# Learning Guide

## Nutrition screening and education

| 27455 Conduct nutrition screening with, and provide education to, adult clients in an aged care, health, or disability context | Level 4 | 6 credits |

**Name:**

**Workplace:**
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Introduction

Nutrition and a person’s health are linked. This learning guide will assist you to understand and use screening tools and educate adults about nutrition.

How to use your learning guide

This guide supports your learning and prepares you for the unit standard assessment. The activities should be used as a general guide for learning.

This guide relates to the following unit standard:
27455 Describe nutrition screening with, and provide education to, adult clients in an aged care, health, or disability context (level 4, 6 credits).

This guide is yours to keep. Make it your own by writing notes that help you remember things, or where you need to find more information.

Follow the tips in the notes column.
You may use highlight pens to show important information and ideas, and think about how this information applies to your work.

You might find it helpful to talk to colleagues or your supervisor.

Finish this learning guide before you start on the assessment.

What you will learn

This topic will help you to:
• understand and use some validated nutrition screening tools.
• conduct nutrition screening.
• provide nutrition education.
Nutrition

What is nutrition?
Nutrition is the nourishment found in food and how it relates to a person’s health. Nutrients are the ingredients in food that the body uses to provide energy, keep the cells in the body alive, repair body tissues, help prevent disease, assist healing and sustain life.

What is malnutrition?
In a broad sense, malnutrition is where a person is undernourished and not having their nutritional requirements met. This can include both severely underweight or severely overweight (obese) people who are lacking the appropriate balance of the carbohydrates, proteins, fats, vitamins and minerals needed for health and wellbeing.

Malnutrition is a state that takes time to develop and the signs and symptoms will vary depending on the cause and type of the undernourishment. If malnutrition remains undetected and untreated it can cause a range of adverse effects. These effects include:

- increased morbidity (illness) and/or mortality (death).
- impaired immune responses and increased risk of infection.
- reduction in the speed of healing from wounds or recovering from illness.
- reduced respiratory muscle function that can lead to breathing difficulties and increased risk of chest infection and respiratory failure.
- impaired ability to regulate body temperature and increased risk of hypothermia.
- reduced muscle strength.
- fatigue and irritability.
- apathy, depression and self-neglect.
- reduced quality of life.
- increased risk of hospital admission and longer stays in hospital.
Causes of malnutrition

Malnutrition can be caused by insufficient food intake, medical conditions, effects of ageing and other causes such as food intolerances and restrictive diets that are not balanced correctly and alcohol and drug dependency which may replace food or reduce appetite.

Insufficient food intake

This may be due to:

- being unable to afford to buy food.
- a poor appetite that could be a side effect of medication.
- difficulty with chewing and swallowing food.
- pain and nausea.
- deliberately reducing food intake, for example, a diet or eating disorder.

Medical conditions

For example:

- dementia can interfere with a person’s ability to purchase, prepare and consume food which will lead to an insufficient intake.
- depression may affect a person’s appetite and/or motivation to follow a healthy diet.
- recovery from trauma, surgery or severe illness may require an increased level of nutrients that may not be met by current intake.
- diseases such as cancer and AIDS may require an increase in nutrients.
- rapid loss of nutrients through vomiting and diarrhoea.
- a medical condition, for example, diseases of the bowel, liver or pancreas may interfere with the absorption of nutrients.
- a cognitive or physical disability may create issues with eating, for example, brain injury or stroke.
- a condition such as coeliac disease or irritable bowel syndrome that may lead to a restricted diet.
- Effects of ageing
  - sensory impairment can mean the person has a decreased sense of taste, smell and vision that can lead to decreased appetite.
  - oral health or dental problems.
  - decreased physical activity.
  - changes in the person’s psychosocial context or environment can lead to reduced nutritional intake, for example, social isolation or financial difficulties.
Nutrition screening and assessment

There is an important difference between nutrition screening and nutrition assessment.

**Nutrition screening** is about collecting a limited amount of information to identify people at nutritional risk who require a nutritional assessment.

A **nutritional assessment** is conducted on a person who has been identified as being at nutrition risk. The assessment uses comprehensive data to identify areas of nutritional need and is usually followed by a nutrition diagnosis and relevant intervention.

**Validated screening tools**

Nutrition screening tools are important because they identify people at risk of, or affected by, malnutrition. It is important to use validated tools. This is because validated nutrition screening tools are instruments (models) that have been developed in health care settings to determine people’s nutritional status and identify their degree of nutritional risk. They are deemed ‘validated’ when they have been tested in the setting with the consumers of the food, and where testing results have shown that these instruments can, with high reliability, sensitivity and specificity, identify people with malnutrition.

**Sensitivity** is how effective the screening tool is in detecting a disease or condition in those who have the disease or condition. The higher the sensitivity of a nutrition screening tool, the fewer cases of nutrition risk that go undetected.

**Specificity** is the extent to which a test gives negative results in those who are free of the disease or condition. The higher the specificity of a nutrition screening tool, the fewer well-nourished people are incorrectly labelled as at nutrition risk, and the fewer resources are wasted on those who need no intervention.

Source: Nestlé Nutrition Institution, MNA Mini Nutritional Assessment

www.mna-elderly.com-validity_in_screening_tools.html

Three validated screening tools are:

- Malnutrition Screening Tool (MUST).
- Mini Nutritional Assessment (MNA).
- SCREEN II (Seniors in the Community: Risk Evaluation for Eating and Nutrition).

These tools are more suited to adults and elderly in the community or in care. Always use a validated nutrition screening tool for the specific population.
Malnutrition Universal Screening Tool

'MUST' is a five-step screening tool to identify adults, who are malnourished, at risk of malnutrition (undernutrition), or obese. It also includes management guidelines which can be used to develop a care plan.

It is for use in hospitals, community and other care settings and can be used by all care workers.

This guide contains:
- A flow chart showing the 5 steps to use for screening and management
- BMI chart
- Weight loss tables
- Alternative measurements when BMI cannot be obtained by measuring weight and height.

The 5 'MUST' Steps

Step 1
Measure height and weight to get a BMI score using chart provided. If unable to obtain height and weight, use the alternative procedures shown in this guide.

Step 2
Note percentage unplanned weight loss and score using tables provided.

Step 3
Establish acute disease effect and score.

Step 4
Add scores from steps 1, 2 and 3 together to obtain overall risk of malnutrition.

