissioning additional services to prevent weight regain. For example, consider providing support to establish or expand local support groups or networks that may encourage self-management.

- Ensure lifestyle weight management programmes are complemented by a range of activities or services that address the wider determinants of health. This includes, for example, providing safe cycle and walking routes or restrictions in planning permission for takeaways and other food and drink outlets in specific areas.
- Review programmes that do not meet agreed uptake, provision or outcome targets. Amend or de-commission programmes as appropriate.

Recommendation 14 Provide continuing professional development on lifestyle weight management for health and social care professionals

Those responsible for setting competences and continuing professional development programmes for health professionals (see Who should take action?) should:

- Ensure professional development training on weight management is available for health and social care professionals. (Also see recommendation 13 in 'Obesity: working with local communities', NICE public health guidance 42.)
- Train GPs and other health and social care professionals to identify when to raise weight management with someone and to do so confidently, but with empathy. They should understand why many adults have difficulty managing their weight and the experiences they may face in relation to it. This includes considering the effect of their attitudes to, and any concerns about, their own weight. (Also see recommendations 9 and 13 in 'Obesity: working with local communities', NICE public health guidance 42.)
- Train GPs and other health and social care professionals to accurately measure and record height and weight, determine body mass index (BMI) and accurately measure waist circumference.
- Train GPs and other health and social care professionals to understand the practical skills and behaviours that can help someone lose or maintain their weight and how to provide ongoing support and encouragement. This includes encouraging people to self-manage and self-monitor their weight and any associated behaviours over the long term.
- Train GPs and other health and social care professionals to discuss the likely benefits of a lifestyle weight management programme with service users, taking into account someone's personal circumstances. For example, they should take into account any associated medical conditions or personal factors, such as someone's commitment to change.

- Train GPs and other health and social care professionals in how to help people make an informed decision about the best weight management option for them. They should also be able to refer people to the most appropriate weight management service. This includes identifying people with more complex needs and referring them to appropriate services (such as mental health, psychological or alcohol services).
- Train GPs and other health and social care professionals to identify when someone may benefit from re-referral to a lifestyle weight management programme.

Recommendation 15 Provide training and continuing professional development for lifestyle weight management programme staff

Lifestyle weight management services, professional bodies and training organisations (see Who should take action?) should:

- Develop training for lifestyle weight management programme staff with qualified professionals such as registered practitioner psychologists, registered dietitians and qualified physical activity specialists. Ensure this training addresses staff attitudes to, and any concerns about, their own weight.
- Train staff to communicate effectively with, and generally adopt a respectful and non-judgemental approach to, participants. They should work collaboratively with them. This means they should understand the complexity of weight management and the reasons why many people have difficulty managing their weight, the experiences they may face in relation to their weight, and the fact that they may feel anxious about attending the programme. They should also be clear and open about what the programme involves, so that participants can make an informed choice about whether or not to join.
- Train staff to deliver multicomponent programmes that cover weight management, dietary habits, safe physical activity and behaviour-change strategies. This should include the ability to:
    - tailor interventions to individual needs (considering, for example, any specific language or literacy needs)
    - review progress and provide constructive feedback to both participants and referrers
    - identify possible reasons for relapse and use problem-solving techniques to address these

  - collect information about people's weight, eating habits and physical activity to support monitoring in line with the Department of Health's information governance and data protection requirements (for example, see the Public Health Services Contract 2014/15: guidance on the non-mandatory contract for public health services.)

- Train staff to accurately measure and record height and weight to determine body mass index (BMI) and to accurately measure waist circumference. They should also be sensitive to how people feel about being measured and able to identify when it is practical, relevant and appropriate to measure someone.
- Ensure staff are aware of the common medical and psychological problems associated with being overweight or obese.
- Ensure staff are aware of evidence on the effect of dietary habits and physical activity on weight gain, loss and maintenance.
- Ensure staff are aware of the practical skills and behaviours that can help someone lose or maintain their weight. This includes, for example, shopping and cooking skills, understanding food labels and knowing what constitutes an appropriate portion of food. It also includes being able to identify opportunities to be less sedentary and more physically active.
- Train staff to identify when a participant should be referred to their GP for potential onward referral to other services (for example, specialist weight management or other specialist services, such as alcohol counselling).
- Ensure staff leading supervised physical activity sessions are qualified and insured (for example, they should be trained to at least level 3 on the register of exercise professionals or equivalent).
- Train staff to identify any gaps in their own knowledge, confidence or skills and ensure they know how to get these gaps addressed through further training.

Recommendation 16 Improve information sharing on people who attend a lifestyle weight management programme

- Commissioners of lifestyle weight management services should work with all referrers and providers to put systems in place to share any relevant information, in confidence, about people referred to lifestyle weight management programmes. (Examples of relevant information include details of someone's weight at baseline, programme end and at

12 months.) This should be in line with the Department of Health's information governance and data protection requirements (for example, see Public Health Services Contract 2014/15: guidance on the non-mandatory contract for public health services).

- Referrers to, and providers of, lifestyle weight management programmes should seek the consent of participants to share between them any relevant information (see above) on the participant's progress. Explain that this information will be used to help monitor and evaluate the service.

Recommendation 17: Monitor and evaluate programmes

Commissioners and providers of lifestyle weight management programmes, professionals who make referrals, services that help prevent weight regain, and monitoring services (see Who should take action?) should:

- Use the standard evaluation framework for weight management programmes and validated tools to monitor interventions.
- Ensure the scales used for monitoring people's weight are regularly calibrated (see recommendation 2).
- As a minimum, collect and assess the following information on participants at the end of the programme, in line with the Department of Health's Best practice criteria for weight management services:
    - Weight – to calculate total and percent weight change. Do not rely on self-reported measures of height or weight.
    - Percent of participants losing more than 3% of their baseline weight.
    - Percent of participants losing more than 5% of their baseline weight.
    - Percent adherence to the programme.
    - Age, gender, ethnicity and socioeconomic status (for example, as indicated by the postcode of participants), so that the effect on health inequalities can be assessed.
- Collect details on how each participant's weight has changed 12 months after the programme is completed (see recommendation 16).

- Consider collecting and assessing other outcomes, for example:
  - changes in other measures of body fatness, such as waist circumference
  - changes in dietary habits, physical activity and sedentary behaviour
  - changes in self-esteem, depression or anxiety
  - changes in health outcomes, such as blood pressure
  - the views and experience of participants who completed the programme
  - the views and experience of participants who did not complete the programme, and any changes in their weight
  - the views of staff delivering the programme and of those referring participants to it.

