Best Practice Food and Nutrition Manual for Aged Care Homes Edition 2.1

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Foreword

There is one exception to the epidemic of overweight and obesity in Australia. Older people can be at risk of malnutrition if they depend on others to provide their food.

The Commonwealth Department of Health produced in 1999 (International Year of Older Persons) a 200 page scientific report ‘Dietary Guidelines for Older Australians’ focussed on independent older people, living in their own homes. This report is now the standard reference for all health professionals and the shorter version for the general public has been a (well subsidised) best seller.

The Committee on Nutrition for Older Australians (CNOA) was surprised to discover that there is no corresponding practical guidebook on nutrition and food service for aged care facilities in Australia. Yet problems and complaints about the food are common.

Carolyn Bunney and Rudi Bartl of the Nutrition Department, Central Coast Health, NSW advise on nursing home and hostel nutrition and menus as part of their work as community nutritionists. They have collected ideas from aged care staff and advisors, and combined these with their own experience to produce this Best Practice Food and Nutrition Manual for Aged Care Facilities. Drafts were then sent to over 100 people with experience and knowledge in the area with the majority providing input.

Bunney and Bartl have aimed to keep the manual reader-friendly and easy to find your way around and not too long or technical. Yet here there is a blend of classical home economics, practical nursing and contemporary ideas of nutrition.

This manual is, I believe, very much needed and three copies should be in every aged care facility in our country, one for staff education, one for the kitchen staff and one for management.

Central Coast Health is to be commended for having the vision to fund the production and printing of a manual that has the capacity to benefit aged care residents Australia wide.

A. Stewart Truswell, AO, MD, FRACP  
Emeritus Professor of Human Nutrition  
University of Sydney 2004

Foreword for the 2nd edition

This unique manual, first produced in 2004 was very well received and has been widely used across Australia. Some of its statements or references by now need updating. Fortunately the original authors, Bartl and Bunney were willing to undertake this task and have been seconded from their usual community nutrition work at Gosford Hospital.

There are changes in layout. Some sections are larger. This edition gives more emphasis to preventing or delaying malnutrition, especially of protein. Residents have wide ranging needs and different life long habits and the manual encourages all staff to have an individual resident-centred approach to providing food and hydration. The chapter on food safety is not in the new edition; it is covered in other documents.

We are grateful to members of the Advisory Group, and other professionals who have given their expert advice to the authors.

Lastly may I express the hope that one day the NH&MRC may give priority to the difficult task of measuring what residents actually eat in aged care homes, and relating this to outcomes.

Professor A Stewart Truswell, AO, MD, FRACP

Preface

The intent of this manual is to provide appropriate, practical and helpful information for all staff of aged care homes and approved service providers of packaged community care.

To ensure the manual is ‘user friendly’, background information has been kept to a minimum. People requiring more information will need to consult additional resources. A list of references and resource material is included at the end of most chapters.

The authors of this manual have, for many years, worked in partnership with aged care homes on the Central Coast, New South Wales.
and wrote the ‘Best Practice Food and Nutrition Manual for Aged Care Facilities’, which precedes this manual.

In order to have realistic and useful content, there has been extensive consultation with a range of aged care homes as well as key individuals and groups.

Although the term ‘resident’ is used throughout this manual, this information also applies to clients of approved service providers of packaged community care.

The following are acknowledged and thanked for their input, support and feedback on draft versions of this manual.

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Introduction

Australia has an ageing population. While most older people will live out their lives independently, the situation and health of some will mean living in an aged care home. These homes have the challenging and rewarding task of providing the best possible life for their residents.

Food and nutrition have a major role in meeting the physical and functional needs of residents and contribute significantly to quality of life. Enjoyable food is of paramount importance to residents.

The major themes throughout this manual are maximising resident food enjoyment and minimising malnutrition. Emphasis is on enjoying everyday foods and removing unnecessary dietary restrictions which can lead to malnutrition.

Section one of the manual includes information relevant to residents’ nutritional needs and menu planning guidelines. Included is a menu checklist and tips on maximising the nutritional content of the menu items.

Section two addresses the social aspects of dining by providing ideas to enhance mealt ime atmosphere and mealt ime enjoyment.

Section three builds upon the first two sections and is focussed on prevention and treatment of malnutrition. Guidance on how to fortify the basic menu to maximise the nutritional content of foods and fluids offered to residents along with other practical suggestions to regain lost weight are included. Malnutrition screening tools are included in this section.

The final section provides advice on special dietary needs which are commonly required by aged care home residents. These include texture modified diets, high fibre diets, diabetes and tube feeding, among others.

With a resident outcome focus, this comprehensive manual is designed to be useful to all aged care home staff and packaged community care staff to assist them in their endeavour to improve resident quality of life.
# Food and nutrition manual for aged care homes

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Food, Nutrition and Hydration Requirements
Nutritional Requirements
Nutritional requirements

It is a common misconception that older people, particularly those living in aged care homes, need less protein, vitamins, minerals and calories than younger people do.

Protein, calcium and vitamin D requirements are higher in older people than younger adults. Protein is needed for tissue repair and maintenance rather than growth. Protein is best obtained from foods such as meat, chicken, fish, eggs, cheese, milk, custard and legumes. While many residents are no longer active, the amounts of vitamins and minerals needed remain much the same throughout life. Older people have the same requirements for many important nutrients such as magnesium, zinc, vitamin E, vitamin A, folate and vitamin B12. Refer to appendix 8: ‘Nutrient Reference Values’.

The calories (or kilojoules) required can also be higher for older people than once was thought. Some residents have high calorie requirements due to underlying medical conditions such as Parkinson’s disease where there is increased rigidity or involuntary movements. Residents with dementia often lose weight despite eating large quantities of food.

The nutritional requirements of individual residents vary because of body size, activity, gender and the presence of illness. In the presence of illness, infection and wounds, food requirements increase. Food needs will also increase during recovery or healing, such as from a fractured neck of femur or pressure injury, because of an increased need for calories, protein plus some vitamins and minerals.

Some residents need larger food serves or seconds. ‘One serve fits all’ is not appropriate as residents’ needs are different. Each resident should receive sufficient food and fluids to meet their individual nutritional requirements. Food will need to be fortified (or supplemented) and lots of assistance given if residents have poor appetites, are too tired to eat enough, have increased nutritional requirements or are malnourished.

Weight loss is not a normal part of the ageing process. When nutritional requirements are met by the right amount of food and fluids, residents who are underweight or losing weight are more likely to regain weight and those with a healthy body weight should maintain their weight.