Step 5
Use management guidelines and/or local policy to develop care plan.

Please refer to The ‘MUST’ Explanatory Booklet for more information when weight and height cannot be measured, and when screening patient groups in which extra care in interpretation is needed (e.g. those with fluid disturbances, plaster casts, amputations, critical illness and pregnant or lactating women). The booklet can also be used for training. See The ‘MUST’ Report for supporting evidence. Please note that ‘MUST’ has not been designed to detect deficiencies or excessive intakes of vitamins and minerals and is of use only in adults.

MUST is available from: www.bapen.org.uk/must_tool.html

The Malnutrition Universal Screening Tool has been developed by the British Association for Parenteral and Enteral Nutrition (BAPEN). It is a five step screening tool and is used to identify adults who are:
- malnourished.
- at risk of malnutrition (under nutrition).
- obese.
The tool also includes management guidelines that can be used to develop a care plan.

MUST has been designed for use with people in:

- hospital.
- other care settings.
- the community.

Any health care worker can administer the tool, which is easy to use and quick to administer. Another benefit is that guidelines are provided for people where it is not possible to accurately measure their height and weight.

**The five steps of MUST**

**Step 1**

Calculate the person’s body mass index (BMI) by measuring the person’s height and weight and score according to the table provided. A person who is obese or within a healthy range for their BMI will have a score of zero.

Sometimes a person’s height and weight cannot be obtained, for example, a person who is bedridden. Methods of taking alternative measurements or estimating a person’s BMI can be found in the MUST explanatory booklet which can be downloaded from www.bapen.org.uk

**Step 2**

Identify the percentage of unplanned weight loss and score using the table.

<table>
<thead>
<tr>
<th>Unplanned weight loss in past 3–6 months</th>
<th>Using the tables provided in the tool, a score can be obtained.</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of body weight</td>
<td>Score</td>
</tr>
<tr>
<td>&lt;5</td>
<td>0</td>
</tr>
<tr>
<td>5–10</td>
<td>1</td>
</tr>
<tr>
<td>&gt;10</td>
<td>2</td>
</tr>
</tbody>
</table>

**Step 3**

Take into account the effect of any acute illness. A score of 2 is given if a person is acutely ill and there has been, or is likely to be, no nutritional intake for more than 5 days.
Step 4

<table>
<thead>
<tr>
<th>Score</th>
<th>Overall risk of malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 0</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Score 1</td>
<td>Medium Risk</td>
</tr>
<tr>
<td>Score 2 or more</td>
<td>High Risk</td>
</tr>
</tbody>
</table>

Determine the overall risk of malnutrition by adding the scores from the first three steps.

Step 5

Develop an appropriate care plan.

In all risk categories:

- record malnutrition risk category.
- treat any underlying conditions.
- give help and advice, if necessary, on food choices, eating and drinking.
- record the need for special diets.
- follow the policies and procedures for your organisation.

People at low risk (a score of 0) need routine clinical care and repeat screening:

- weekly for hospitals.
- monthly for care homes.
- annually for special groups in the community, for example, those aged over 75 years.

People at medium risk (a score of 1) need to be observed, with intervention implemented if their dietary intake is shown to be inadequate.

People at high risk (a score of 2 or more) need treatment, unless this will be detrimental or no benefit is expected from nutritional support, for example, people who are close to death.

The guidelines for high risk people are:

- refer to a dietitian, nutritional support team or follow the policies and procedures of your organisation.
- set goals, improve and increase overall nutritional intake.
- monitor and review care plan, weekly in hospital and monthly in care homes or the community.
Mini Nutritional Assessment

The Mini Nutritional Assessment tool (MNA) was developed by Nestlé. It is used to screen older adults (over 65 years) to identify people who are malnourished or those who are at risk of malnutrition. Originally comprised of 18 questions, the current MNA is streamlined with only six questions and is now the preferred form of the MNA for clinical use.

Advantages of the MNA include it being:

- the most well validated screening tool for elderly people.
- quick and easy to answer six short questions.
- easy to administer in a wide variety of settings with no special training required.
- available in different languages.
- an early intervention tool that identifies at-risk people before weight loss occurs.
- an indication for health care professionals of the causes of malnutrition that may need to be targeted for intervention.

Mini Nutrition Assessment guides

Information on the Mini Nutrition Assessment can be found at Nestlé’s Nutrition Institute’s website

www.mna-elderly.com

It is also available as an app for your phone.
The six questions in the MNA are divided into sections and each section is scored.

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Scoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>Identifies any decline in food intake over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing.</td>
<td>0 for a severe decrease in food intake. 1 for a moderate decrease in food intake. 2 for no decrease in food intake.</td>
</tr>
<tr>
<td>Section B</td>
<td>Identifies weight loss during the last 3 months.</td>
<td>0 for a weight loss greater than 3kg. 1 if the person does not know. 2 for a weight loss between 1 and 3kg. 3 for no weight loss.</td>
</tr>
<tr>
<td>Section C</td>
<td>Identifies the person’s mobility.</td>
<td>0 if the person is bed or chair bound. 1 if the person is able to get out of bed/chair but does not go out. 2 if the person goes out.</td>
</tr>
<tr>
<td>Section D</td>
<td>Identifies if the person has suffered psychological stress or acute disease in the past three months.</td>
<td>0 if yes. 2 if no.</td>
</tr>
<tr>
<td>Section E</td>
<td>Identifies any neuropsychological problems.</td>
<td>0 for severe dementia or depression. 1 for mild dementia. 2 if the person has no psychological problems.</td>
</tr>
<tr>
<td>Section F1</td>
<td>Identifies the person’s BMI (weight in kg) / (height in m²) Tables are provided.</td>
<td>0 for a BMI less than 19. 1 for a BMI 19 to less than 21. 2 for a BMI 21 to less than 23. 3 for a BMI 23 or greater.</td>
</tr>
<tr>
<td>Section F2 (To use if BMI not available)</td>
<td>Calf circumference (CC) in cm.</td>
<td>0 for CC less than 31. 3 for CC 31 or greater.</td>
</tr>
</tbody>
</table>
Measuring calf circumference

1. The person should be sitting with the left leg hanging loosely or standing with their weight evenly distributed on both feet.
2. Ask the person to roll up the trouser leg to uncover their calf.
3. Wrap the tape around the calf at the widest part and note the measurement.
4. Take additional measurements above and below the point to ensure that the first measurement was the largest.
5. An accurate measurement can only be obtained if the tape is at a right angle to the length of the calf, and should be recorded to the nearest 0.1 cm.

Measuring calf circumference in bed-bound people

1. Have the person being measured lie in supine position with the left knee bent at 90° angle.
2. Slip a loop of the tape measure around the left calf until largest diameter is located.
3. Pull tape so it is just snug but not so tight that tissue is compressed.
4. Read and accurately record measurement to the nearest 0.1 cm. Repeated measurements should agree within 0.5 cm.
Screening score

The scores from the six questions in the MNA are added together to get a screening score. The results are:

- 12–14 points Normal nutritional status
- 8–11 points At risk of malnutrition
- Less than 7 points Malnourished

Recommended interventions based on the MNA score.

**Recommendations for Intervention**

![Flowchart diagram showing MNA score outcomes: Normal Nutritional Status (12 – 14 points), At Risk of Malnutrition (8 – 11 points), Malnourished (0-7 points). The flowchart includes rescreening, monitoring with close weight monitoring and rescreening every 3 months, treatment with nutrition intervention, diet enhancement, oral nutritional supplementation (400 kcal/d), close weight monitoring, further in-depth nutrition assessment, and close weight monitoring with further in-depth nutrition assessment.]
Seniors in the Community: Risk Evaluation for Eating and Nutrition

SCREEN™ was developed and validated in Canada by Dr Heather Keller, a Professor in the Department of Family Relations and Applied Nutrition at the University of Guelph. Dr Keller is an expert in nutrition and older adults.

SCREEN™ is a validated and reliable tool which can be self or interview administered and is used for identifying community living older people (over 50 years of age) who are at risk of malnutrition.

SCREEN™ consists of 15 questions that cover:

- appetite.
- frequency of eating.
- motivation to cook.
- ability to shop and prepare food.
- weight changes.
- isolation and loneliness.
- money to buy food.

SCREEN II is a modified version which has increased sensitivity and specificity. It consists of 14 questions covering the same areas, with sub-questions for the weight change and meal preparation items.

The tool is designed to identify nutrition risk in older people before there are any physiological (for example reduced pre-albumin levels) or anthropometric changes, such as muscle wasting or weight loss that would indicate malnutrition. This makes it different to other nutrition screening tools that rely on weight loss or other measures which require under-nutrition indicators (for example weight loss, reduced intake or muscle wasting) to be present before the tool can identify the malnutrition risk.

The advantage of using this tool for screening is that nutrition risk can be identified early and treatment implemented to prevent malnutrition occurring.

SCREEN™ and the Toolkit are copyright protected. Users can purchase a copyright licence that will allow the unlimited use of SCREEN™ and its support materials in a single setting. The licensing fee offsets the costs of development and production of the Toolkit.
Dr Keller describes the SCREEN and SCREEN II tool as follows.

SCREEN™ is a brief self-administered or interviewer administered nutrition risk questionnaire designed to address risk factors and determinants of food intake that can lead to malnutrition for community-living older adults.

It is valid and reliable for the cognitively well older adult (50+ years of age) and is designed to identify ‘upstream’ nutrition problems.

SCREEN II has 14 questions that include:

- weight change.
- intention of change and perception.
- skipping meals.
- limiting or restricting food intake.
- appetite.
- fruit and vegetable intake.
- meat and alternative consumption.
- milk product intake.
- amount of fluid consumed per day.
- eating alone.
- taking nutritional meal replacements.
- chewing and biting difficulty.
- swallowing problems.
- grocery shopping difficulties.
- cooking challenges.

Users have up to four potential responses for each question and no measurements are required.

It can be administered over the phone as well as in person. An internet version for self-management is currently available.

SCREEN can be used in needs assessment and evaluation, and raises awareness of nutrition issues, starting the process of behaviour change for older adults. The questions can be used to identify needed services in the community for older adults (for example grocery shopping assistance).

A toolkit aids communities/service providers in developing local screening programs that lead to implementation of interventions that meet the nutrition education and service needs of older adults. A licence to use SCREEN II is available in eight languages from www.flintbox.com/public/project/2750.
Use of validated nutrition screening tools with specific populations

Always use the tool most appropriate for the population.

<table>
<thead>
<tr>
<th>Screening tool</th>
<th>Population used with</th>
<th>Assessment results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malnutrition Universal Screening Tool (MUST)</td>
<td>Adults in:</td>
<td>Gives a score that indicates the overall risk of malnutrition:</td>
</tr>
<tr>
<td></td>
<td>• hospital.</td>
<td>• 0 is low risk.</td>
</tr>
<tr>
<td></td>
<td>• other care settings.</td>
<td>• 1 is medium risk.</td>
</tr>
<tr>
<td></td>
<td>• the community.</td>
<td>• 2 or more is high risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mini Nutritional Assessment (MNA)</td>
<td>Elderly (65 years and over). Used with the elderly in:</td>
<td>The scores from each section are added together to give a screening score:</td>
</tr>
<tr>
<td></td>
<td>• hospital settings.</td>
<td>• 12–14 points is normal nutritional status.</td>
</tr>
<tr>
<td></td>
<td>• long term care settings.</td>
<td>• 8–11 points is at risk of malnutrition.</td>
</tr>
<tr>
<td></td>
<td>• the community.</td>
<td>• 0–7 points is malnourished.</td>
</tr>
<tr>
<td>SCREEN II</td>
<td>Cognitively well older adults (50+ years of age).</td>
<td>Identifies nutrition risk in older adults before there are any physiological or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>anthropometric changes which would indicate malnutrition.</td>
</tr>
</tbody>
</table>
What screening tools are used by your organisation?

What setting are these tools used in?
For example, hospital? rest home? in the community?

What is your role with using the tool?

- What do you use the tool for?

- What parts of the tool do you administer?

How is the information gathered by the screening used to support a person with their nutrition?
Conducting adult nutrition screening

Conducting nutrition screening with adults includes:

- using a validated screening tool suitable for the person.
- analysing the data from that tool.
- monitoring the person’s food and fluid intake.
- reporting on the outcome of the nutrition screening.

The first step in conducting nutritional screening is to use an appropriate nutritional screening tool. The choice of tool will depend on the:

- tools available and used in your workplace.
- age of the person you are screening.
- location of the person you are screening, for example whether they are in a community or care setting.

Communication and interpersonal skills are a key part of gathering information about people. Skills include:

- listening.
- asking clarifying or follow up questions to gain extra information or clarify confusion.
- establishing rapport and making the person feel at ease.
- being respectful of the person’s culture.
The following guidelines in the table below can be used when administering a nutritional screening tool.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confirm the person</strong></td>
<td>• Confirm you are screening the correct person before conducting the screen.\n• Ensure you know whether you are screening the person in the community or in a care setting.</td>
</tr>
<tr>
<td><strong>Obtain the correct documentation for the screening tool you will be using</strong></td>
<td>• Ensure you are using the correct screening tool for that particular person.\n• Obtain the correct documentation for that tool as used by your workplace.\n• Consult with any relevant health care professionals before performing the screen. Obtain any relevant information about the person’s circumstances.</td>
</tr>
<tr>
<td><strong>Put the person at ease</strong></td>
<td>• Administer the tool in a quiet and private setting where possible.\n• Help the person to feel relaxed.\n• Explain why you are conducting the screen. Explain the purpose of the tool.\n• Explain the process to the person. Advise that you are going to ask some questions and may take some measurements.\n• Seek feedback from the person to ensure they understand. Allow the person to ask any questions.\n• Use language that is appropriate to the person.</td>
</tr>
<tr>
<td><strong>Administer the nutrition tool</strong></td>
<td>• Follow the instructions for each nutritional screening tool.\n• Both the MNA and MUST tools have guides that explain how the tools are to be used. These include: the questions to ask and the order in which to ask them.\n• measurements to take.\n• alternative techniques to gain physical measurements.\n• other questions to ask. Seek appropriate assistance if any issues occur with the person’s participation.</td>
</tr>
<tr>
<td><strong>Record the results</strong></td>
<td>• record the person’s results on the form.\n• remember to maintain confidentiality.\n• give results of the screen to the appropriate person.</td>
</tr>
</tbody>
</table>
Collecting and evaluating s data

Part of the nutrition screen is collecting and evaluating data from the person. Information includes height, weight, body mass index (BMI) and percentage weight loss.

**Height**

The person’s height can be measured using a stadiometer or height gauge. If using a stadiometer, the following procedure is suggested.

1. Have the person remove their footwear.
2. Ask the person to stand up straight with the heels together against the stadiometer. Heels, buttocks and shoulders should touch the stadiometer.
3. Ask the person to look straight ahead.
4. Tell the person to let their arms hang freely with palms facing the thighs.
5. Take the measurement with the person standing tall and with their head in an upright position and not tilted backward. Remember, the person’s feet should be flat on the floor.
6. Lower the headpiece of the stadiometer until it compresses the hair and touches the top of the person’s head.
7. Take the reading. Use the unit of measurement used in your workplace, for example, millimetres or centimetres.
8. Record the reading in the documentation.

If the person cannot stand, an indirect technique to measure height may need to be used. These techniques can include:

- using a recent height that the person may give you if you are confident it is reliable and realistic.
- using the knee height or length of the forearm with the appropriate conversion chart and/or formula.
- using the demispan.

The demispan is clinically the most useful measurement, taken from the middle of the sternal notch to the tip of the middle finger when the arm is held out sideways, horizontal and in line with the shoulders.

Sternal notch is the V-shaped notch at the top of the sternum (breastbone). You can feel this notch at the bottom of your neck.

Females: Height in cm = (1.35 x demispan (cm)) + 60.1
Males: Height in cm = (1.40 x demispan (cm)) + 57.8
Weight

The person’s weight is recorded using an accurate set of scales. Where possible, clinical scales should be used.

When recording a person’s weight using standing scales, the following procedure is suggested.

5 Check the scales for accuracy. Ensure they read ‘zero’ before the person stands on them.
6 Make sure the person is wearing light clothing and has removed their shoes. Check there is nothing in pockets that could affect the weight.
7 If the person is able to, ask them to stand on the scales with both feet. Ensure both feet are placed evenly on the scales. Arms should hang freely with palms facing the thighs.
8 Take the reading.
9 Record the weight in the documentation.

If the person is being weighed using chair scales, the following procedure is suggested.

1 Check the scales for accuracy. Ensure they read ‘zero’ before the person sits on them.
2 Make sure the person is wearing lightweight clothing and no shoes. Check there is nothing in pockets that could affect the weight.
3 If the person is able to, ask them to sit on the scales or assist a transfer to the scales. Their hands should be in their lap.
4 Take the reading.
5 Record the weight in the documentation.

Calculating percentage weight loss

The formula for calculating the percentage weight loss is:

\[(\text{Start weight} - \text{new weight}) ÷ \text{start weight} \times 100\]

Calculating the amount of weight the person has lost involves subtracting their new weight from the weight they started at, ie:

\[\text{Start weight} - \text{new weight} = \text{the difference}\]

Calculating this as a percentage involves dividing the difference by their start weight and multiplying this number by 100.

Here is an example:

Start weight 92 kg – new weight 84 kg = 8 kg (lost)

\[8 \text{ kg} ÷ 92 \text{ kg} = 0.087 \times 100 = 8.7\] is the percentage weight loss
**Body Mass Index**

A person’s body mass index (BMI) is a calculation of the ratio between a person’s height and weight. The BMI is a reliable indicator of the amount of body fat a person has.

The formula is:

\[
\text{BMI} = \frac{\text{weight (kg)}}{(\text{height in metres})^2}
\]

If the height is measured in centimetres, divide the height in centimetres by 100 to obtain the height in metres.

A number that is squared is multiplied by itself.

For example: \(4^2 = 4 \times 4 = 16\)

Here is an example.

Height 165 cm = 1.65 m

Height squared is \(1.65 \times 1.65 = 2.72\)

Weight of 66 kg \(\div 2.72 = 24.2\) BMI

This is a normal or healthy weight.

The screening tools MUST and MNA provide BMI tables that allow for the easy calculation of the person’s BMI.

<table>
<thead>
<tr>
<th>BMI</th>
<th>Weight status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>Between 18.5 to 24.9</td>
<td>Normal or healthy weight</td>
</tr>
<tr>
<td>Between 25.0 to 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30.0 and above</td>
<td>Obese</td>
</tr>
</tbody>
</table>

The result from the BMI calculation is interpreted using these categories.
Accuracy of BMI and percentage weight loss

It is important to note that the BMI and percentage weight loss calculations can be affected by:

- fluid disturbances such as oedema and dehydration.
- pregnancy.
- lactation.
- immobility.
- critical illness (acute disease effect – no dietary intake for greater than five days).
- muscle wastage or a very muscular physique.
- some neurological conditions.
- amputations.
- plaster casts.

Once the information about the person has been collected, the next step is to evaluate the information. Evaluating the information involves:

- determining the result of the screening tool. This will inform you whether the person is at low, medium or high risk.
- recording the result using the procedures of your workplace.
- informing the appropriate health professional of the results.
- ensuring the information is passed on in a timely way.
Use a calculator or tables to calculate the BMI of these people and assign a weight status. The first one has been done for you, in red. It is the calculation from a previous page.

<table>
<thead>
<tr>
<th>Person</th>
<th>Height (cm)</th>
<th>Weight (kg)</th>
<th>BMI</th>
<th>Weight Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>165</td>
<td>66</td>
<td>24.2</td>
<td>Healthy weight</td>
</tr>
<tr>
<td>Male</td>
<td>180</td>
<td>118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>170</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>142</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Calculate the percentage weight loss of the following people. The first one has been done for you, in red. It is the calculation from a previous page.

<table>
<thead>
<tr>
<th>Person</th>
<th>Start weight (kg)</th>
<th>New weight (kg)</th>
<th>Weight lost (kg)</th>
<th>% weight loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>92</td>
<td>84</td>
<td>8</td>
<td>8.7</td>
</tr>
<tr>
<td>Female</td>
<td>73</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>87</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Monitoring intake of food and fluids

In your role, you may be required to monitor the person’s intake of food and fluid if there are concerns about a person you are supporting.

The health professional will give you instructions on what to monitor. Depending on the policies and procedures of your organisation and the person you are working with, how and what you monitor will be different. For example, in some cases you might be required to weigh or measure the amount of food given in each portion and then subtract the amount that is not eaten when the meal is finished.

You may need to provide a written report, progress notes or a verbal report that covers the following kinds of information.

| What did the person eat? | For example, did the person eat all the vegetables but not the meat?  
|                         | Did the person eat from only one side of the plate?  
|                         | Did the person only eat soft food and leave anything that required more chewing?  
|                         | Is there a particular food that the person does not like and always leaves? |
| How much did the person eat? | For example, did the person eat only one of four sandwiches?  
|                             | Was most of the meal eaten or only a little? |
| When did the person eat it? | Was it in the morning, afternoon, or evening?  
|                             | Was it before or after medication? |
| What did the person drink? | Was the drink: water, juice, tea or other fluids? |
| How much did the person drink? | Did the person drink only a little or a lot? |
| When did the person drink it? | What time of the day did the person drink?  
|                              | Was it with meals or at different times? |
Monitoring fluid intake

Fluid intake refers to all fluid or liquids that enter the person’s body. It may include foods that are liquid at room temperature, such as ice chips and ice cream. Monitoring the fluid intake involves measuring amounts and keeping records of how much the person is drinking or receiving.

Monitoring fluid intake may include:

- talking to the person about what they have drunk.
- pre-measuring drinking glasses, cups or bowls that may be used. For example, if the person drinks a glassful, you will know how much they have had to drink.
- measuring the fluid given to the person and recording how much they have had to drink.
- monitoring fluid drunk from a jug. Record the total amount in the jug at the start of the day, then subtract the amount of fluid remaining in the jug at the end of the day. Include any extra fluid that has been added if the jug has been ‘topped up’.
- measuring the amount stated on the labels for products such as yoghurt, ice cream or canned drinks.
- recording packets of nutritional supplements such as Ensure or Fortisip.

A fluid balance chart is a more detailed record that includes both the amount of fluid going into a person’s body (intake) and the amount of fluid going out (output). Intake may be oral, intravenous or via tube feeding. Output will be measured via a catheter bag or other means of collection. Your organisation will have policies and procedures about how to take these measurements and the charts to record them on.

Reporting

The outcome of the nutrition screening and its impacts on the person’s personal plan must be reported to the delegating health professional using your workplace’s policies and procedures.

The outcome of the nutrition screen may have an impact on the person’s personal plan. The person may need:

- more frequent weight monitoring.
- oral nutritional supplements.
- alterations to the thickness, temperature or texture of the food.
- information about nutrition and how to better meet their nutritional needs.

You will need to follow your organisation’s procedures for this reporting. Reporting could be done face to face, electronically, or by using printed documentation.
Keep a diary for a day of what you or a person you support has to eat and drink. Fill in this example of a food and fluid intake chart.

### Food and fluid intake chart

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food</th>
<th>Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Amount consumed (tick)</td>
</tr>
<tr>
<td>------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Morning tea</th>
<th>Lunch</th>
<th>Afternoon tea</th>
<th>Evening meal</th>
<th>Supper</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>


Providing nutrition education

An outcome of the nutritional screening tool may be that people and/or their carers need nutrition education or information.

Education may relate to:

- the preparation of texture modified fluids.
- the preparation of texture modified foods.
- provision of information on fortified food and fluids.
- menu selection.

**Texture modified food and fluids** are prescribed by health professionals. These are foods and fluids where the texture has been changed to make them easier to eat. They may be given to people who have dysphagia (swallowing difficulties), people who are unwell and people who need a ‘soft diet’ because:

- they have a greater risk of choking or aspiration with normal food.
- often they do not eat enough to maintain their weight and hydration.

A speech language therapist should have devised a safe swallowing plan for the person. You should have been trained and be confident and competent in following the therapist’s instructions.

**Preparation of texture modified fluids**

Regular liquids may have different thickness levels. For example, fruit nectar is thicker than water. These fluids can be drunk from a cup or glass, and/or through a straw or teat. Regular liquids do not have thickening agents added to them and are not used in the treatment of dysphagia.

Texture modified fluids have been thickened to different extents. They are used for people who experience dysphagia because the fluid:

- moves more slowly and is easier to control, giving the person more time to swallow.
- may be less likely to go down the wrong way and cause choking or aspiration.

The person may be given ready-to-serve, long life thickened drinks. Dietitians New Zealand and the New Zealand Speech-Language Therapy Association (NZSTA) recognise standards for thickened fluids. These are shown in the next table.
<table>
<thead>
<tr>
<th>Texture</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **Level 150** *Mildly thick*  
Mildly thick fluids are thicker than naturally thick fluids (such as fruit nectars), but not as thick as a thick shake. | These fluids:  
• pour quickly from a cup but slower than regular, unmodified fluids.  
• may leave a coating film of residue in the cup after being poured.  
• can be drunk from a cup.  
• require some effort to take this thickness through a standard bore straw.  
You can recognise a mildly thick fluid because it runs quickly from a spoon or through the prongs of a fork but leaves a mild coating behind. |

<table>
<thead>
<tr>
<th>Texture</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **Level 400** *Moderately thick*  
Moderately thickened fluids are similar to the thickness of room temperature honey or a thick shake. They flow slowly. | These fluids:  
• are cohesive and pour slowly.  
• can be drunk directly from a cup although the fluid flows very slowly.  
• are difficult to drink using a standard or wide bore straw.  
Spooning this fluid into the mouth is often the best way of consuming this fluid.  
You can recognise a moderately thick fluid because it slowly drips in dollops from a spoon or through the prongs of a fork. |

<table>
<thead>
<tr>
<th>Texture</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **Level 900** *Extremely thick*  
Extremely thick fluids are similar to the thickness of milk pudding or mousse. They do not flow. | These fluids:  
• are cohesive and hold their shape on a spoon or fork.  
• cannot be poured from a cup into the mouth.  
• cannot be drunk through a straw.  
A spoon is the best method for offering this type of fluid.  
The fluid is too thick if the spoon is able to stand upright in it unsupported.  
You can recognise this fluid because it sits on but does not flow through the prongs of a fork. |
For a person who requires thickened fluids, the following information and guidelines may be helpful.

### Modified fluid type preparation guidelines

<table>
<thead>
<tr>
<th>Step</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash your hands.</td>
<td></td>
</tr>
<tr>
<td>Get the correct equipment, for example, dry measures, jugs, spoons, forks, whisk or a blender.</td>
<td></td>
</tr>
<tr>
<td>Ensure you have the correct thickening product/powder. Thickening powders can be purchased from a local pharmacy. For each product, the instructions must be followed exactly to achieve the correct consistency. In the community, products such as baby cereal, instant potato flakes, gravy powder or cornflour can be used to thicken the texture.</td>
<td></td>
</tr>
<tr>
<td>Mix the required amount of thickening powder into the fluid. Follow the health professional or manufacturer’s instructions for how the powder should be added.</td>
<td></td>
</tr>
<tr>
<td>Stir until the powder is evenly distributed and the fluid is smooth and free of lumps.</td>
<td></td>
</tr>
<tr>
<td>Use very hot water when making hot drinks. This is to ensure the powder can be easily dissolved.</td>
<td></td>
</tr>
<tr>
<td>For mildly and moderately thick fluids: If making cold milky drinks, shake the milk drink, add the thickener, then shake again very hard, to dissolve the thickening powder.</td>
<td></td>
</tr>
<tr>
<td>Use a hand-held blender or food processor to prepare a large amount.</td>
<td></td>
</tr>
<tr>
<td>- Measure out the required amount of thickener and sprinkle over the fluid.</td>
<td></td>
</tr>
<tr>
<td>- Blend for the recommended time.</td>
<td></td>
</tr>
<tr>
<td>- Check that all the powder has been mixed in. If not, blend for another 30 seconds.</td>
<td></td>
</tr>
<tr>
<td>- Remove any lumps or grit by passing the fluid through a sieve.</td>
<td></td>
</tr>
<tr>
<td>- Use a fork to check that the fluid is thick enough.</td>
<td></td>
</tr>
<tr>
<td>- If the fluid is too thin, add a little more thickener and repeat the steps.</td>
<td></td>
</tr>
<tr>
<td>After thickening all drinks, check for lumps.</td>
<td></td>
</tr>
<tr>
<td>Use a fork to test that the thickness is correct. Dip the fork into the liquid, raise it up and compare the thickness of the fluid with the examples in the fluid thickness guide. It is important to stir the fluid if it has been standing and stir before serving to redistribute thickening.</td>
<td></td>
</tr>
</tbody>
</table>
Preparation of texture modified foods

Unmodified foods are everyday foods that have a huge variety of textures, from hard and crunchy to soft. Dietitians New Zealand and the New Zealand Speech-Language Therapy Association (NZSTA) recognise the following standards for texture modified foods.

<table>
<thead>
<tr>
<th>Texture</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Texture A Soft</strong></td>
<td>• Can be chewed but not necessarily bitten.</td>
</tr>
<tr>
<td></td>
<td>• Require minimal cutting. They are easily broken up with a fork.</td>
</tr>
<tr>
<td></td>
<td>• Should be moist or served with a sauce or gravy.</td>
</tr>
<tr>
<td></td>
<td>Examples include:</td>
</tr>
<tr>
<td></td>
<td>• Rice, cereal, rice, pasta, noodles.</td>
</tr>
<tr>
<td></td>
<td>• Cooked vegetables, legumes.</td>
</tr>
<tr>
<td></td>
<td>• Stewed or canned fruit.</td>
</tr>
<tr>
<td></td>
<td>• All types of eggs.</td>
</tr>
<tr>
<td></td>
<td>• Soft cooked meat, fish, poultry.</td>
</tr>
<tr>
<td><strong>Texture B Minced and moist</strong></td>
<td>Food is soft and moist and should easily form into a ball.</td>
</tr>
<tr>
<td></td>
<td>These foods:</td>
</tr>
<tr>
<td></td>
<td>• Are in small, soft lumps that can be broken down with the tongue.</td>
</tr>
<tr>
<td></td>
<td>• Are soft and moist and easily form into a ball.</td>
</tr>
<tr>
<td></td>
<td>• Can be easily mashed with a fork.</td>
</tr>
<tr>
<td></td>
<td>• May be presented as a thick puree with obvious lumps in it.</td>
</tr>
<tr>
<td><strong>Texture C Smooth pureed</strong></td>
<td>Food is smooth and lump free with a similar consistency to thick custard, or yoghurt. At times, it may have a grainy quality, but should not contain lumps.</td>
</tr>
<tr>
<td></td>
<td>These foods:</td>
</tr>
<tr>
<td></td>
<td>• Should be smooth and lump free but may have a grainy quality.</td>
</tr>
<tr>
<td></td>
<td>• Should be moist and cohesive. It holds its shape on a spoon. This means when the food is placed side by side on the plate, it should hold its shape and not run into anything else.</td>
</tr>
<tr>
<td></td>
<td>• Can be moulded, layered or piped.</td>
</tr>
</tbody>
</table>
For a person who requires texture modified food, the following information and guidelines may be helpful for the person or the carer. The suitability of food items will vary between individuals, depending on their needs and personal preferences.

### Soft foods

<table>
<thead>
<tr>
<th>Suitable food choices</th>
<th>Tips for preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft sandwiches with very moist fillings, such as eggs and mayonnaise.</td>
<td>Avoid grainy breads and remove crusts. Avoid dry or thick fillings.</td>
</tr>
<tr>
<td>Well moistened breakfast cereals. Toasted muesli and bran cereals are harder to moisten.</td>
<td>Ensure milk has thoroughly softened the cereal. Avoid cereals with nuts, seeds or dried fruits.</td>
</tr>
<tr>
<td>Soft pasta and noodles, well cooked rice and cous cous.</td>
<td>Ensure pasta, noodles, rice or cous cous are completely cooked and very soft.</td>
</tr>
<tr>
<td>Soft pastry, such as a quiche with a pastry base.</td>
<td>Avoid filo and puff pastry, such as sausage rolls.</td>
</tr>
<tr>
<td>Well cooked vegetables served in small pieces, soft enough to be mashed or broken up with a fork.</td>
<td>Avoid raw vegetables, including chopped and shredded and hard to chew or stringy vegetables, such as sweet corn, celery or broccoli stalks.</td>
</tr>
<tr>
<td>Fresh fruit pieces that are naturally ripe and soft or stewed, pureed and canned fruits in small pieces.</td>
<td>Avoid fruit that poses a choking risk, such as whole grapes or fruit with large pips. Avoid dried fruits, seeds and fruit peel.</td>
</tr>
<tr>
<td>Casseroles with tender pieces of meat or moist fish that is easily broken up with the side of a fork.</td>
<td>Avoid meat with gristle. Avoid meat that is dry, tough, chewy or crispy, for example, bacon or crackling.</td>
</tr>
<tr>
<td>Soft puddings, such as custard, moist cakes, trifle or mousse.</td>
<td>Avoid cakes or desserts that contain nuts, seeds, coconut, dried fruit or pineapple.</td>
</tr>
<tr>
<td>Soups (creamy, thick or blended). These may contain soft lumps.</td>
<td>Avoid soups with large pieces of meat, vegetables or corn.</td>
</tr>
</tbody>
</table>
## Minced and moist foods

<table>
<thead>
<tr>
<th>Suitable food choices</th>
<th>Tips for preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast cereal with small moist lumps, such as porridge. Small, moist pieces of soft pasta, such as macaroni cheese. Some pasta dishes may require blending or mashing. Noodles.</td>
<td>Avoid all breads, sandwiches, pastries, crackers and dry biscuits. Avoid rice that does not hold together, such as parboiled, long-grain or basmati. Avoid crispy or dry pasta, such as the hard edges of a pasta bake.</td>
</tr>
<tr>
<td>Tender, cooked vegetables that are easily masked with a fork, such as potato, kumara, pumpkin. Pieces should be less than 0.5cm in size. Pureed vegetables, such as peas and corn.</td>
<td>Avoid raw vegetables. Remove skins from vegetables, such as pumpkin. Avoid vegetables that have outer shells or require extensive chewing.</td>
</tr>
<tr>
<td>Mashed soft fresh fruits, such as banana, mango or kiwifruit. Finely sliced or diced soft pieces of canned or cooked fruit, such as pears or peaches. Pureed fruit.</td>
<td>Avoid large pieces of fruit that is too hard to be mashed with a fork. Avoid dried fruit and stringy fruit such as pineapple.</td>
</tr>
<tr>
<td>Yoghurt with soft fruit and very soft cheeses with small lumps, such as cottage cheese or cream cheese.</td>
<td>Avoid the rind of soft cheeses such as camembert.</td>
</tr>
<tr>
<td>Coarsely minced, tender, meats with a sauce or gravy. Blended or flaked/minced fish with a sauce. Very soft and moist egg dishes, such as scrambled eggs or soft quiches. Small pieces of soft tofu.</td>
<td>Ensure casserole or mince dishes have no hard or chewy pieces. Casseroles may be blended to reduce the size of larger food pieces. Remove any hard pieces of crust from quiches or pies. Avoid nuts.</td>
</tr>
<tr>
<td>Smooth puddings, such as custards, yoghurt, instant puddings and ice cream. Soft moist sponge cake desserts with lots of custard or cream. Soft fruit-based desserts. Rice pudding or canned creamed rice.</td>
<td>Avoid bread based puddings. Ensure puddings do not have hard crumble or bases, such as apple crumble. Avoid crumbly or flaky pastry.</td>
</tr>
</tbody>
</table>
Other guidelines for preparing soft and minced and moist foods include:

- remove all skin, bones, pips or seeds from the food before processing.
- use cooking methods that help to keep the food moist, such as steaming, boiling and stewing.
- make use of a range of equipment, such as juicer, blender, food processor or sieve.
- ensure all fruit is ripe and soft for easier chewing or mashing.

Smooth pureed foods

<table>
<thead>
<tr>
<th>Suitable food choices</th>
<th>Tips for preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth, lump-free breakfast cereals, such as semolina, pureed porridge, cremoata or baby rice. Pureed pasta, noodles or rice.</td>
<td>Avoid all bread, dry cereals, crackers or cereals with large pieces or lumps.</td>
</tr>
<tr>
<td>Cooked, peeled and pureed vegetables. Smooth, lump free mashed potato.</td>
<td>Avoid lumpy mashed vegetables. Avoid all vegetable skins or pips.</td>
</tr>
<tr>
<td>Cooked, pureed fruits with no lumps.</td>
<td>All skins, pips and seeds must be removed before blending.</td>
</tr>
<tr>
<td>Plain or Greek yoghurt. Dairy food. Smooth, milk-based sauces, such as cheese sauce thickened to the correct consistency.</td>
<td>Avoid yoghurt that has lumps or pieces of fruit. Avoid semi-solid cheeses such as cottage cheese.</td>
</tr>
<tr>
<td>Pureed meat, chicken or fish. Soufflés and mousses, such as lump free salmon mousse. Plain baked custard or pureed poached eggs.</td>
<td>Remove all skin, rind and fat before blending. Use sauce or gravy to achieve a thick, moist texture. Avoid mince or partially pureed meats.</td>
</tr>
<tr>
<td>Dairy desserts such as custards, mousse, instant puddings, ice cream.</td>
<td>Do not put non-pureed garnishes on the desserts.</td>
</tr>
<tr>
<td>Soups that have been blended or strained to remove any lumps. Smooth jams, condiments and sauces. Smooth savoury dips.</td>
<td>Avoid thin or watery soups or broths if the person requires thickened fluids.</td>
</tr>
</tbody>
</table>
Other guidelines for preparing smooth, pureed foods are on the next page.

Other guidelines for preparing smooth, pureed foods include:

- always puree each item of the meal separately. Do not puree a whole meal together.
- puree and then add seasonings, such as powdered spices, Worcester sauce or soy sauce. Ensure sauces have a smooth consistency and do not contain pieces that could stick to the person’s tongue.
- extra servings of each pureed item can be frozen in individual servings, such as ice cube trays.
- use liquids such as sour cream, gravy, cheese sauce, soups, cream or fruit juice to add extra energy and taste to pureed food.
- commercially prepared stage one (six months) baby foods are suitable when out travelling or visiting. Extra seasoning can be added to these for more flavour.
- puree meat raw then puree it again once it has been cooked. This helps to reduce the gritty texture.
- some people on smooth pureed diets find blended baked beans and peas irritating, because the skins have not been removed. Check with the person or speech therapist. These foods may need to be omitted, or pushed through a sieve or mouli to separate the skins from the seed.

Fortified food and fluids

Fortified food and fluids are foods and fluids that have one or more vitamins or minerals added to them. The additional vitamins and minerals improve the nutritional value of the food product. Food and fluid fortification is used to create foods for special dietary purposes and contain nutrients in appropriate amounts. These may also be called nutritional supplements or special foods.

Different products will be given to a person to meet that person’s particular needs. When advising a person or carer about preparing a fortified food or fluid, make sure they understand:

- how many times a day the product is to be taken.
- what times of the day to take the product.
- where to store the product (fridge or at room temperature).
- how to open the product, for example, cans, tetra packs with straws or bottles with twist caps.

Ensure the person can easily hold and open the product.
Menu selection

When giving information to a person or carer about menu selection, the following guidelines should be followed. The menu should:

- contain textures appropriate to the person’s needs, such as soft, minced and moist or smooth pureed.
- be well balanced and include a variety of foods.
- provide the person with an appropriate amount of each food group:
  - fruit and vegetables.
  - breads and cereals (bread, rice, pasta, breakfast cereals).
  - milk and milk products (milk, cheese, yoghurt, ice cream).
  - lean meat and alternatives (lean meat, poultry, seafood, eggs, nuts and seeds, beans and lentils).
- provide for extras. This covers foods such as cakes, biscuits, lollies, chocolate, chips etc.
- provide a good variety of vegetables and a good balance of fresh vegetables with frozen/canned vegetables.
- offer a variety of fruit, including seasonal fruit.
- provide healthy and appropriate snacks between main meals throughout the day.
- provide an appropriate daily fluid intake, for example, from tea, soup, milk, juice and water.
- contain food choices that are culturally appropriate.
- take account of the person’s preferences and contain tastes and flavours that the person will like and enjoy.

Fortisip is a nutritional supplement.
A menu for a healthy older person should contain the following servings from the four food groups each day.

<table>
<thead>
<tr>
<th>Food group</th>
<th>Recommended serving per day</th>
<th>Examples of serving sizes</th>
</tr>
</thead>
</table>
| Vegetables and fruit (fresh, frozen, canned and dried) | At least 5 servings per day:  
  - 3 servings of vegetables  
  - 2 servings of fruit | 1 medium potato or kumara  
  ½ cup cooked vegetables  
  ½ cup salad  
  1 tomato  
  1 apple, pear or orange  
  2 small apricots or plums  
  ½ cup fresh fruit salad  
  ½ cup stewed, canned or frozen fruit  
  1 cup fruit juice (250ml)  
  1 tablespoon dried fruit |
| Breads and cereals (breakfast cereals, breads, grains, rice and pasta), preferably wholegrain | At least 6 servings per day (choose wholegrain breads and cereals) | 1 bread roll  
  1 muffin  
  1 medium slice bread  
  1 cup cornflakes  
  ½ cup muesli  
  ½ cup cooked porridge  
  1 cup cooked pasta  
  1 cup cooked rice |
| Milk and milk products (includes milk, cheese, yoghurt and ice cream) and alternatives | At least 3 servings per day (choose low or reduced-fat options) | 1 glass milk (250ml)  
  1 pottle yoghurt (150g)  
  2 slices cheese (40g)  
  2 scoops ice cream (140g) |
| Lean meat, poultry, seafood, eggs, nuts and seeds, and legumes | At least 1 serving per day | 2 slices cooked meat (approximately 100g)  
  ¼ cup mince or casserole  
  1 egg (50g)  
  1 medium fillet of fish cooked (100g)  
  1 medium steak (120g)  
  ¼ cup dried cooked beans (135g)  
  2 drumsticks or 1 chicken leg (110g)  
  ½ cup nuts or 2 tablespoons of seeds |
Communicating information

When communicating nutrition information to people and/or their carers, it is important to ensure that your communication style meets the needs of people and/or their carers. Guidelines to follow include:

- making information clear, concise and accurate (matches the instructions of the dietitian or speech language therapist).
- that the information is consistent with your workplace’s policies and procedures.
- the person and/or the carer is able to understand the information, for example:
  - you have used words the person will understand.
  - you do not overload people with too much information at once.
  - you have spoken to the people with an appropriate pace and volume so they can comfortably hear and understand you.
- you have been culturally appropriate in your communication style, for example, eye contact, body language, body position when speaking to the person and/or carer, use of gestures, greetings etc.
- you have checked that the person and/or carer have understood what you have told them, for example, by asking them to repeat back to you what you have said or left written instructions/information/prompts that the person can refer back to independently.