Recommendation 18 Monitor and evaluate local provision

Commissioners of lifestyle weight management services, health and wellbeing boards and local authorities should:

- Regularly review lifestyle weight management services for adults to ensure they meet local needs (as identified by the joint strategic needs assessment), any gaps in provision should be identified and adherence and outcomes should be reported to agreed standards.
- Monitor awareness of the programmes among health and social care professionals and potential users (see recommendations 4 and 5).
- Collect data on referral routes to identify geographical areas where awareness of available programmes is low and where referral rates might be increased.
- Collate the results of routine monitoring and programme expenditure. Analyse these results in relation to the characteristics of the local population (for example, urban versus rural groups and between the general population and minority ethnic groups).
- Amend, improve or decommission programmes based on these findings.

See also recommendation 10 in 'Obesity: working with local communities' (NICE public health guidance 42).

2 Who should take action?

Introduction

The guideline is for: commissioners and providers of lifestyle weight management programmes and health and social care professionals who advise or refer people these programmes. It may also be of interest to adults who are overweight or obese, their families and other members of the public.

Who should do what at a glance

Who should take action	Recommendation
Clinical commissioning groups	1, 3, 4, 5,13
Commissioners of health and social care services	2
Commissioners of lifestyle weight management programmes	9, 10, 16, 17, 18
GPs and other health and social care professionals	2, 6, 7, 16, 17
Health and wellbeing boards	1, 2, 3, 4, 5, 13, 18
Hospital and community trusts	4, 16
Local authorities	1, 2, 3, 4, 5, 13, 18
Local education and training boards or councils and others responsible for setting competences and designing continuing professional development programmes for health professionals	14, 15
Local service providers	1, 8
National agencies with an interest in the effectiveness of lifestyle weight management programmes	12
NHS England	3, 4
Professional bodies	14, 15
Providers of lifestyle weight management services	2, 7, 9, 10, 11, 12,15, 16, 17
Providers of monitoring services	16, 17

Public Health England	2, 3, 4, 5, 12

Who should take action in detail

Recommendation 1

Local authorities, working with other local service providers, clinical commissioning groups and health and wellbeing boards

Recommendation 2

Public Health England; GPs and other health and social care professionals; health and wellbeing boards; local authorities and other commissioners of health and social care services; providers (designers, developers or deliverers) of lifestyle weight management programmes in private, public or voluntary sector organisations working in the community or in (or via) primary care settings

Recommendation 3

Local authorities, Public Health England, NHS England, clinical commissioning groups and health and wellbeing boards

Recommendation 4

Clinical commissioning groups, health and wellbeing boards, hospital and community trusts, local authorities, NHS England and Public Health England

Recommendation 5

Public Health England, local authorities, health and wellbeing boards and clinical commissioning groups

Recommendation 6

General practice teams and other health or social care professionals who give advice about, or refer people to, lifestyle weight management programmes. This includes professionals working in: cardiac rehabilitation, diabetes, disability, fertility, postnatal, rheumatology and smoking services

Recommendation 7

GPs and other health or social care professionals advising or referring adults to lifestyle weight management programmes; providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings

Recommendation 8

Providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings

Recommendation 9

Commissioners of lifestyle weight management services, such as public health teams within local authorities or other health and social care commissioners

Recommendation 10

Commissioners of lifestyle weight management programmes, such as public health teams within local authorities or other health and social care commissioners

Recommendation 11

Providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings

Recommendation 12

Public Health England; national agencies with an interest in the effectiveness of lifestyle weight management programmes; commissioners; providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings

Recommendation 13

Clinical commissioning groups; health and wellbeing boards; local authorities

Recommendation 14

Local education and training boards; local education and training councils; professional bodies; those responsible for setting competences and designing continuing professional development programmes for health professionals

Recommendation 15

Providers of, and staff working for, lifestyle weight management services (designers, developers or deliverers in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings; professional bodies; training organisations

Recommendation 16

Commissioners of lifestyle weight management services, such as public health teams within local authorities or other health and social care commissioners; providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings; health and social care professionals advising or referring service users; providers of monitoring services

Recommendation 17

Commissioners of lifestyle weight management programmes, such as public health teams within local authorities or other health and social care commissioners; providers (designers, developers or deliverers of lifestyle weight management programmes in private, public or voluntary sector organisations) working in the community or in (or via) primary care settings; health and social care professionals who refer people to lifestyle weight management programmes; providers of services to support the prevention of weight regain; providers of programme monitoring services

Recommendation 18

Commissioners of lifestyle weight management services, such as public health teams within local authorities or other health and social care commissioners; health and wellbeing boards; local authorities

3 Context

In 2012, around a quarter of adults in England (24% of men and 25% of women aged 16 or older) were classified as obese (body mass index [BMI] 30 kg/m^2 or more). A further 42% of men and 32% of women were overweight (BMI 25 to 30 kg/m^2) (Statistics on obesity, physical activity and diet: England 2014, Health and Social Care Information Centre 2014).

Although there are people in all population groups who are overweight or obese, obesity is related to social disadvantage (Fair society, healthy lives: strategic review of health inequalities in England post-2010, The Marmot Review 2010).

Prevalence varies by population characteristics (for example see Public Health England briefing papers). For women, obesity prevalence increases with greater levels of deprivation, regardless of the measure used. For men, only occupation-based and qualification-based measures show differences in obesity rates by levels of deprivation.

For both men and women, obesity prevalence decreases with increasing levels of educational attainment. Around 30% of men and 33% of women with no qualifications are obese compared to 21% of men and 17% of women with a degree or equivalent (Statistics on obesity, physical activity and diet: England, Health and Social Care Information Centre 2010).

Obesity is also linked to ethnicity: it is most prevalent among black African women (38%) and least prevalent among Chinese and Bangladeshi men (6%) (Statistics on obesity, physical activity and diet: England, The NHS Information Centre 2006).

Being overweight or obese can lead to both chronic and severe medical conditions (Tackling obesities: future choices – project report, Foresight 2007). It is estimated that life expectancy is reduced by an average of 2 to 4 years for those with a BMI of 30 to 35 kg/m^2, and 8 to 10 years for those with a BMI of 40 to 50 kg/m^2 (Briefing note: obesity and life expectancy, National Obesity Observatory 2010).

Women who are obese are estimated to be around 13 times more likely to develop type 2 diabetes and 4 times more likely to develop hypertension than women who are not obese. Men who are obese are estimated to be around 5 times more likely to develop type 2 diabetes and 2.5 times more likely to develop hypertension than men who are not obese (Statistics on obesity, physical activity and diet: England, 2011, Health and Social Care Information Centre 2011;

Tackling obesity in England, National Audit Office 2001). People who are obese may also experience mental health problems as a result of stigma and bullying or discrimination in the workplace (Puhl and Heuer 2009).