TO DETERMINE IF RESIDENTS ARE GETTING ENOUGH FOOD

• Ask residents if they are getting enough food or feel hungry. Refer to appendix 7: ‘Resident Meal Satisfaction Survey’
• Ensure your menu provides sufficient food. Have it assessed by a dietitian with experience in aged care. Use the ‘daily menu planning checklist’ on page 26 to help
• Monitor the residents’ need for mealtime assistance
• Weigh residents on admission then monthly and record in their notes as well as in a serial manner in a weight book or on the template supplied. Refer to appendix 3: ‘Resident Monthly Weight Chart’. Take appropriate action if resident’s weight changes by more than 2kg in one month or 5kg over six months
• Perform regular malnutrition screening. This can be done monthly when residents are being weighed or on ‘special care’ days etc. Monitor food intake by keeping nutrition notes. Refer to appendix 6: ‘Nutrition Notes for Residents Eating Poorly’
• Be mindful that residents from different cultures may vary in build e.g. Australian Aboriginals and Torres Strait Islanders, Asians, Pacific Islanders, Italian, German etc.
Assessing food and nutrition needs

Each resident’s food and nutritional needs should be determined on entry to an aged care home and reviewed regularly. A nutrition care plan is essential and should include the following:

**NUTRITIONAL ASSESSMENT**

The following should be obtained for each resident:

- Current weight. Ensure someone is responsible for reviewing each resident’s weight and acting on significant changes. Some care planning software packages now provide weight tracking and alert staff when weight loss has occurred which can make this monitoring easier.
- Current height. Estimate from ulna length on entering the aged care home (see page 89).
- Reference weight for height range (BMI: 22-27 Refer to the chart in appendix 3: ‘Resident Monthly Weight Chart’).
- History of any recent weight loss, and over what time period.
- Baseline malnutrition screening on admission. Malnutrition screening should take less than 5 minutes and should be done monthly. Four valid and reliable malnutrition risk screening tools are included in this manual. Residents found to be at malnutrition risk will need a more thorough assessment by a dietitian or health professional skilled in nutrition assessment. A malnutrition flow chart on what to do when a resident is identified at risk of malnutrition is on page 99.
- Food and drink likes, dislikes and usual eating pattern.
- A completed version of the resident food and nutrition communication card. A template is provided in appendix 1. Try to review and update this card monthly. Have a procedure in place so that all relevant staff are aware of any changes.

**NUTRITION SUPPORT**

(ie. EXTRA NUTRITION)

Identifying whether a resident needs nutritional support is essential to prevent and treat malnutrition. Many older people are malnourished when they enter an aged care home. Malnutrition needs to be recognised, documented and a management plan developed, implemented and regularly reviewed. Refer to chapter 16: ‘Malnutrition Screening’.

**RESIDENT MEDICAL HISTORY RELATING TO NUTRITION**

For example dementia, diabetes, cancer, depression, swallowing problems, poor oral health, unintentional weight loss, allergies or pressure injuries.

**RESIDENT THERAPEUTIC DIET REQUIREMENTS**

Any therapeutic diet must have clear benefit and not increase the risk of malnutrition. Judgement and common sense should prevail to maximise residents’ enjoyment of meals and enable them to eat the widest variety of food available. For example, frail elderly residents with diabetes would not benefit from being placed on a strict diabetic diet. The need for calories and protein surpass the need for a strict diet. Some diets, such as ‘gluten-free’ for residents with coeliac disease will need to be adhered to closely. A dietitian should be consulted regularly to ensure nutritional adequacy of the menu and to ensure that foods provided meet the residents’ nutrition needs. For those that require a special diet e.g. gluten free, low lactose etc. information is available at the website below.

‘Therapeutic Diet Specifications for Adult Inpatients’ provides a range of therapeutic diets outlining what foods are allowed or not allowed and is available to download at https://www.aci.health.nsw.gov.au/resources/nutrition/nutrition-food-in-hospitals/nutrition-standards-diets or ‘Nutrition Manual’ by the Dietitians Association of 2014 Australia can be purchased DAA 1/8 Phipps Close, Deakin ACT 2600 Tel: 1800 812 942 Fax: 02 6282 9888

**RESIDENT LIKES/DISLIKES**

Obtaining a list of likes and dislikes from a resident or their family will assist in providing foods that the resident enjoys. This is especially important when their appetite is poor. Likes and
dislikes will need to be reviewed regularly. This is also important for residents from culturally and linguistically diverse (CALD) backgrounds and communities as many will crave their cultural/traditional food. Having family bring in familiar foods often increases food intake as does the mealtime assistance family members may provide. Food safety will need to be established.

RESIDENT APPETITE
There can be large differences in appetite between residents. Customising serving sizes to resident need is important; a resident’s appetite will vary from meal to meal. Small eaters or those who have a poor appetite may benefit from small serves and an option of a second helping. Frequent small meals may be the best option. By regularly reviewing resident’s appetite, amounts of food offered can be individualised. It is useful to identify the meal times when residents eat the most. For example, residents may eat a good sized breakfast and perhaps not as much at the evening meal. Providing a cooked or hot breakfast rather than a continental breakfast is preferable as it provides a good opportunity to improve food intake. Meal and mid-meal times should not be too close together as this can reduce appetite for the next meal. It is notable that a resident’s appetite does not determine their nutrition requirements. A resident with a small appetite may need the implementation of various strategies contained in this manual to ensure they are obtaining sufficient nutrition.

RESIDENT ABILITY TO CHEW AND SWALLOW
Identifying, documenting and regularly reviewing residents’ chewing and swallowing ability is essential to prevent poor food intake. Record whether residents have dentures and if they use them, whether they have natural teeth or a combination. Also document chewing ability. Note loose or ‘clicking’ dentures. This may suggest inadequate food intake and a history of weight loss. The condition of the resident’s gums should also be noted. Resident’s swallowing problems need to be documented and reviewed by a speech pathologist. A resource addressing all aspects of oral hygiene and staff training is – ‘Better Oral Health in Residential Care’ Portfolio, prepared by the SA Dental Service available at https://www.sahealth.sa.gov.au/wps/wcm/connect/09fa99004358886a979df72835153af6/BOHRC_Staff_Portfolio_Full_Version%5B1%5D.pdf?MOD=AJPERES&CACHEID=09fa99004358886a979df72835153af6
Additional information is contained in chapter 13: ‘Oral Health’.

APPROPRIATE FOOD TEXTURE
The type of food texture that a resident requires can vary. Speech pathologist recommendations should be followed where available. Residents should never be put on a puree diet because of staffing shortages or lack of dentures.

The diagram below* indicates the progression of textures from full to puree. Some residents may be able to manage a full diet with only a few food items, such as meat, needing to be pureed. Aim for the appropriate texture that maximises a resident’s intake. Ask residents what texture they prefer or can manage if there are no specific requirements due to dysphagia (swallowing difficulty).

* Australian Standards for Texture Modified Foods

A resident may be able to manage a soft diet and should be given this opportunity before deciding on a minced or pureed diet. A soft choice (including a soft meal) at both midday and evening meal should be available on the menu. A speech pathologist assessment should be sought when indicated and recommendations followed. (For more information refer to chapter 21: ‘Swallowing and Food Texture’). Remember that many ‘normal’ foods such as mornays are soft enough to be included as part of a soft diet.

Some residents manage different textures at different times of the day. They may tolerate a soft diet at midday meal but in the evening as they tire, may only manage a minced or a puree diet.
RESIDENT BOWEL HABITS
Constipation generally affects appetite. Encourage residents with constipation to consume more fluids and fibre-rich foods and participate in exercise if possible. Assess residents on entry to the aged care home and document the problem of constipation in their care plan. Refer to chapter 23: ‘Fibre, Fluid and Constipation’.

PRESENCE OF NAUSEA/ VOMITING
If residents are experiencing nausea and vomiting, this needs to be documented, managed and monitored. Reasons for nausea and vomiting should be sought. It may help to keep residents away from ‘kitchen smells’ or smells of cleaning products. Don’t overwhelm them with large amounts of food at one time. Identify which meal is the best tolerated during the day, for example breakfast, and offer a little more food and/or assistance at that time.

RESIDENT DEXTERITY
Note whether a resident can use cutlery or if they prefer to eat with their fingers. Refer to chapter 20: ‘Finger Foods’. Can they open small portion control packets? Do all packets need to be opened for them? Can they remove plastic wrap from sandwiches? Refer to chapter 11: ‘Mealtime Assistance and Assistive Devices’, or enlist the help of an occupational therapist. Most importantly, provide assistance to the resident.

RESIDENT MEDICINES
Usually, residents are on many medicines. Some medicines can cause nausea, dry mouth or increase the requirements for certain micronutrients.

NUTRITION AND END OF LIFE OR PALLIATIVE CARE
Towards the end of life, residents will often stop eating and drinking. In the final stages of life residents may be drowsy, bed bound and disinterested in food and drink. Loss of muscle strength is common and dysphagia (swallowing difficulties) may worsen and could result in choking, aspiration and pneumonia.

It is important that the resident (and their family) not feel guilty about not eating or drinking. Communication between the resident, their family and aged care home staff is essential to facilitate decisions that are in the resident’s best interest. Advanced care plans can be useful in these situations and should be considered for all residents ahead of this stage.

A resident’s wishes should be the main guide for determining the degree of nutrition and hydration provided. Some days the resident may eat a little and other days they may eat nothing. A resident’s food preferences and ability to eat may change from meal to meal. Gently offering something at a meal or mid-meal is fine but be guided by the resident and their preferences. All symptoms that reduce the desire to eat such as pain, nausea, constipation, thrush and dry mouth should be relieved.\(^1\)

The primary goal of offering food and fluids at the end of life is providing comfort. While providing food and drink is usually thought of as providing nourishment and comfort, it may cause suffering or distress at the end of life. For example it may lead to increased nausea, vomiting, oedema, pulmonary oedema, incontinence (bladder and bowel), or infections.

Voluntary intake of fluid often decreases in the end of life stage. Fear of residents being distressed due to thirst can make staff want to ‘push’ fluids. However, fluids may play only a minor role in resident comfort. Water deprivation increases the body’s own production of endorphins that has been associated with a reduction in pain. A dry mouth, however will cause distress and meticulous mouth care with ice chips, lip balms and moistened swabs is needed.

At the end of life stage, weight loss may be an anticipated outcome. The resident’s comfort and dignity should not be compromised by weighing or other intrusive measures.

FURTHER INFORMATION
Strengthening Care Outcomes for Residents with Evidence (SCORE) Victorian Government Health Information. Aged Care in Victoria https://www2.health.vic.gov.au/Api/downloadmedia/%7B65F4671C-361F-450C-9858-D32D5E73E1F3%7D

The following website provides access to resources and literature relevant to the practice of palliative care for dietitians.

Vitamin D
Vitamin D

Adequate Vitamin D is essential for health of bones and muscle in all age groups.

‘Older people who are institutionalised or housebound are at particularly high risk of vitamin D deficiency. For example, up to 80% of women and 70% of men living in hostels or nursing homes in Victoria, New South Wales and Western Australia had (frankly) deficient blood levels of vitamin D’. (1)

Severe vitamin D deficiency may cause muscle pain and weakness that may mean exercise will be difficult and possibly painful. Getting up from a chair could be a problem and every day activities that encourage independence, such as brushing hair, can become too hard.

‘Vitamin D deficiency is an independent predictor of falls in older women in residential care in Australia. It is also linked with falls and fragility fractures in both women and older men.’ (3)

Only a few foods contain significant amounts of vitamin D. (2) Fatty fish such as mackerel, salmon and sardines contain vitamin D. Some margarines and milk products have been fortified with small amounts of vitamin D. Meat, butter and eggs contain a little. Considering that residents may have a poor appetite, the amount of vitamin D from food is further reduced.

‘The major source of vitamin D is via exposure to sun’s ultraviolet (UV) radiation. Most Australians obtain less than 10% of their daily vitamin D requirements from diet’. (3)

To get enough sunlight to produce vitamin D, hands, face and arms (or equivalent area of skin) need to be regularly exposed. It should be noted that glass blocks the UV rays required for vitamin D production. It should also be noted that sun screen blocks out those UV rays.

If residents cannot be exposed to direct sunlight without sunblock for at least 1-2 hours per week before 11am or after 3pm, they should receive supplements of 1000 international units (IU) of vitamin D per day. This is equal to 25 µg Vitamin D.

Resident’s vitamin D level can be measured with a blood test. Arrange this with their GP.

It may be impractical to get all residents out into the sun for the recommended amount of time. Each resident should be supplemented with vitamin D at a rate of 1000 IU per day. (4)

Best Weight Range for Residents
What is the best weight range for residents

Underweight is a frequent problem among aged care home residents; overweight and obesity are also common. Should residents who are overweight or obese be encouraged to lose weight?

The accepted healthy body weight range for younger adults is a body mass index (BMI) of 20-25 but there is now evidence that being overweight is not necessarily associated with higher mortality in people over 65 years of age.

According to a recent systematic review (1) looking at adults over 65, a BMI of less than 22 was associated with a significant increase in mortality in this older age group. A BMI of between 25 and 30 was associated with the lowest mortality for this age group. In aged care home residents, obesity is associated with increased survival and stable functionality.(2)

Therefore residents have better health outcomes if they are on the heavier side than the thinner side compared to younger adults. Hence, there is no need to advocate for active weight loss for residents over 65 years with a BMI up to 30.(1)

This means the healthy weight range for residents in aged care homes is more appropriately a BMI of 22-27 rather than 20-25 recommended for younger adults. This higher and more suitable BMI range of 22-27 is used in the BMI table and chart in appendix 4 and 5.

Malnutrition screening tools such as the MNA-SF and MUST do not use a BMI of 22-27. It should be noted that these screening tools are designed to be used in younger adults as well as older adults and the BMI that they use reflects this.

Health benefits of active weight loss in older people, particularly by calorie restriction are uncertain. Deliberate weight loss in older people can lead to muscle (protein) loss, functional decline and hence loss of independence.(3)

Even though obesity is associated with a number of health problems such as breathing difficulties, reduced mobility and pressure area issues, there is no evidence that deliberate weight reduction in the obese elderly leads to any specific positive health outcomes. In fact, the consequences of weight loss in the absence of weight bearing exercise can be loss of muscle (protein) and bone.(5) Loss of weight without trying is always of concern, even in those who are very overweight or obese. Remember that malnutrition and obesity can co-exist.

If a resident is overweight or obese and their weight is affecting their quality of life or their health then a plan to prevent further weight gain may be required. Occasionally deliberate weight loss may be necessary. However, a strategy to prevent loss of muscle mass is required. In those residents who require it, exercise is a better option for weight loss.(4) Refer to chapter 26: ‘Exercise’.

Even if BMI is over 30, weight reducing diets are fraught with problems. Diet alone will result in the resident losing muscle mass as outlined above. There is NO place for a rigid diet plan, or any fad diets of any kind. The latest diet from the newspaper or magazine must never be used. Reduced calorie diets are likely to be low in many nutrients and need to be well planned. Sufficient protein and micronutrients must be provided and the resident must be encouraged to take weight bearing exercise. A physiotherapist or exercise physiologist should be consulted. It must also be remembered that quality of life and choice are important considerations and that imposition of dietary restrictions is unwarranted and may have negative consequences.

Morbidly obese (Bariatric) residents require practical strategies to prevent excess weight gain which may be to limit sugar containing drinks and to reduce the usual calorie additions to food such as added cream and butter/margarine that are routinely recommended elsewhere in this manual. However, any formal strategies aimed at weight control require a specialised nutritional care plan which should be planned and monitored by a dietitian with experience in aged care.

Hydration Needs
Hydration needs

Older people have similar fluid needs to young adults. Providing enough fluids is a fundamental aspect of nutritional care. Water acts as a coolant, lubricant and transport agent. It is needed to carry nutrients, regulate body temperature and remove waste. Dehydration occurs when the amount of fluid consumed is less than the amount that is lost. Dehydration in residents in an aged care home is a common and dangerous problem.

Dehydration leads to cognitive impairment which deteriorates further as the extent of the dehydration increases. The impact of reduced cognitive function leads to functional decline e.g. greater risk of falls and its consequences, and reduced quality of life.

Many people are aware of the dangers of dehydration during the summer months. However in winter months, serious cases of dehydration result from the heating of rooms and from illnesses such as the flu. Fluids need to be increased with any fevers or respiratory illnesses; encouraging fluids at this time is vital even when residents don’t feel thirsty. Older people may not complain of thirst especially if cognition is impaired.

WHY ARE RESIDENTS PRONE TO DEHYDRATION?

Reasons include:
- Diminished sense of thirst
- Poor oral intake
- Refusal of fluids
- Inadequate staffing to assist residents who have total or partial dependence on staff to provide fluids
- Medicines e.g. diuretics
- Some residents limiting their fluid intake to reduce incontinence or trips to the toilet. (This can increase the urge to void, as when urine becomes concentrated it irritates the bladder resulting in frequent, small voids). Restricting fluids does not reduce urinary incontinence
- Oral or swallowing disorders making it difficult to drink

SIGNS OF DEHYDRATION

- Dry mucous membranes in the mouth, dry tongue, cracked lips
- Dark urine, small output
- Reduced sweat in the armpits
- Recent alteration in consciousness

PROVIDING GOOD HYDRATION ASSISTS IN THE MANAGEMENT OF

- Thirst
- Dry mouth, lips, tongue and mucous membranes (which can lead to poor oral health)
- Constipation
- Urinary tract infections, incontinence and kidney stones
- Pressure injuries
- Low blood pressure and dizziness (which can lead to falls)
- Prevention of blood clots by reducing blood viscosity
- Confusion and irritability
- Weakness and fatigue
- Medicines (many medicines work better when a resident is properly hydrated)
**HYDRATION NEEDS**

**HOW MUCH FLUID DOES A RESIDENT NEED EACH DAY?**

All fluid sources are counted in the daily fluid intake. This includes soup, jelly, tea, coffee, milk, cordial, soft drinks, juice, custard, ice-cream, milk on cereal, as well as water. Caffeinated beverages such as tea and coffee can be used to meet total hydration needs in the same way as non caffeinated beverages.(4)

Usually the minimum fluid intake is considered to be between 1600ml and 2000ml (6-8 cups) per day. More will be required if there are extra losses, fever or hot weather.

**RECOMMENDED FLUID REQUIREMENTS BASED ON RESIDENT WEIGHT**

Dehydration can happen very quickly. In less than eight hours a resident can go from being well hydrated to being dehydrated. Although the fully dependant resident is at higher risk of dehydration, the semi dependant resident's fluid intake should be regularly monitored.(2)

Remember fluids come in many shapes, tastes and forms. Below are listed some fluids that may be especially helpful for residents who are prone to dehydration.

<table>
<thead>
<tr>
<th>Fluid Type</th>
<th>Fluid Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>½ cup custard</td>
<td>100ml fluid</td>
</tr>
<tr>
<td>Juice glass</td>
<td>120ml fluid</td>
</tr>
<tr>
<td>½ cup canned fruit</td>
<td>80ml fluid</td>
</tr>
<tr>
<td>¼ cup thick soup</td>
<td>150ml fluid</td>
</tr>
<tr>
<td>Plastic feeder glass of fluid</td>
<td>200ml fluid</td>
</tr>
<tr>
<td>2 scoops ice-cream</td>
<td>70ml fluid</td>
</tr>
<tr>
<td>Coffee cup of fluid</td>
<td>150ml fluid</td>
</tr>
<tr>
<td>200g carton yoghurt</td>
<td>180ml fluid</td>
</tr>
<tr>
<td>Fruit juice Tetra Pak of fluid</td>
<td>250ml fluid</td>
</tr>
<tr>
<td>½ cup jelly</td>
<td>100ml fluid</td>
</tr>
</tbody>
</table>
TIPS TO INCREASE RESIDENT FLUID INTAKE

• Identify each resident’s preferences for type and temperature of beverages
• Observe, record and monitor consumption of fluids to assess if each resident is drinking enough
• Identify residents at high risk of dehydration. A symbol such as a drop of water could be placed above the beds of these residents as long as privacy and dignity are maintained
• Schedule fluid rounds three times a day between meals in addition to meal times. i.e. every 1.5 hours (1)
• Involve family and friends; offer fluids in a social atmosphere and encourage residents to drink at the same time
• Provide small amounts of fluid more frequently, rather than infrequent offerings of large amounts of fluids
• Assign a staff member to make regular ‘hydration’ rounds, encouraging residents to drink between meals and mid-meals
• Encourage residents to drink a full glass of fluid with medicines
• Have fluids available during all activity and therapy sessions
• Offer fluids every time a resident is assisted to the toilet
• Ensure fluids are available during the night as well as day and within their reach
• Serve fluids using suitable cups, straws, beakers or squeeze bottles
• Offer high fluid foods such as pureed fruit, soup, jelly, custard, ice-cream, ice blocks and ice chips
• Some residents may prefer the taste of cordial. Add a small amount of cordial to the bedside jug of water
• Offer a wide variety of beverage flavours especially for those on thickened fluids
• Water is best served chilled and fresh, not left for long periods in open plastic jugs Add lemon or orange slices and ice cubes
• Install water fountains in resident areas to encourage fluids
• Introduce special drinks for days of the week e.g. ‘milkshake Monday’
• Know the volume of standard cups, mugs etc. used in the aged care home so that fluid charts are accurate

WHEN OFFERING FLUIDS TO EACH RESIDENT THE FOLLOWING TIPS MAY HELP (5)

• Use a direct approach when offering fluids. Rather than asking ‘Do you want something to drink’ say: ‘I would like you to have a drink of water with me’
• Be open and friendly, offer lots of smiles
• Sit in a prominent position in front of the resident
• Proceed slowly with gentle coaxing
• Cue and orientate the resident to the need for a drink
• Encourage and praise during fluid intake
• ‘Hand over Hand’ guiding of the cup to the resident’s mouth
• Support resident autonomy in their choices about fluids
• If necessary, wipe resident’s lips and any spillage

Nutrition Checklist for Menu Planning
Nutrition checklist for menu planning

For many residents the food provided by an aged care home is their only source of food and drink. This means nutritional status is entirely determined by whether the aged care home is providing sufficient quantities of suitable, appealing, texture appropriate food.

On the following page is a menu checklist developed for planning a balanced menu in aged care homes.

Use this checklist to plan a menu that will meet residents’ basic food and nutrition requirements. Your current menu should be assessed against this checklist to ensure sufficient food is being provided to meet resident’s calorie, protein and nutrient needs.

Based on the National Health and Medical Research Council’s ‘Australian Dietary Guidelines’ (2013) and adapted for aged care home residents, the checklist is designed to meet the recommended daily intake for sedentary males and females 71 years and older who are within their reference weight range.

The Australian Dietary Guidelines are designed for healthy individuals, however, many residents have underlying medical conditions or chronic illnesses which can further increase their nutritional requirements.

While these are recommended serves and serving sizes, appetite will determine the amount of food eaten.

Resident preferences will also determine how much from each food group is eaten. For example, residents who like milky desserts may prefer these to servings of meat or vegetables. A person centred approach is important here.

Some serving sizes are taken from ‘Nutrition Standards for Adult Inpatients in NSW Hospitals’(2), when the ‘Australian Dietary Guidelines’ do not provide details e.g. amount of soup etc.

Importantly the following ‘daily menu planning checklist’ does not factor in extra food that is needed if residents are underweight or have increased requirements or larger appetites. For residents with poor appetites it is important to fortify the food they receive as the volume of food recommended in the ‘Australian Dietary Guidelines’ will be too large. Refer to chapter 6: ‘Tips to Maximise the Nutrition Content of Foods Offered on the Menu’.

The checklist also doesn’t factor in extra foods that many residents consume such as margarine, cream, mayonnaise, oil, sweet biscuits, chocolates, cake, pastries etc. These are a pleasurable part of a resident’s diet and contribute calories and enjoyment.

### NUTRITION CHECKLIST FOR MENU PLANNING

#### Daily menu planning checklist

**BREAKFAST**
- ☐ Hot choices include a protein source such as eggs, bacon, mince, cheese, baked beans
- ☐ If only a continental breakfast is served, a protein source such as yoghurt, cheese or peanut butter is offered
- ☐ A hot cereal such as rolled oats and at least 3 other varieties of breakfast cereal are available
- ☐ High fibre breakfast cereals are offered

**MAIN MEALS**
- ☐ Residents have at least two hot choices at the main meal
- ☐ Each hot main meal choice provides 1 serve of meat, chicken, fish or eggs
- ☐ Red meat is included on the menu at least once a day
- ☐ Vegetarian meals are based on eggs, cheese, tofu, nuts or legumes (e.g. lentils)
- ☐ Salad as a main meal includes a serve of meat, chicken, fish or eggs
- ☐ A nourishing dessert is served with the main meal

**LIGHT MEALS**
- ☐ Residents can choose more than one of hot meal + soup + salad + sandwich
- ☐ The hot light meal choice provides 1 serve of meat, chicken, fish or eggs
- ☐ Soups are substantial e.g. thick creamy soups, vegetable soups that contain barley, legumes etc. plus meat or chicken
- ☐ Salads include 1 serve of protein such as meat, chicken, fish or eggs
- ☐ Sandwiches include a serve of protein such as meat, chicken, fish, eggs or baked beans
- ☐ A nourishing dessert is served with the light meal

**MID-MEALS**
- ☐ High calorie mid-meals and beverages are always offered at morning tea & afternoon tea & supper

**FRUIT AND VEGETABLES**
- ☐ The menu provides for five serves of vegetables per day. Note that a salad would be equivalent to one serve of vegetables and soup with lots of vegetables would also be equivalent to one serve of vegetables
- ☐ Starchy vegetable serves are approximately 75g per serve (½ cup)
- ☐ Other vegetables are approximately 75g per serve (½ cup)
- ☐ The menu provides at least 2 serves of fruit daily. This includes fresh, canned, stewed, dried or 100% juice
- ☐ If residents prefer to have more fruit and less vegetables, this is accommodated e.g. 3 serves of fruit and 4 serves of vegetables

**DAIRY FOODS**
- ☐ The menu offers at least four serves of dairy foods such as milk, custard, yoghurt and cheese daily
- ☐ Calcium rich, milk based desserts are offered twice a day
- ☐ If a dessert is low in calcium, 125ml (½ cup) custard, ice-cream or yoghurt is added
- ☐ Milk drinks are offered with all main meals and mid-meals
- ☐ Drinks, desserts etc. are made with full cream milk and fortified with full cream milk powder where appropriate

**BREADS, CEREALS, RICE AND PASTA**
- ☐ The menu provides four serves of bread, cereal, rice or pasta foods per day
- ☐ High fibre breads (multigrain, wholemeal bread or white high fibre) are offered
- ☐ Bread is available at the main meal and the light meal
What is a serve?

MEAT, CHICKEN, FISH, EGGS
2 - 2½ Serves each day
According to the Australian Dietary Guidelines: EAT FOR HEALTH, a serve of this group is
• 65g cooked red meat (lamb, beef, pork)
• 80g cooked chicken
• 100g cooked fish
• ½ cup cooked lean mince
• 2 small chops
• 2 thick slices roast meat
• 170g tofu
• ½ cup cooked beans, peas, lentils or chickpeas
• 30g nuts or peanut butter
• 2 eggs

FOODS CONTAINING CALCIUM
3½ - 4 Full serves each day or 7 - 8* half serves
Milk, cheese, yoghurt, ice-cream, calcium fortified soy milk. Milk can be fresh, powdered, UHT or canned.
All should be full cream. Offer milk drinks, hot or cold, custard, rice puddings, junket, blancmange, fricassee, mornay, cheese and crackers, cheese scones, cream soups, cheese sandwiches. Make mousse desserts on milk not water.
According to the Australian Dietary Guidelines: EAT FOR HEALTH, a serve of dairy food is
• 1 cup of milk (250ml)
• 1 tub of yoghurt (200g tub)
• 2 slices of cheese (40g)
• 1 cup of custard (250ml)
• ½ cup of evaporated milk (125ml)
• 30g full cream milk powder (4 tablespoons)
* Mostly residents are given smaller amounts of dairy foods at one time e.g. a slice of cheese on a sandwich or a small yoghurt (100g). This means 7-8 half serves will need to be provided. Adding milk powder to menu items, offering milk at each meal and mid-meal and always offering dairy based desserts will mean this is possible.
For residents from some cultures who are lactose intolerant, hard cheese, yoghurt, calcium fortified soy milk and low lactose milk are suitable.

BREADS, CEREALS, RICE, NOODLES
3 - 4½ Serves each day
Include high fibre varieties where possible. Encourage the use of low Glycaemic Index varieties. See chapter 22: ‘Diabetes and the Glycaemic Index’.
According to the Australian Dietary Guidelines: EAT FOR HEALTH, a serve of cereal is
• 1 slice bread
• 1 scone, crumpet or small English muffin
• 1 small bread roll
• ½ cup cooked rice, noodles, pasta
• ½ cup cooked rolled oats
• ½ cup cooked barley
• 30g ready to eat cereal

FRUIT
2 Serves each day
Fresh, frozen, canned or dried. Serve with cereal, custard, yoghurt and ice-cream. Incorporate in desserts, muffins, cakes, puddings and smoothies.
According to the Australian Dietary Guidelines: EAT FOR HEALTH, a serve of fruit is
• 1 medium piece of fruit (apple, banana, orange, pear)
• 2 small pieces of fruit (apricots, plums, peaches)
• 1 cup stewed, canned or diced fruit pieces
• 1½ tablespoons sultanas, 4 dried apricot halves
• 5 prunes
• 125 ml 100% juice

VEGETABLES, LEGUMES
5 Serves each day
Fresh, frozen or canned. Incorporate in salads, soup, pies, quiches, slices, stir-fries, scones, pikelets and pancakes. Include vegetables at breakfast e.g. grilled tomato, and try to offer three vegetables at the main meal.
According to the Australian Dietary Guidelines: EAT FOR HEALTH, a serve of vegetables is
• ½ cup cooked vegetables (approx. 75g)
• ½ cup cooked peas, beans or lentils
• 1 cup salad vegetables (approx. 75g)
• 1 small potato or ½ medium potato
Tips to maximise the nutrition content of foods offered on the menu
Tips to maximise the nutrition content of foods offered on the menu

This chapter provides suggestions on designing a nutritious menu which enables the amounts of food recommended in the ‘Australian Guide to Health Eating’ to be met.

Food and drink should be further enriched or fortified with ingredients that increase the protein and calorie content of foods offered. Refer to chapter 17: ‘Eating to Prevent Weight Loss’ for ideas on how to fortify the menu further.

MID-MEALS

An aged care home is more likely to meet resident nutritional needs if the number of opportunities for each resident to eat and drink is maximised. Examples include flexible mealtimes, out of hours food provision and nourishing mid-meals provided three times a day.

‘Mid-meals provide an essential addition to the aged care home menu by adding flexibility, interest and variety’.(1) ‘Food eaten at mid-meals should make a significant contribution to the nutritional requirements of poor eaters’.(2)

Many residents in aged care homes are poor eaters and have limited appetite which restricts the amount of food they can eat at any one time. For this reason it is essential that high calorie mid-meals are offered for morning tea, afternoon tea and supper.

A high calorie mid-meal is a snack that provides at least 150cal/serve.(1) It is preferable if the mid-meal also contributes reasonable amounts of protein (over 5g/serve is desirable).

The table on page 32 has a list of mid-meal items. For residents who are malnourished or eating poorly, offer mid-meals that will provide at least 150 calories* and 5 grams of protein. Any food is suitable as a mid-meal. It can be a dessert, a serve of breakfast cereal or a bowl of soup. Whatever the resident likes can be given at morning tea, afternoon tea and supper.

As can be seen from the table over the page, a cup of tea or coffee and two oatmeal biscuits would provide only 80 calories and 1 gram of protein. A glass of milk and a small serve of fruit cake would provide 277 calories and 7.5 grams of protein.

Appendix 10: ‘Mid-meal and Light Meal Ideas’ lists a number of mid-meal suggestions that have proven popular in many aged care homes.

* 1 calorie = 4.2 kilojoules
From the following list of mid-meal ideas try and get 5g protein and 150 calories.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SERVING SIZE</th>
<th>KCAL</th>
<th>PROTEIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk – full cream</td>
<td>150ml</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>High protein milkshake</td>
<td>150ml</td>
<td>182</td>
<td>7</td>
</tr>
<tr>
<td>So Good™ (Chocolate)</td>
<td>150ml</td>
<td>111</td>
<td>5</td>
</tr>
<tr>
<td>Juice (Apple)</td>
<td>150ml</td>
<td>61</td>
<td>0</td>
</tr>
<tr>
<td>Lemonade</td>
<td>150ml</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>Snak Pack™ (Vanilla)</td>
<td>140g</td>
<td>159</td>
<td>4</td>
</tr>
<tr>
<td>Madeira cake</td>
<td>50g</td>
<td>137</td>
<td>2</td>
</tr>
<tr>
<td>Fruit cake</td>
<td>50g</td>
<td>177</td>
<td>2.5</td>
</tr>
<tr>
<td>Mini muffin</td>
<td>45g</td>
<td>143</td>
<td>2</td>
</tr>
<tr>
<td>Chocolate biscuits</td>
<td>2 biscuits</td>
<td>196</td>
<td>2</td>
</tr>
<tr>
<td>Oatmeal biscuits</td>
<td>2</td>
<td>80</td>
<td>1</td>
</tr>
<tr>
<td>Dairy milk chocolate</td>
<td>Fun Size 18g bar</td>
<td>95</td>
<td>1.5</td>
</tr>
<tr>
<td>Potato chips</td>
<td>30g</td>
<td>157</td>
<td>2</td>
</tr>
<tr>
<td>Saos™</td>
<td>2 biscuits</td>
<td>72</td>
<td>2</td>
</tr>
<tr>
<td>Cheese portion</td>
<td>20g</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Peanut butter</td>
<td>11g</td>
<td>68</td>
<td>3</td>
</tr>
<tr>
<td>Bread (White)</td>
<td>1 slice</td>
<td>73</td>
<td>2.5</td>
</tr>
<tr>
<td>Bread roll</td>
<td>1 roll / 55g</td>
<td>138</td>
<td>5</td>
</tr>
<tr>
<td>Breakfast cereal</td>
<td>30g</td>
<td>109</td>
<td>3</td>
</tr>
<tr>
<td>Rolled oats</td>
<td>150g</td>
<td>56</td>
<td>1.5</td>
</tr>
<tr>
<td>Scrambled eggs (2 egg)</td>
<td>100g</td>
<td>148</td>
<td>10.4</td>
</tr>
<tr>
<td>Biscuits &amp; Cheese</td>
<td>40g</td>
<td>170</td>
<td>7</td>
</tr>
<tr>
<td>Assorted sandwiches</td>
<td>2 brd</td>
<td>315</td>
<td>15</td>
</tr>
<tr>
<td>Ice-cream cup</td>
<td>50g</td>
<td>96</td>
<td>1.5</td>
</tr>
<tr>
<td>Custard</td>
<td>120g</td>
<td>123</td>
<td>4</td>
</tr>
<tr>
<td>Yoghurt – full cream</td>
<td>175g</td>
<td>178</td>
<td>7</td>
</tr>
<tr>
<td>Thick custard</td>
<td>80g</td>
<td>110</td>
<td>4</td>
</tr>
<tr>
<td>Fruche™</td>
<td>75g</td>
<td>90</td>
<td>4</td>
</tr>
<tr>
<td>Mousse</td>
<td>60g</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>Thin cream</td>
<td>60ml</td>
<td>210</td>
<td>0</td>
</tr>
<tr>
<td>Half English muffin butter and jam</td>
<td>50g</td>
<td>172</td>
<td>5</td>
</tr>
<tr>
<td>Scone with jam and cream</td>
<td>50g</td>
<td>275</td>
<td>4</td>
</tr>
<tr>
<td>Muesli/cereal bar</td>
<td>One (30g)</td>
<td>120</td>
<td>2</td>
</tr>
<tr>
<td>Pikelets and margarine and jam</td>
<td>2 (30g)</td>
<td>150</td>
<td>2</td>
</tr>
<tr>
<td>Crumpet and spread</td>
<td>1</td>
<td>120</td>
<td>2</td>
</tr>
<tr>
<td>Fruit</td>
<td>1 piece/140g</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>Pureed fruit</td>
<td>120g</td>
<td>90</td>
<td>0</td>
</tr>
<tr>
<td>Sustagen™ (Vanilla)</td>
<td>150ml</td>
<td>150</td>
<td>9</td>
</tr>
<tr>
<td>Ensure™ (Vanilla)</td>
<td>150ml</td>
<td>157</td>
<td>6</td>
</tr>
<tr>
<td>Ensure Plus™ (Vanilla)</td>
<td>150ml</td>
<td>226</td>
<td>9</td>
</tr>
<tr>
<td>Ensure Pudding™ (Vanilla)</td>
<td>113g</td>
<td>170</td>
<td>4</td>
</tr>
<tr>
<td>Resource Fruit Beverage™</td>
<td>237ml</td>
<td>250</td>
<td>9</td>
</tr>
<tr>
<td>Two-Cal HN™</td>
<td>60mL</td>
<td>120</td>
<td>5</td>
</tr>
<tr>
<td>Nepro™</td>
<td>60mL</td>
<td>120</td>
<td>4</td>
</tr>
<tr>
<td>Arginaid Extra™ (Orange)</td>
<td>237ml</td>
<td>250</td>
<td>10.5</td>
</tr>
<tr>
<td>Cubitan™ (Vanilla)</td>
<td>200mL</td>
<td>250</td>
<td>20</td>
</tr>
</tbody>
</table>

Where food is provided by external food suppliers, it is vital that quality mid-meals are included when negotiating contracts. Resident access to food out of hours is crucial. Hunger through the night can lead to behavioural disturbances. Food should be available out of hours and floor staff should have access to provide residents with food and drink as required.
MAIN DISHES – MEAT, CHICKEN, FISH

Whether a main meal is a wet dish or a dry dish, at least one serve of meat, chicken or fish should be included. Refer to ‘What is a serve’ page 27. For example if roast beef is served, it should be at least 65g cooked weight. If red meat is in a casserole or stew then the meat component should be at least 65g per resident.

- At least one dish per day should be red meat either at the main meal choice or the light meal
- One main meal option should be soft
- For variety, consecutive meals should not provide the same meat e.g. roast lamb at midday meal and lamb sandwiches for the evening meal
- Main dishes should be able to be adapted for a texture modified diet as required

- Sauces/gravies accompanying hot main dishes are expected to be at least 40ml per serve
- There should be a varied selection of meats in line with residents’ preferences e.g. Roasts could be offered twice a week or more if residents prefer

Below are some main meal ideas that have been popular in aged care homes. Choices need to be culturally appropriate e.g. Piroshky in a Russian home, cabbage rolls in Italian/European home.

<table>
<thead>
<tr>
<th>Main dishes where the predominant ingredient is meat</th>
<th>Wet dish with high meat content</th>
<th>Main dish with a fairly even mix of meat and vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat serve has a total cooked weight 65-100g</td>
<td>Total cooked weight of the entire dish at least 120g. Meat serve has a total cooked weight 65-100g</td>
<td>Total cooked weight of the entire dish at least 150g</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHICKEN/TURKEY</th>
<th>Wet dish with high meat content</th>
<th>Main dish with a fairly even mix of meat and vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roast turkey</td>
<td>Apricot chicken</td>
<td>Chicken and vegetable pie</td>
</tr>
<tr>
<td>Chicken rissoles</td>
<td>Chicken asparagus mornay</td>
<td>Curry chicken pie</td>
</tr>
<tr>
<td>Roast chicken</td>
<td>Chicken and mushroom casserole</td>
<td>Macaroni chicken</td>
</tr>
<tr>
<td>Crumbed chicken</td>
<td>Chicken creole</td>
<td>Stir fry chicken with vegetables</td>
</tr>
<tr>
<td>Poached chicken</td>
<td>Chicken wellington</td>
<td>Chicken and corn mornay</td>
</tr>
<tr>
<td>Crumbed chicken breasts</td>
<td>Indian chicken curry</td>
<td>Chicken Chow Mein</td>
</tr>
<tr>
<td>Chicken in honey and soy</td>
<td>Chicken cacciatore</td>
<td>Chicken burger</td>
</tr>
<tr>
<td>Chicken Tikka</td>
<td>Curried chicken</td>
<td>Creamy chicken bake</td>
</tr>
<tr>
<td>Tandoori chicken</td>
<td>Chicken a la king</td>
<td>Chicken fried rice</td>
</tr>
<tr>
<td>Chicken in plum sauce</td>
<td>Satay chicken</td>
<td>Chicken and cheese pie</td>
</tr>
<tr>
<td>Chicken schnitzel</td>
<td>Chicken mornay</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BEEF</th>
<th>Wet dish with high meat content</th>
<th>Main dish with a fairly even mix of meat and vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rissoles</td>
<td>Beef stew</td>
<td>Beef pie</td>
</tr>
<tr>
<td>Meat loaf</td>
<td>Beef casserole</td>
<td>Spaghetti bolognaise</td>
</tr>
<tr>
<td>Rissoles parmigiano</td>
<td>Savoury mince</td>
<td>Beef &amp; vegetable stir fry</td>
</tr>
<tr>
<td>Roast beef</td>
<td>Shepherd’s pie</td>
<td>Spaghetti and meatballs</td>
</tr>
<tr>
<td>Corned silverside</td>
<td>Beef stroganoff</td>
<td>Lasagne</td>
</tr>
<tr>
<td>Mixed grill</td>
<td>Sweet beef curry</td>
<td>Veal and ham pie</td>
</tr>
<tr>
<td>Steak dianne</td>
<td>Irish stew</td>
<td>Beef and noodle casserole</td>
</tr>
<tr>
<td>Veal schnitzel</td>
<td>Chilli con carne</td>
<td>Beef pasta bake</td>
</tr>
<tr>
<td>Satay beef</td>
<td>Veal marsala</td>
<td>Beef and vegetable risotto</td>
</tr>
<tr>
<td>Sausages</td>
<td>Steak and kidney pie</td>
<td>Pastitio</td>
</tr>
<tr>
<td>Crumbed veal medallions</td>
<td>Beef hotpot</td>
<td>Sausage and potato pie</td>
</tr>
</tbody>
</table>
### Maximising Nutritional Content of Foods on the Menu

<table>
<thead>
<tr>
<th>Main dishes where the predominant ingredient is meat or fish</th>
<th>Wet dish with high meat or fish content</th>
<th>Main dish with a fairly even mix of meat or fish and vegetables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat serve has a total cooked weight 65-100g</td>
<td>Total cooked weight of the entire dish at least 120g. Meat serve has a total cooked weight 65-100g</td>
<td>Total cooked weight of the entire dish at least 150g.</td>
</tr>
</tbody>
</table>

#### SEAFOOD
- Fish cakes
- Crumbed fish
- Grilled fish
- Smoked cod
- Steamed fish in white sauce
- Fried fish
- Cheese baked fish

#### Main dish options:
- Poached fish with cheese sauce
- Fish casserole
- Seafood curry
- Tuna bake
- Curried prawns
- Sweet and sour fish
- Seafood casserole

#### Main dish options:
- Seafood mornay
- Seafood crepes
- Tuna and macaroni casserole
- Fish mornay
- Salmon and onion puff pie
- Seafood vol au vents
- Salmon and asparagus fettuccini

#### LAMB
- Roast lamb
- Cutlets
- Stewed chops
- Minted lamb
- Lamb schnitzel
- Crumbed cutlets
- Braised chump chops
- Brains & bacon
- Fragrant lamb chops
- Lamb in minted orange and honey
- Crumbed brains
- Lamb’s fry and bacon
- Savoury lamb chops

#### Main dish options:
- Lamb casserole
- Lamb korma
- Curried lamb
- Sweet lamb and potato curry
- Savoury lamb mince
- Hungarian paprika lamb
- Fricassee brains
- Mongolian lamb with rice

#### Main dish options:
- Spring lamb and vegies
- Irish lamb and vegie stew
- Tuna and macaroni casserole
- Fish mornay
- Salmon and onion puff pie
- Seafood vol au vents
- Salmon and asparagus fettuccini

#### PORK
- Ham steaks
- Roast pork
- Baked ham
- Pork fillets in peach sauce
- Pickled pork and white sauce
- Braised pork chops
- Pork with garlic
- Pork schnitzel
- Pork with pear and ginger sauce

#### Main dish options:
- Chinese pork in plum sauce
- Sweet & sour pork
- Pork and sweet potato casserole
- Curried pork
- Chinese chop suey
- Ham steaks and pineapple
- Pea and ham frittata
- Fettuccine Alfredo
- Ham and cheese crepes
- Ham and cheese omelet
VEGETABLES

When cooking vegetables

- The main meal should contribute three of the required number of vegetable serves. The remaining serves of vegetables should be provided in the light meal, incorporated into soups and salads etc.
- Potato, rice or pasta serves should be at least 75g cooked weight. Other vegetable serves should be 75g each. Provide a variety of vegetables with contrasting colours.
- Cultural preference and norms need to be considered. For example, people who come from an era when vegetables were cooked extremely well may continue to prefer them that way. Cooking vegetables until they are very soft may be the only way a resident will eat vegetables. To minimise nutrient loss, steam vegetables or use very little water.
- Salt in the cooking water of vegetables need not be avoided as the familiar flavour that comes with adding a little salt in the cooking water may be the very thing that means the vegetable will be eaten, but do not add sodium bicarbonate to vegetables as it will destroy the vitamin C.
- Addition of fats such as margarine, butter and sour cream to vegetables improves palatability and so, increases the likelihood of them being eaten (as well as providing extra calories). For example; stirring butter or margarine through vegetables such as green beans doubles the calories. Add grated cheese or cream sauces to vegetables to increase their protein and calorie content.
- Ideally, residents might eat 5 serves of vegetables a day; those with small appetites may not be able to eat this amount. Vegetables are usually quite filling but don't provide significant protein or calories. Some serves can be incorporated into soups or into desserts such as carrot cake, pumpkin pie or included at breakfast time e.g. baked beans.
- Exchange a serve of vegetable for a serve of fruit if desired.
- If residents have poor appetites it is better to offer high protein/high calorie foods, rather than filling up on the recommended serves of vegetables.

VEGETARIAN MEALS

A vegetarian meal is not just a plate of vegetables. A vegetarian menu must be nutritionally adequate and offer appropriate choices that consider both nutrition and resident acceptability. In order to do this, the type of vegetarian diet required will first need to be established. These include:

- **Vegan**: No animal products are included in a vegan diet. No meat, fish, poultry, eggs, milk or dairy products. Because of this, alternative sources of protein will need to be provided. These include legumes (red, brown or green lentils, haricot beans, soy beans, butter beans and chick peas), and textured vegetable protein (TVP) and commercially available vegetarian sausages, patties etc. Because this diet contains no milk or cheese the intake of calcium may not be adequate. Calcium fortified soy milk is an acceptable alternative.
- **Lacto**: A lacto-vegetarian diet includes milk and dairy products but excludes all other animal foods. Milk and milk dishes have an important role to play in this diet. Menu items such as macaroni cheese, ravioli with cheese sauce, vegetable au gratin as well as legume containing dishes will need to be included.
- **Ovo-Lacto**: Although there is no meat, fish or poultry in an ovo-lacto diet, both eggs and milk are included. The menu in this vegetarian category can include such dishes as cheese omelette, vegetable and cheese quiche and vegetable slices.
| Vegan*
No animal products | Ovo
Contains egg | Lacto
Contains dairy | Ovo Lacto
Contains dairy and egg |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable curry</td>
<td>Vegetarian patties</td>
<td>Cauliflower &amp; potato au gratin</td>
<td>Omelette (cheese)</td>
</tr>
<tr>
<td>Vegetable casserole</td>
<td>Egg &amp; asparagus mornay</td>
<td>Asparagus mornay</td>
<td>Crepes</td>
</tr>
<tr>
<td>Vegetable sausages</td>
<td>Leek &amp; mushroom pie</td>
<td>Vegetable pie</td>
<td>Macaroni pie</td>
</tr>
<tr>
<td>Nutloaf™ roll</td>
<td>Vegetable frittata</td>
<td>Mushroom pasta</td>
<td>Corn fritters</td>
</tr>
<tr>
<td>Ratatouille slice</td>
<td>Scrambled eggs</td>
<td>Potato bake</td>
<td>Savoury cheese</td>
</tr>
<tr>
<td>Vegetarian stew</td>
<td>Asparagus loaf</td>
<td>Scalloped potatoes</td>
<td>Egg &amp; macaroni custard</td>
</tr>
<tr>
<td>Vegetable macaroni</td>
<td>Spinach pie</td>
<td>Spinach triangles</td>
<td>Zucchini slice</td>
</tr>
<tr>
<td>Vegetable layer</td>
<td>Vegetable omelette</td>
<td>Spinach &amp; cheese slice</td>
<td>Vegetable quiche</td>
</tr>
<tr>
<td>Bubble &amp; squeak</td>
<td>Vegetable omelette</td>
<td>Ravioli &amp; cheese sauce</td>
<td>Egg &amp; asparagus bake</td>
</tr>
<tr>
<td>Baked beans on toast</td>
<td>Spanish omelette</td>
<td>Asparagus vol-au-vents</td>
<td>Frittata</td>
</tr>
<tr>
<td>Sweet creamed corn on toast</td>
<td>Potato pancakes</td>
<td>Welsh rarebit</td>
<td>Vegetable au gratin</td>
</tr>
<tr>
<td>Sweet potato bake</td>
<td>Spinach roll</td>
<td>Vegetable lasagne</td>
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</tr>
<tr>
<td>Mild curried veg pasta</td>
<td>Curried egg on toast</td>
<td>Macaroni cheese</td>
<td></td>
</tr>
<tr>
<td>Quorn™ products</td>
<td></td>
<td></td>
<td>Spinach &amp; cheese risotto</td>
</tr>
</tbody>
</table>

* It is important that vegan meals contain a protein source, e.g. lentils, legumes or textured vegetable protein (TVP). Vegans also need vitamin B12 supplements.

It is important to ensure that the protein content of each recipe offered in a vegetarian menu will supply the recommended amount of protein per serve. Simply adding a few legumes to a vegetable stew is not going to ensure the protein content of the dish will be adequate. Refer to page 27: What is a serve?

For vegetarians, protein powders such as Proform™, