

# Weight management

## IN ADULTS

### 1 MONITOR

Monitor weight and calculate body mass index (BMI) opportunistically (ideally annually) or as needed.

Overweight

Obese



If weight is increasing, or BMI is  $\geq 25 \text{ kg/m}^2$ , monitor waist circumference.

If a person is trending towards overweight, or he or she is overweight and has a waist circumference of  $\leq 102 \text{ cm}$  (for men) or  $\leq 88 \text{ cm}$  (for women), offer brief nutrition, physical activity and sleep advice.

Discuss current and future health risks with a person if he or she is obese, or overweight with a waist circumference of  $> 102 \text{ cm}$  (for men) or  $> 88 \text{ cm}$  (for women).

Proceed  
to stage 2:  
Assess



### 2 ASSESS

Take a full history if a person is overweight with a high waist circumference, or obese.

Assess the person's history to identify clinical, social and behavioural factors that may affect their weight.

#### Consider

- co-morbidities, and the current physical and social consequences of the person's unhealthy weight
- psychiatric/mental health history
- medications that may contribute to weight gain
- family history of obesity, early cardiovascular disease or dyslipidaemia
- readiness and motivation to change
- precipitating events
- actions the person has already taken to reduce weight
- usual diet, alcohol consumption, levels of physical activity, smoking status and sleep patterns.

#### Include in a clinical examination:

- waist circumference (if not already taken)
- blood pressure with appropriate cuff size
- other examinations as appropriate, such as those for:
  - skin: striae, intertrigo, cellulitis, carbuncles
  - abdomen: hepatomegaly, abdominal panniculus
  - cardiovascular: cardiomegaly, vascular bruits
  - head and neck: thyroid, neck circumference
  - extremities: oedema, joint deformities, osteoarthritic changes.

Undertake a cardiovascular disease risk assessment and screen for type 2 diabetes, as necessary.

Consider further laboratory studies, radiological procedures, and a sleep study as indicated by the history and examination.



### 3 MANAGE

Develop a weight management plan that includes lifestyle interventions tailored to the individual.

Your cultural competence is an integral part of this process. Have a plan for review and monitoring.

Use the Food, Activity (including sleep) and Behavioural strategies (FAB) approach to address lifestyle interventions. These look at a person's:

- food (aiming to achieve a nutritionally balanced diet)
- physical activity and reduced sedentary time
- sleep (aiming to achieve a sufficient amount)
- behaviour strategies.

Consider prescribing weight loss medication if, after six months, a person's lifestyle changes have not resulted in significant benefit and their BMI is  $\geq 30 \text{ kg/m}^2$ .

Consider recommending bariatric surgery as an adjunct to lifestyle interventions when a person's BMI is  $> 35 \text{ kg/m}^2$  and they have co-morbidities.

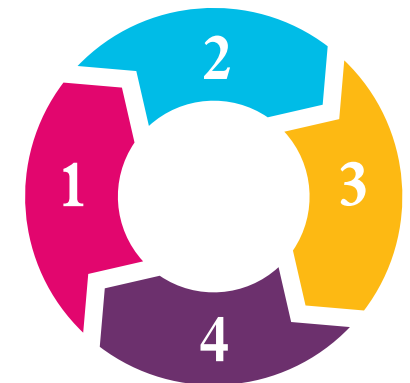
Consider as appropriate: referral to a dietitian, endocrinologist or other specialist; Green Prescription ([www.health.govt.nz/greenprescription](http://www.health.govt.nz/greenprescription)); and other community support programmes and services.

### 4 MAINTAIN

Maintain contact and support with the person. Continue to monitor their weight, BMI, waist circumference, mental health and wellbeing.

Reinforce the importance of healthy eating, physical activity, sleep and behaviour strategies.

Encourage the person to self-monitor their weight regularly, and maintain their own strategies for managing weight gain.






#### Reassess

Once a person has achieved his or her goal weight, reassess them regularly, and consider restarting a weight management programme if their weight increases by 1.5–2 kg.

# 1 MONITOR

## To monitor people's weight according to best practice, take the following steps.





-  Record height using a stadiometer.
-  Measure weight (with shoes and heavy clothing removed) and calculate and record BMI regularly (eg, annually).
-  Use waist circumference to provide useful additional information, especially if you suspect excess intra-abdominal fat in people who are overweight but not obese.

### Calculate BMI



Use height and weight values to calculate BMI. For example, an adult who weighs 90 kg and whose height is 1.81 m will have a BMI of 27:

$$90 \text{ (kg)} / 1.81^2 \text{ (m}^2\text{)} = 27.5 \text{ (kg/m}^2\text{)}$$

Use BMI to classify weight as follows:

-  underweight: BMI < 18.5
-  normal weight: BMI < 18.5–24.9
-  overweight: BMI ≥ 25
-  obese: BMI ≥ 30.

### Measure waist circumference

-  Ask the person to hold the end of a measuring tape and turn around so that it wraps around their waist. The tape should be horizontal and lie loosely against their skin.
-  Record waist circumference midway between the lower rib margin and the iliac crest, to the nearest 1 cm.



Disease risk is increased when waist circumference is over 80 cm for women and 94 cm for men.

Disease risk is considered high when waist circumference is over 88 cm for women and 102 cm for men.

Consider lowering these thresholds for patients of Asian ethnicities, due to their higher ratio of fat to lean mass.

For more information on how to accurately measure height and weight and waist circumference, refer to [Appendix 1 of the Clinical Guidelines for Weight Management in New Zealand Adults](#).




### Next steps

-  If a person's BMI is 18.5–25kg/m<sup>2</sup> and stable, monitor weight opportunistically (ideally annually).
-  If a person's BMI is less than 25kg/m<sup>2</sup> but trending towards 25kg/m<sup>2</sup>, monitor waist circumference also, and offer brief food and activity advice.

Select appropriate advice from the 'Stage 3: Manage' section, or use the following resources: on [health.govt.nz](http://health.govt.nz)

- [Healthy eating, active living](#)
- [Eat healthy food and move more every day](#)
- [Healthy Weight for Adults](#)

Monitor weight and waist circumference opportunistically (ideally annually).

-  If a person's BMI is between 25kg/m<sup>2</sup> and 29.9kg/m<sup>2</sup>, and his or her waist circumference is less than 88 cm (for women) or 102 cm (for men), offer brief food and activity advice. Select appropriate advice from the 'Stage 3: Manage' section, or use the resources identified above. Continue to monitor weight and waist circumference opportunistically (ideally every 6–12 months).
-  If a person's BMI is between 25kg/m<sup>2</sup> and 29.9kg/m<sup>2</sup>, and his or her waist circumference is over 88 cm (for women) or 102 cm (for men), discuss current and long-term health risks and proceed to stage 2: Assess.
-  If a person's BMI is over 30kg/m<sup>2</sup>, discuss current and long-term health risks and proceed to stage 2: Assess.\*

\* Note that BMI does not distinguish between muscle and fat mass. Healthy, highly muscular people may have a BMI over 30kg/m<sup>2</sup>.

# 2 ASSESS

### To assess a person's individual health risks, conduct a full history and clinical examination.

Undertake screening and further laboratory studies as necessary, including:

- a cardiovascular disease (CVD) risk assessment and diabetes screen
- further laboratory studies and radiological procedures.

Unless otherwise indicated by the history and examination, note adiposity, and consider weight management strategies.

### History



In taking a person's history, consider:

- their age, sex and ethnicity
- their current physical issues (eg, snoring, joint problems, abdominal pain or breathing difficulties) and the social consequences (in terms of their daily activities, employment, self-esteem, body image and mental health) of their body size
- their family history of CVD, type 2 diabetes and genetic lipid disorder
- their co-morbidities, such as type 2 diabetes and CVD risk factors
- their mental health and wellbeing, including the presence of eating disorders (eg, binge eating disorder, bulimia or night eating syndrome) and depression or other mood disorders
- their smoking status and alcohol use
- the possibility they are pregnant

- contributing factors – including precipitating events, injuries or medications (eg, antipsychotics or mood stabilisers) that may have contributed to their weight gain
- their readiness and motivation to make lifestyle changes, taking account of their previous actions, beliefs and values
- their usual eating patterns (eg, the types and amounts of foods they eat, their eating patterns, and restrictive or fad diets they have tried)
- their usual physical activities, sedentary behaviours and routines (consider their occupational and recreational activities, transport, home life and daily activities)
- their sleep patterns: ask about usual sleep length and patterns, whether they do shift work and the quality of their sleep (consider the presence of obstructive sleep apnoea (OSA)).

### Clinical examination



In conducting a clinical examination of a person, record:

- their waist circumference (if not already taken as part of stage 1: Monitor)
- the average of two seated blood pressure measures and pulse
- results of other examinations (as appropriate), such as:
  - an examination of the head and neck, including the thyroid if indicated and the neck circumference if you suspect OSA (>42 cm is a risk factor)

- a cardiovascular examination, looking for evidence of cardiomegaly and vascular bruits
- an examination of the abdomen for hepatomegaly and abdominal panniculus
- an examination of the extremities for oedema, joint deformities, cellulitis and osteoarthritic changes.

Undertake a CVD risk assessment, in line with [Cardiovascular Disease Risk Assessment and Management for Primary Care](#) (Ministry of Health 2018).

Undertake the following laboratory tests to assess CVD risk and diabetes status:

- single non-fasting total cholesterol (TC): high-density lipoprotein (HDL) ratio. If the TC or TC:HDL ratio is above 8 mmol/L, repeat the test
- single non-fasting glycated haemoglobin HbA1c
- serum creatinine (to calculate the estimated glomerular filtration rate).

### Screening and laboratory studies



Consider further investigations as necessary, including:

- liver function tests and, if you suspect liver disease, an ultrasound
- a mammography or colonoscopy, if you suspect post-menopausal breast cancer or colon cancer
- an exercise electrocardiogram to investigate ischaemic CVD
- a sleep study for sleep apnoea, if the person is a regular snorer and has an [Epworth Sleepiness score](#) over 10.

### 3 MANAGE

#### Use the Food, Activity and Behavioural strategies (FAB) approach to implement lifestyle interventions. Work together with the person to develop a realistic weight management plan.

Encourage a whole-of-household approach to introduce positive eating and activity changes to everyone the person lives with.

Discuss health risks associated with an unhealthy weight, and the benefits of improving eating, activity and sleep habits.

#### Food



Tailor dietary advice to the person and their family/whānau, taking into account co-morbidities, income, access to additional services and previous weight-loss experiences or attempts.

Aim to reduce the total energy the person consumes in a sustainable way.

Encourage the person to eat a nutritionally balanced diet, with limited portion sizes, that aims to include five or more servings of vegetables and fruit a day. Advise them to choose whole and less processed food, and foods that are low in saturated fat, salt and sugar.

Advise the person to reduce their intake of sugar-sweetened drinks, alcohol, confectionery and fast food.

Help them to identify positive eating changes that they can make for themselves, such as:

- removing unhealthy food from their home to reduce temptation

- using a smaller plate
- avoiding situations in which they are likely to overeat
- eating regular meals as a household.

When offering advice, consider whether a person is likely to be able to maintain proposed changes long term, and the person's individual preferences. Explore the cultural connotations certain foods or eating habits may have for particular people, especially Māori, Pacific and Indo-Asian people. Consider:

- the types of food available in different contexts (eg, a marae or church-based activities)
- the seasonal availability of foods.

Consider referring a person to a dietitian if you consider that they need further professional help.

#### Physical activity



- If a person is medically stable but has not recently been regularly active, advise them to:
  - start with 5 or 10 minutes of exercise a day and work up to more
  - split physical activity into smaller bouts (eg, walking for 10 minutes after each meal) to reach a daily activity target, instead of undertaking it all at once.
- If a person wants to lose weight, advise them to aim for at least 250 minutes of moderate-intensity aerobic physical activity (eg, brisk walking) spread over the week (eg, 50 minutes a day, five days a week).
- If a person wants to maintain a healthy weight, advise them to do 150–250 minutes of moderate-

intensity aerobic physical activity spread over the week (eg, 30 minutes a day, five days a week).

- Advise the person to move more, and sit less, including by breaking up their sitting time and reducing screen time.
- Encourage muscle-strengthening/resistance activities on two or more days of the week. (Note that muscle-strengthening activities may result in initial weight gain, due to changes in muscle mass.)

Consider referring a person to exercise or physical activity programmes such as the Green Prescription programme.

#### Sleep



If you suspect a person has OSA, consider referring them to an overnight sleep study to confirm the diagnosis. Contact your district health board for information about the availability of sleep clinic services.

Recommended hours of sleep for adults are as follows:

- for adults aged 18–65 years: 7–9 hours
- for adults aged >65 years: 7–8 hours.

Some people naturally sleep slightly more or less than the recommended hours.

Advise the person to maintain a regular sleep pattern by going to bed and getting up at around the same time each day, including on the weekends. Advise them to relax and unwind before bed (avoiding alcohol, caffeine and cigarettes), and keep the bedroom quiet and dark.

**3** MANAGE *continued*

**Behavioural strategies**



Encourage the person to involve their family/whānau, household, friends and, especially, partners into supporting their weight management plan.

Identify changes that they wish to work on first (eg, 'increase my physical activity').

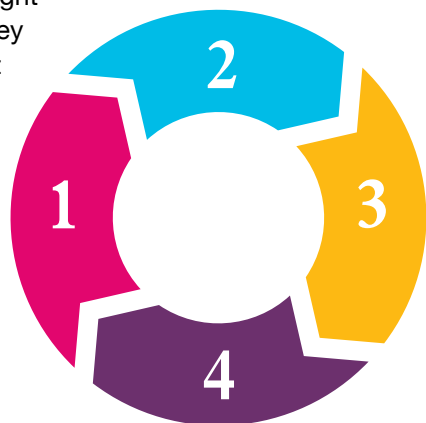
Help them to use problem-solving and incremental goal-setting strategies to set realistic targets (eg, walking 5 minutes per day for the first week, then 10 minutes per day for the second week).

Identify activities that they find enjoyable and can build into their everyday life.

Regular self-monitoring of weight can be helpful for some people.

Encourage the person to use appropriate (non-food) rewards for meeting goals, and to treat unmet goals as opportunities to learn more about their current challenges.

Encourage electronically delivered or face-to-face weight loss or weight maintenance programmes if they are available. Programmes that provide regular contact with a trained interventionist (eg, a clinical psychologist) can provide additional support.



**Mental health and weight recommendations**



Intervention strategies should take account of both the physical and mental health of patients. Monitor the weight of people who are depressed, and monitor the mood of people with excess weight.

**Weight-loss drugs**



Only recommend weight-loss drugs to an overweight or obese person if lifestyle changes have not produced significant benefit after at least six months, and the person has a BMI of  $\geq 30$  kg/m<sup>2</sup>.

**Bariatric surgery**



Consider bariatric surgery as an adjunct to an overall lifestyle management approach, rather than as a separate and independent treatment for weight management.

Advise people that surgery is not a quick fix, and that it requires lifestyle modification and supervision, including lifelong nutritional monitoring.

**4** MAINTAIN

**Reinforce healthy eating, physical activity, sufficient sleep, and behaviour strategies through regular brief contact with the person to ensure they are progressing to a healthy weight or achieving their goals.**



Monitor their BMI, waist circumference, mood and wellbeing.

Encourage them to regularly self-monitor their weight (eg, weekly).

Once a person has achieved his or her goal weight, reassess them regularly, and consider restarting a weight management programme if their weight increases by 1.5–2.0 kg.

If a person is using weight-loss drugs, consider continuing them for weight-loss maintenance only if the person has lost at least 5 percent of their initial body weight in the first three months of starting the drug, and side effects are manageable.

Identify and promote local services that encourage healthy lifestyle approaches. Develop collaborative partnerships with community-based organisations.

For more detail, download *Clinical Guidelines for Weight Management in New Zealand Adults* (Ministry of Health 2017).