The cost to society and the economy of people being overweight or obese was estimated at almost £16 billion in 2007 (more than 1% of gross domestic product). It could rise to just under £50 billion in 2050 (based on 2007 prices), if obesity rates continue to rise unchecked (Healthy lives, healthy people: a call to action on obesity in England, Department of Health 2011).

The government's obesity strategy 'Healthy lives: a call to action on obesity in England' (Department of Health 2011) aimed to reduce, 'the level of excess weight averaged across all adults by 2020'. It advocated a range of local interventions that both prevent obesity and treat those who are already obese or overweight.

In many areas, public, private or voluntary organisations are commissioned to provide individual or group lifestyle weight management services. People can also self-refer to commercial or voluntary programmes, for example, by attending a local class or 'club' or joining an online programme.

Local policies vary but generally, funded referrals to a lifestyle weight management programme (in tier 2 services) lasts for around 12 weeks or 12 sessions.

There has been uncertainty about which weight management programmes are effective and constitute good value for money. Evidence published since 2006 (such as Loveman 2011) provides an opportunity to refine and clarify best practice (for both self-help and referral schemes) and provide guidance on the commissioning of such programmes.

4 Considerations

This section describes the factors and issues the Programme Development Group (PDG) considered when developing the recommendations. Please note: this section does **not** contain recommendations. (See Recommendations.)

Protecting people's mental and physical wellbeing

4.1 The PDG considered that the overarching approach to lifestyle weight management should be to do no harm.

4.2 Generally, the more weight an adult loses as part of a lifestyle weight management programme, the more health benefits they are likely to gain. (For example, they could benefit from reducing their blood pressure or improving control of blood glucose levels.) A commonly stated 'realistic' goal is to lose around 5–10% of baseline weight. The evidence reviews for this guideline estimated that the mean percentage weight loss from participating in a lifestyle weight management programme was somewhat lower, with an average of around 3% of baseline weight. However, the PDG noted that even losing this relatively small amount of weight is likely to lead to health benefits (particularly if the weight loss is maintained for many years).

4.3 Observed weight losses from multicomponent lifestyle weight management programmes (as identified in the evidence review) are unlikely to be associated with unintended or adverse effects. (For example, musculoskeletal injuries or increased anxiety.) But the PDG noted that any unintended or adverse effects were not actively investigated, or systematically reported, in the majority of trials reviewed.

4.4 The PDG heard that people who are obese may perceive or experience stigma on a daily basis, and that any failure to lose weight (or regaining weight following weight loss) may have a negative psychological effect. Although this should not be a reason to avoid managing weight, it does highlight the importance of adopting a respectful, non-judgemental approach. It also highlights the importance of providing long-term support. The PDG noted that it is vital people are enabled to make informed choices about if, when and how

they manage their weight. Training and continuing professional development is, members believe, particularly important in both these contexts. The Group also noted that the type and level of training for weight management programmes varies substantially. In particular, healthcare professionals have reported concerns about their lack of training or confidence in raising the issue of weight management.

Evidence

4.5 The PDG considered a substantial body of evidence, including 29 randomised controlled trials of lifestyle weight management programmes lasting at least 12 months. Seven of the 29 trials reported outcomes at 3 years or longer. But no studies were identified with outcomes beyond 5 years. Maintaining weight loss is known to be difficult and, as a result, extrapolating longer term outcomes from short term studies may be misleading. Modelling showed that even a small amount of weight loss is cost effective, but only if it is maintained long term on a lower weight trajectory. (See prevention of weight regain for an explanation of weight trajectory.)

4.6 The PDG concluded that multicomponent lifestyle weight management programmes that address dietary habits, physical activity and behaviour change techniques can help adults lose weight and maintain that weight loss for at least 12 to 18 months. However, it was difficult to draw conclusions about why some programmes were more effective than others, or about the effect of specific components. (Examples of the latter include: the setting, face-to-face versus remote contact and the effect of the length or intensity of a programme.) Few studies reported outcomes for specific groups and it was unclear what any reported 'tailoring' meant in practice.

4.7 The PDG noted that obese adults may attempt to lose weight many times throughout their lives. The point at which they may be successful (and the number of times this translates into a referral to services) was unclear. In addition, the effect (both positive and negative) on their psychological or physical health remains unclear. The PDG agreed that people who are obese need as many opportunities as possible to lose weight. Members also agreed that this should be an ongoing area for research.

4.8 The PDG was unable to consider the relative effectiveness of alternative approaches to weight management – such as focusing on a healthy lifestyle and the prevention of weight gain rather than weight loss – because of a lack of trials that met the review inclusion criteria.

4.9 The PDG noted the lack of longer term follow-up of a range of approaches to weight management and the lack of standard evaluation of trials. This includes standard reporting of weight outcomes and strategies for dealing with missing data for different groups to judge the effect on inequalities in health. It has made a research recommendation on this to improve the evidence base.

Wider context

4.10 The guideline focused on multicomponent lifestyle weight management services and excluded other routes for managing obesity, such as drugs or surgery. Evidence that focused only on populations with linked conditions (such as type 2 diabetes) was excluded, as was evidence on people with more complex needs (such as those who are obese and also have alcohol or mental health problems). The relative effectiveness of, for example, specific dietary approaches or the effect of wider behaviours that have been linked to weight gain (such as shift working or sleep) was not considered. Therefore it is important to read this guideline in the context of broader NICE guidance on obesity.

4.11 The PDG noted that local services or activities that address the wider determinants of health may also help people to change their dietary habits or physical activity levels and manage their weight.

Commissioning

4.12 The PDG was concerned that people who have attended weight management services may not have enough sources of support to prevent them regaining the weight they have lost. Members recognised the importance of commissioned services addressing the prevention of weight regain. The evidence reviewed suggests that commercial multicomponent lifestyle weight management programmes available in the UK are likely to be effective, at least up to 12 to 18 months. However, this finding is based on a relatively small

number of trials and no head-to-head comparisons of the relative effectiveness of programmes were available. The evidence reviewed also suggests that primary care-led services may be less effective than commercial programmes, but it is unclear why. The PDG noted that local authority services may be established to support people living in particular geographic areas, or from lower income groups. This is particularly the case if their needs are not being met by commercial programmes.

4.13 The PDG discussed the importance of ensuring commissioners have access to robust, regularly updated information on effective lifestyle weight management programmes. Members noted how time consuming and potentially difficult it would be otherwise for each local area to decide which programmes may be most effective and cost effective. It was noted that programme range, content and evidence of effectiveness may be subject to change. They agreed that a national source of information on programmes shown to be effective – based on robust and consistent data – would be helpful. The PDG's conclusions were informed by the randomised controlled trials of programmes included in the evidence reviews. Members noted that it was unclear what impact any subsequent changes made to the format or content of programmes would have on effectiveness.

4.14 The PDG noted that the ability to review, improve or decommission programmes at a local level is dependent on monitoring processes being built into the programme from the outset. Members also agreed that establishing systems for information sharing between referrers and providers (such as weight outcomes at programme end or at 12 months) was key.

4.15 The PDG was concerned that people from lower income groups may struggle to attend programmes once their referral period is over. This is a particular concern if participants wishing to continue the programme beyond the referral period have to pay for it.

4.16 The PDG noted the importance of an integrated approach to weight management to ensure referrals can easily be made within and across different tiers of weight management services. In addition, because some people who are obese may have other health issues, it noted the importance of

local links between a variety of services. (This includes, for example, weight management, smoking cessation, mental health services, substance misuse and alcohol counselling services.)

4.17 The PDG noted that the recommendations in this guideline apply equally to all types of lifestyle weight management programme.

Cost effectiveness

4.18 The economic model estimated that a 12-week programme costing £100 or less will be cost-effective for adults who are overweight or obese under 2 conditions. First, the weight loss, compared with what it would have been without the intervention, must be maintained for life. Second, at least 1 kg of weight is lost and this weight difference is maintained for life (that is, the person's lifetime weight trajectory is lowered by at least 1 kg). A 24-week programme costing £200 or less was estimated to be cost effective under the same conditions. However, there were not enough data to populate the model for adults with an initial body mass index (BMI) of more than 40 kg/m^2. So it was unclear whether or not it would be cost effective for this group. For programmes costing £500 per head to be cost effective, it is estimated that an average 2 kg weight differential must be maintained for life. A 3 kg loss must be maintained for life for programmes costing £1000 or more per head. The model estimated that programmes costing £100 or more per head are not cost effective if, on average, participants regain the weight lost within 2 to 3 years or less. This is regardless of the average initial weight loss. The key variable is thus the speed with which weight is regained. However, the PDG noted that evidence based on long term follow up of participants was limited.

4.19 The length of time that someone's weight trajectory must be below the 'without-intervention' trajectory and still remain cost effective is reduced by the following 4 factors:

- a higher initial weight loss
- the person being older (for a given BMI group)
- the person having a higher BMI (for a given age group)

- a lower cost per head of the intervention.

4.20 In relation to age, the model implies that the recommendations will generate better value for money for people older than 50 – even if they only maintain a lower weight trajectory for 3 to 10 years. This is because older people will gain the health benefits sooner (not because older people lose more weight than younger people). Trials suggest average weight loss is similar for all ages and BMI groups. For people aged 20–39, weight loss may need to be maintained for up to 40 years before the intervention is worth undertaking.

4.21 In relation to weight, the model implies that implementation of the recommendations will generate better value for money when used with adults who are obese (rather than overweight) (see adults who are overweight or obese). As a result, the PDG felt that people with a BMI between 30 and 40 kg/m^2 should be made a priority for funded referrals to lifestyle weight management programmes. But members also agreed that people who are overweight (BMI 25 to 30 kg/m^2) should not be excluded from funded referrals if there is enough capacity. There were insufficient data to make a judgement on this for people whose BMI is above 40 kg/m^2.

4.22 The modelling data relate to population cohorts of a given age, sex and BMI category – not to every individual in each cohort, because weight loss and gain vary greatly between people in each cohort. Effective interventions for a particular cohort will usually be cost effective for people who have lost at least the average amount of weight, or who have regained weight at an average or slower than average rate.

5 Recommendations for research

The Programme Development Group (PDG) recommends that the following research questions should be addressed. It notes that 'effectiveness' in this context relates not only to the size of the effect, but also to cost effectiveness and duration of effect. It also takes into account any harmful or negative side effects.

All the research should aim to identify differences in effectiveness among groups, based on characteristics such as socioeconomic status, age, gender and ethnicity.

Findings should be published in peer reviewed journals.

5.1 How effective are lifestyle weight management programmes available in the UK, when directly compared using high-quality trials? In particular, what effect do specific components of a multicomponent lifestyle weight management programme have on adherence, effectiveness and cost effectiveness? This includes:

- components, or combinations of components, that support weight loss or the prevention of weight regain
- the effect of programme length, intensity, setting and means of delivery (examples of the latter include group, individual and remote support)
- specific behaviour change techniques (using a recognised taxonomy)
- the effect of new technologies
- the effect of additional support services, such as self-help groups and networks
- approaches to commissioning
- processes for collecting long-term follow-up data.

5.2 How effective and cost effective are lifestyle weight management programmes available in the UK over at least at least 3 to 5 years, and ideally beyond 10 years. Specifically:

- Do short-term (12-week) interventions provide adults with the self-management skills they need to maintain weight loss in the long term?
- Are alternative approaches to weight management (such as approaches that focus on a healthy lifestyle, behaviour change and the prevention of weight gain rather than weight loss) effective and cost effective in the long term?
- How effective and cost effective are programmes for people of different ages, gender, sexuality or from different ethnic or socioeconomic groups?
- How effective and cost effective are programmes for specific population groups, such as adults with depression or with disabilities?

5.3 What is the effect of lifestyle weight management programmes available in the UK on:

- Changes to dietary habits and choices, physical activity level and sedentary behaviour?
- Wider lifestyle factors, such as sleeping patterns or stress management?
- Psychological issues, such as body confidence or attitude, depression, anxiety or self-esteem?
- Health conditions, such as changes to blood pressure or lipids?
- Unintended outcomes such as musculoskeletal injuries, symptoms of an eating disorder; increased anxiety or depression?
- User adherence and satisfaction?
- Quality of life?

5.4 How can referrals to other services after involvement in a lifestyle weight management service be as effective and cost effective as possible? This includes: re-referrals to a lifestyle weight management service, referrals to other tiers of weight management services or referrals to other specialist services (such as alcohol or substance misuse). In particular:

- How long should people wait before being re-referred to a programme?

- Does re-referral to the same (or a similar programme) influence adherence, effectiveness or cost effectiveness?
- In what circumstances should participants not be re-referred to the same (or a similar programme)?
- Who is best placed to provide ongoing support after the programme, and does this differ according to whether someone completed the programme or met their weight loss goal?
- Are there any unintended or adverse effects from repeated attempts to lose weight?

5.5 What effect does lifestyle weight management training for health professionals and lifestyle weight management staff have on:

- The referral process, including patient satisfaction?
- Programme outcomes (weight loss and prevention of weight regain), adherence to the programme and participants' satisfaction with it?
- Staff confidence in discussing weight issues and any concerns about their own weight?
- Staff ability to deliver the programme?
- General approach of staff (that is, whether they adopt a 'respectful and non-judgemental' approach as a result)?

More detail identified during development of this guideline is provided in Gaps in the evidence.

6 Related NICE guidance

Published

- Behaviour change – individual approaches. NICE public health guidance 49 (2014).
- Overweight and obese children and young people: lifestyle weight management services. NICE public health guidance 47 (2013)
- BMI and waist circumference – black, Asian and minority ethnic groups. NICE public health guidance 46 (2013).
- Physical activity brief advice for adults in primary care. NICE public health guidance 44 (2013).
- Fertility. NICE clinical guideline 156 (2013).
- Obesity: working with local communities. NICE public health guidance 42 (2012).
- Walking and cycling. NICE public health guidance 41 (2012).
- Preventing type 2 diabetes: risk identification and interventions for individuals at high risk. NICE public health guidance 38 (2012).
- Preventing type 2 diabetes: population and community interventions. NICE public health guidance 35 (2011).
- Hypertension. NICE clinical guideline 127 (2011).
- Weight management before, during and after pregnancy. NICE public health guidance 27 (2010).
- Prevention of cardiovascular disease. NICE public health guidance 25 (2010).
- Physical activity and the environment. NICE public health guidance 8 (2008).
- Familial hypercholesterolaemia. NICE clinical guideline 71 (2008).
- Behaviour change. NICE public health guidance 6 (2007).
- Obesity. NICE clinical guideline 43 (2006).

- Eating disorders. NICE clinical guideline 9 (2004).

Under development

- Exercise referral schemes. NICE public health guidance. Publication expected September 2014.
- Maintaining a healthy weight and preventing excess weight gain among children and adults. NICE public health guidance. Publication expected March 2015.

7 Glossary

Adults who are overweight or obese

Adults are assessed to see if they are overweight or obese using their body mass index (BMI). The following table shows the cut-off points for a healthy weight or being overweight or obese:

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

BMI is a less accurate indicator of adiposity in adults who are highly muscular, so it should be interpreted with caution in this group.

Waist circumference can also be used to assess whether someone is at risk of health problems because they are overweight or obese (up to a BMI of 35, see recommendation 1.2.2.9 in 'Obesity', NICE clinical guideline 43). For men, a waist circumference of less than 94 cm is low risk, 94–102 cm is high and more than 102 cm is very high risk. For women, a waist circumference of less than 80 cm is low risk, 80–88 cm is high and more than 88 cm is very high risk.

The use of lower BMI thresholds to trigger action to reduce the risk of conditions such as type 2 diabetes has been recommended for black African, African–Caribbean and Asian groups. The lower thresholds are 23 kg/m^2 to indicate increased risk and 27.5 kg/m^2 to indicate high risk.(See 'BMI and waist circumference – black, Asian and minority ethnic groups', NICE public health guidance 46.)

Behaviour change techniques

A collection of techniques that aim to help people change their behaviour to improve their health. The techniques are based on an established theory or rationale (see NICE guidance on behaviour change, NICE public health guidance 6 and 49).

Body mass index

Body mass index (BMI) is commonly used to measure whether or not adults are a healthy weight or underweight, overweight or obese. It is defined as weight in kilograms divided by the square of height in metres (kg/m^2).

Complex needs

'Complex needs' refers to issues that affect a person's health and wellbeing. They might include:

- a behavioural issue such as substance misuse
- specific conditions such as those limiting mobility or learning, mental health conditions, substantive or life-threatening comorbidities or dietary needs
- personal social circumstances, such as homelessness.

Dietary habits

This includes a range of factors including the food and drink (including alcoholic drinks) consumed, energy and nutrient intake, portion size and the pattern and timing of eating. Population advice on food and nutrition is available on the NHS Choices website.

Lifestyle weight management programmes

Lifestyle weight management programmes for overweight or obese adults are multi-component programmes that aim to reduce a person's energy intake and help them to be more physically active by changing their behaviour. They may include weight management programmes, courses or clubs that:

- accept adults through self-referral or referral from a health or social care practitioner
- are provided by the public, private or voluntary sector

- are based in the community, workplaces, primary care or online.

Although local definitions vary, these are usually called tier 2 services and are just one part of a comprehensive approach to preventing and treating obesity.

Physical activity

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

Physical activity instructor

A qualified physical activity instructor meets the fitness industry's agreed qualification standards and undertakes continued professional development. Instructors working with people referred from a GP or another health professional should hold level 3 membership of the Register of Exercise Professionals (or equivalent).

Stigma

Stigma in relation to someone's weight may take the form of bullying, teasing, harsh comments, discrimination or prejudice based on a person's body size.

Tiers of weight management services

Different tiers of weight management services cover different activities. Definitions vary locally but usually tier 1 covers universal services (such as health promotion or primary care); tier 2 covers lifestyle interventions; tier 3 covers specialist weight management services; and tier 4 covers bariatric surgery.

Weight loss

In this guideline, weight loss refers to the amount of weight lost through a lifestyle weight management programme.

Weight maintenance

The maintenance of a specific weight (whether or not weight has been lost).

Weight regain

In this guideline, weight regain means regaining some or all of the weight that was lost during a lifestyle weight management programme. The prevention of weight regain refers to keeping to a lower weight than the person would have been if they had not lost weight in the first place. This is also referred to as being on a lower weight trajectory.

Weight trajectory

A weight trajectory refers to a general pattern of weight gain or weight loss over many years. Many adults gradually put on weight as they get older. This gradual increase in weight will be lower for someone who has lost weight during a lifestyle weight management programme, if they have not regained any of that lost weight.

8 References

Golubic R, Ekelund U, Wijndaele K et al. (2013). Rate of weight gain predicts change in physical activity levels: a longitudinal analysis of the EPIC-Norfolk cohort. International Journal of Obesity 37: 404–9

Loveman E, Frampton GK, Shepherd J et al. (2011) The clinical effectiveness and cost-effectiveness of long-term weight management schemes for adults: a systematic review. Health Technology Assessment 15 (2)

Puhl RM, Heuer CA (2009). The stigma of obesity: a review and update. Obesity 17: 941–64

9 Summary of the methods used to develop this guideline

Introduction

The reviews, commissioned report and economic modelling report include full details of the methods used to select the evidence (including search strategies), assess its quality and summarise it.

The minutes of the Programme Development Group (PDG) meetings provide further detail about the Group's interpretation of the evidence and development of the recommendations.

Guideline development

The stages involved in developing public health guidelines are outlined in the box below.

1. Draft scope released for consultation
2. Stakeholder comments used to revise the scope
3. Final scope and responses to comments published on website
4. Evidence reviews and economic modelling undertaken and submitted to PDG
5. PDG produces draft recommendations
6. Draft guideline (and evidence) released for consultation
7. PDG amends recommendations
8. Final guideline published on website
9. Responses to comments published on website

Key questions

The key questions were established as part of the scope. They formed the starting point for the reviews of evidence and were used by the PDG to help develop the recommendations. The overarching question was: how effective and cost effective are multi-component lifestyle weight management programmes for adults?

The subsidiary questions were:

1. How does effectiveness and cost effectiveness vary for different population groups (for example, men, black and minority ethnic or low-income groups)?

2. What are the best practice principles for multi-component lifestyle weight management programmes for adults?

3. What are the most effective and cost effective behavioural or psychological components of a lifestyle weight management programme for adults – and who might best deliver them?

4. What are the views, perceptions and beliefs of adults in relation to lifestyle weight management programmes (whether or not they use such programmes)? How can overweight and obese adults from a diverse range of backgrounds be encouraged to join, and adhere to, these programmes?

5. How can lifestyle changes and weight loss be sustained once the weight management programme has ended?

6. What barriers and facilitators affect the delivery of effective weight-management programmes for adults and how do they vary for different population groups?

7. What are the best practice principles for primary care when referring people to commercial, voluntary or community sector or self-help lifestyle weight management programmes?

8. What are the best practice principles for commissioners of lifestyle weight management services for adults?

9. What training is needed for professionals involved directly or indirectly with lifestyle weight management programmes for adults?

10. How should lifestyle weight management programmes be monitored and evaluated locally?

These questions were made more specific for each review (see reviews for further details).

Reviewing the evidence

Effectiveness reviews

One review of effectiveness was conducted, split into 3 sections:

- Review 1a 'The clinical effectiveness of long-term weight management schemes for adults'.
- Review 1b 'How components of behavioural weight management programmes affect weight change'.
- Review 1c 'Weight regain after behavioural weight management programmes'.

Identifying the evidence

The review updated and expanded on an existing review (Loveman 2011) and uses similar methods.

Ten electronic databases were systematically searched in October 2012 for randomised controlled trials of multi-component behavioural weight management programmes. See review 1 for details of the databases searched.

Reference lists were also screened and references submitted to NICE in a call for evidence.

Selection criteria

Studies were included in the effectiveness review if they:

- were multi-component interventions addressing physical activity, dietary intake and behaviour change
- were randomised controlled trials.
- included at least 12 months follow-up
- included a measure for weight loss (for example, weight or body mass index [BMI])
- included adults aged 18 and older who were overweight or obese

- were undertaken in OECD (Organisation for Economic Co-operation and Development) countries
- were published in English.

Studies were excluded if they:

- included children and pregnant women
- included people with eating disorders
- only included people with specific pre-existing medical condition such as diabetes, heart failure, uncontrolled hypertension or angina
- focused on pharmacological or surgical interventions.

See review 1 for details of the inclusion and exclusion criteria.

Other reviews

One review of barriers and facilitators, referral, commissioning and training issues in relation to lifestyle weight management was conducted:

- Review 2: Managing overweight and obese adults.

Identifying the evidence

Several databases and websites were searched in April 2013 for qualitative evidence, grey literature and best practice guidelines. See above for details.

Selection criteria

Studies were included in the review if they:

- addressed questions included in the scope (except questions of effectiveness).
- focused on adults aged 18 and older who were overweight or obese
- were undertaken in the UK.

Studies were excluded if they:

- included children and pregnant women
- included people with eating disorders
- focused on pharmacological or surgical interventions
- only included people with a specific pre-existing medical condition such as diabetes, heart failure, uncontrolled hypertension or angina
- focused on pharmacological or surgical interventions.

Quality appraisal

Included papers were assessed for methodological rigour and quality using the NICE methodology checklist, as set out in Methods for the development of NICE public health guidance. Each study was graded (++, +, −) to reflect the risk of potential bias arising from its design and execution. Included studies were not evaluated on the basis of blinding.

Study quality: internal validity

++ All or most of the checklist criteria have been fulfilled. Where they have not been fulfilled, the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled. Those criteria that have not been fulfilled, or not adequately described, are unlikely to alter the conclusions.

− Few or no checklist criteria have been fulfilled. The conclusions of the study are likely or very likely to alter.

This was based on:

- randomisation and allocation procedures
- evidence of selective reporting
- attrition (at 12 months or at the closest point reported after 12 months, as appropriate).

Study quality: external validity

As above, external validity was rated '++', '+' or '−' based on whether:

- participants were representative of the general population
- the intervention needed any extraordinary efforts to implement in the UK (for example, the implementation of a particular infrastructure).

Summarising the evidence and making evidence statements

The review data were summarised in evidence tables (see the reviews in Supporting evidence).

The findings from the reviews were synthesised and used as the basis for a number of evidence statements relating to each key question. The evidence statements were prepared by the external contractors (see 'Supporting evidence'). The statements reflect their judgment of the strength (quality, quantity and consistency) of evidence and its applicability to the populations and settings in the scope.

Commissioned report

A questionnaire covering practical and process issues was sent to known weight management providers operating in England. Responses to the survey were compiled by an independent researcher:

- Practical and process issues in the provision of lifestyle weight management services for adults.

Cost effectiveness

There was a review of economic evaluations and an economic modelling exercise. See Managing overweight and obesity among adults: report on economic modelling and cost consequence analysis.

Review of economic evaluations

The review of economic evaluations was an extension of the effectiveness review (review 1). Studies were considered if they had been undertaken in an OECD country and included a cost

effectiveness analysis. For a description of the search strategy and the inclusion, exclusion and quality criteria used, see review 1.

Economic modelling

An economic model was constructed to incorporate data from review 1. The results are reported in: Managing overweight and obesity among adults: report on economic modelling and cost consequence analysis.

How the PDG formulated the recommendations

At its meetings in 2013, the Programme Development Group (PDG) considered the evidence, expert testimony, commissioned report and cost effectiveness to determine:

- whether there was sufficient evidence (in terms of strength and applicability) to form a judgment
- where relevant, whether (on balance) the evidence demonstrates that the intervention or programme/activity can be effective or is inconclusive
- where relevant, the typical size of effect (where there is one)
- whether the evidence is applicable to the target groups and context covered by the guideline.

The PDG developed draft recommendations through informal consensus, based on the following criteria:

- Strength (type, quality, quantity and consistency) of the evidence.
- The applicability of the evidence to the populations/settings referred to in the scope.
- Effect size and potential effect on the target population's health.
- Effect on inequalities in health between different groups of the population.
- Equality and diversity legislation.
- Ethical issues and social value judgments.

- Cost effectiveness (for the NHS and other public sector organisations).
- Balance of harms and benefits.
- Ease of implementation and any anticipated changes in practice.

The PDG noted that effectiveness can vary according to whether interventions are delivered to a group or on a one-to-one basis.

Where possible, recommendations were linked to an evidence statement(s) (see The evidence for details). Where a recommendation was inferred from the evidence, this was indicated by the reference 'IDE' (inference derived from the evidence).

10 The evidence

The evidence statements from 2 reviews are provided by external contractors.

This section lists how the evidence statements and expert papers link to the recommendations and sets out a brief summary of findings from the economic analysis.

How the evidence and expert papers link to the recommendations

The evidence statements are short summaries of evidence, in a review, report or paper (provided by an expert in the topic area). Each statement has a short code indicating which document the evidence has come from.

Evidence statement number 1.2 indicates that the linked statement is numbered 1.2 in review 1. **Evidence statement number 2.2** indicates that the statement is numbered 2.2 in review 2. **EP1** indicates that expert paper 1 is linked to a recommendation. **CR** indicates that the commissioned report is linked to a recommendation. **EM** indicates that the economic modelling report is linked to a recommendation.

Where a recommendation is not directly taken from the evidence statements, but is inferred from the evidence, this is indicated by **IDE** (inference derived from the evidence).

Recommendation 1: EP2, EP4; IDE

Recommendation 2: evidence statement 1.9; EP1, EP2, EP3; IDE

Recommendation 3: evidence statements 2.8, 2.9, 2.10; EP2, EP4; CR; IDE

Recommendation 4: evidence statements 2.8, 2.9, 2.10; EP2, EP4; CR; IDE

Recommendation 5: evidence statement 2.1; EP2, EP4; CR; IDE

Recommendation 6: evidence statements 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.10, 1.12, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8, 2.9, 2.11; EP1; EP2; CR, EM

Recommendation 7: evidence statements 1.1, 1.3, 1.23, 2.1, 2.7, 2.8, 2.9; EP1, EP2, EP3, EP4; EM

Recommendation 8: evidence statements 2.1, 2.2, 2.4, 2.5, 2.7, 2.8, 2.11; EP2, CR.

Recommendation 9: evidence statements 1.2, 1.8, 1.9, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.22, 2.5, 2.6, 2.14; EP1, EP2, EP3; CR; EM

Recommendation 10: evidence statements 1.18, 1.19, 1.20, 1.21, 1.22, 1.23, 2.5; EP2, EP3; EM

Recommendation 11: evidence statements 1.2, 1.8, 1.9, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22, 1.23, 2.5, 2.6, 2.14; EP1, EP2, EP3; CR; EM

Recommendation 12: evidence statements 1.3, 2.13

Recommendation 13: evidence statements 1.3, 1.4, 1.5, 1.6, 1.7, 1.10, 1.20, 1.23, 2.12, 2.13; EP2, EP4; CR

Recommendation 14: evidence statements 2.9, 2.10, 2.11, 2.14; EP1, EP2, EP3

Recommendation 15: evidence statements 2.9, 2.10, 2.11, 2.14; EP1, EP2, EP3

Recommendation 16: evidence statement 2.8; EP4; CR

Recommendation 17: evidence statements 2.8, 2.9, 2.11, 2.12, 2.13

Recommendation 18: evidence statements 2.9, 2.10, 2.14; EP4

Expert papers and commissioned report

- Expert papers 1–4
- Commissioned report

Economic modelling

Overall, the modelling showed that lifestyle weight management interventions that help people lose weight and then maintain the weight loss in the long term would be cost effective, if they can be identified.

The economic model considered cohorts of (virtual) adults of different ages and with a body mass index (BMI) of 25, 30, 35 and 40 kg/m^2. The model tested the effect of a 12-week lifestyle weight management programme. All cohorts were followed for the whole of their lives and they contract diseases and conditions at different rates, depending on their BMI.

From a public sector perspective, the modelling showed that if the original weight loss achieved by attending a lifestyle weight management programme were to be maintained for life, most of these interventions would be cost effective. That is, provided they cost less than £500 per person and on average, participants lost more than 1 kg in weight. This is true for all age groups and both sexes.

However, if they were to regain the lost weight within 2 to 3 years, the modelling indicates that few, if any, of these interventions would be cost effective. To be cost effective, they would need to cost less than £100 per person and the average weight lost would need to be in excess of 5 kg.

More detail (including any observed differences by age and gender) is given in the modelling report: Managing overweight and obesity among adults: report on economic modelling and cost consequence analysis.

11 Gaps in the evidence

The Programme Development Group (PDG) identified a number of gaps in the evidence related to the programmes under examination, based on an assessment of the evidence. These gaps are set out below.

1. There is a lack of long-term (that is, 3 years or longer) trials of lifestyle weight management programmes to determine cost effectiveness.

(Source: evidence reviews 1a and 1c; economic modelling)

2. There is a lack of trials directly comparing lifestyle weight management programmes in the UK.

(Source: evidence reviews 1a, 1b and 1c)

3. There is a lack of evidence on whether there are any adverse or unintended effects associated with long-term weight management programmes. There is also a lack of evidence on 'weight cycling' (repeated attempts to lose weight) in relation to these programmes.

(Source: evidence reviews 1a, 1b and 1c; expert paper 1)

4. There is a general lack of evidence on which specific components of a lifestyle weight management programme ensure effectiveness. In particular, it is unclear what effect programme length and intensity has on effectiveness.

(Source: evidence reviews 1a and 1b)

5. There is a lack of evidence on the effect of sexual orientation, disability, religion, place of residence, occupation, education, socioeconomic position or social capital on the effectiveness of lifestyle weight management programmes. There is also a lack of analysis of participants by age and gender.

(Source: evidence review 1a)

6. The existing evidence base is limited by studies characterised by: short-term follow up, small sample sizes, the collection of data at only a limited number of time points (usually 2), demographic samples that limit the ability to generalise and non-reporting of reasons for people dropping out.

(Source: evidence reviews 1a and 1b)

7. There is a lack of evidence on whether any particular approach to commissioning leads to better outcomes for participants in lifestyle weight management programmes.

(Source: evidence review 2)

8. There is a lack of evidence as to whether any particular type of training for practitioners leads to more effective programmes.

(Source: evidence review 2)

The Committee made 5 recommendations for research into areas that it believes will be a priority for developing future guidance. These are listed in Recommendations for research.

12 Membership of the Programme Development Group (PDG) and the NICE project team

Programme Development Group

PDG membership is multidisciplinary. The Group comprises public health practitioners, clinicians, local authority officers, representatives of the public, academics and technical experts as follows.

Lucy Aphramore
Director, Well Founded; Visiting Research Fellow, Glyndŵr University (until September 2013)

Barry Attwood
Community Member

Matthew Broughton
Health and Wellbeing Manager, West Lindsey District Council

Ruth Chambers OBE
GP Partner and Clinical Associate, Stoke-on-Trent Clinical Commissioning Group; Honorary Professor, Keele University; Honorary Professor of Primary Care, Staffordshire University

Jane DeVille Almond
Senior Lecturer in Adult Nursing, University of Wolverhampton

Gill Fine (Chair)
Independent Public Health Nutritionist

Ulla Griffiths
Lecturer in Health Economics, London School of Hygiene and Tropical Medicine

Vicky Hobart
Joint Director of Public Health, Redbridge Council and Waltham Forest Council

Kate Jolly
Professor of Public Health, University of Birmingham

Laura Sanger
Principal Clinical Psychologist, City Hospitals Sunderland NHS Foundation Trust

Carol Weir
Head of Service for Nutrition and Dietetics, Leeds Community Healthcare NHS Trust

Sarah West-Sadler
Community Member

NICE project team

Mike Kelly
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Jane Huntley
Associate Director

Adrienne Cullum
Lead Analyst

Andrew Hoy
Analyst (from April 2013)

Caroline Mulvihill
Analyst

Nicola Ainsworth
Analyst (until March 2013)

Alastair Fischer
Technical Adviser Health Economics

Daniel Tuvey
Information Specialist

Victoria Axe
Project Manager

Rukshana Begum
Coordinator

Sue Jelley
Senior Editor

Susie Burlace and **Rebecca Boucher**
Editors

About this guideline

What does this guideline cover?

This guideline is a partial update of Obesity, NICE clinical guideline 43 (2006). It provides recommendations on lifestyle weight management services for overweight and obese adults aged 18 and over (see the scope).

The recommendations replace section 1.1.7 in Obesity.

This guideline does not cover:

- services that focus on preventing obesity (usually called tier 1 services) or address the wider determinants of health
- pharmacological treatments
- specialist weight management services (usually called tier 3 services)
- surgical treatments for obesity (usually called tier 4 services)
- the additional needs of adults with a range of complex conditions
- children and young people under 18 years of age
- pregnant women.

The recommendations should be considered alongside NICE guidance on obesity identification and management (NICE clinical guideline 43) and the local strategic approach to obesity (NICE public health guidance 42). (Also see Related NICE guidance for other recommendations that may be relevant to managing obesity among adults, children and young people.)

How was this guidance developed?

The recommendations are based on the best available evidence. They were developed by the Programme Development Group (PDG).

Members of the PDG are listed in Membership of the Programme Development Group and the NICE project team.

For information on how NICE public health guidelines are developed, see the NICE public health guidance process and methods guides.

What evidence is the guideline based on?

The evidence that the PDG considered included:

- Evidence reviews:
  - Review 1 was divided into 3 sections and was carried out by the University of Oxford. The principal authors were: Paul Aveyard, Jamie Hartmann-Boyce and David Johns.
    - Review 1a, 'The clinical effectiveness of long-term weight management schemes for adults'.
    - Review 1b, 'How components of behavioural weight management programmes affect weight change'.
    - Review 1c, 'Weight regain after behavioural weight management programmes'.
  - Review 2: 'Managing overweight and obese adults' was carried out by the University of Oxford. The principal authors were: Paul Aveyard, Jamie Hartmann-Boyce and David Johns.
- Economic modelling: 'Economic modelling and cost consequence analysis' was carried out by the UK Health Forum and the University of East Anglia. The authors were: Martin Brown, Tim Marsh, Lise Retat, Ric Fordham, Marc Suhrcke, David Turner, Richard Little and Oyebanji Filani.
- Commissioned report: 'Practical and process issues in the provision of lifestyle weight management services for adults' was carried out by GK research. The principal author was Graham Kelly.
- Expert papers:
  - Expert paper 1 'Weight bias and stigma and the effectiveness of weight management programmes' by Jane Ogden, Professor in Health Psychology, University of Surrey.

- Expert paper 2 'Experience from practice – psychological issues' by Rachel Holt, Consultant Clinical Psychologist/Service Lead at Derbyshire Tier 3 Weight Reduction Service.
- Expert paper 3 'Weight bias and the impact of weight stigma on emotional and physical health' by Dr Rebecca Puhl, Director of Research and Weight Stigma Initiatives at the Rudd Center for Food Policy and Obesity, Yale University.
- Expert paper 4 'Commissioning and working with health and wellbeing boards' by Stephen Watkins, Director of Public Health, Stockport.

Note: the views expressed in the expert papers above are the views of the authors and not those of NICE.

In some cases the evidence was insufficient and the PDG has made recommendations for future research, see Recommendations for research and Gaps in the evidence.

Status of this guideline

The draft guideline, including the recommendations, was released for consultation in October 2013. At its meeting in February 2014, the PDG amended the guideline in light of comments from stakeholders and experts. The guideline was signed off by the NICE Guidance Executive in April 2014.

The guideline replaces section 1.1.7 of Obesity, NICE clinical guideline 43 (2006).

All healthcare professionals should ensure people have a high quality experience of the NHS by following NICE's recommendations in Patient experience in adult NHS services.

The recommendations should be read in conjunction with existing NICE guidance unless explicitly stated otherwise. They should be implemented in light of duties set out in the Equality Act 2010.

The guideline is available on NICE's website. The recommendations are also available in a pathway for professionals whose remit includes public health and for interested members of the public.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

Implementation

Implementation should follow the usual principles of person-centred care (see NICE clinical guideline 43).

NICE guidelines can help:

- Commissioners and providers of NHS services to meet the requirements of the NHS outcomes framework 2013–14. This includes helping them to deliver against domain 1: preventing people from dying prematurely.
- Local health and wellbeing boards to meet the requirements of the Health and Social Care Act (2012) and the Public health outcomes framework for England 2013 to 16.
- Local authorities, NHS services and local organisations determine how to improve health outcomes and reduce health inequalities during the joint strategic needs assessment process.

NICE has developed tools to help organisations put this guideline into practice.

Updating the recommendations

This guideline will be reviewed 3 years after publication to determine whether all or part of it should be updated. Information on the progress of any update will be posted on the NICE website.

Your responsibility

This guideline represents the views of the Institute and was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary

and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties.

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

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ISBN 978-1-4731-0569-0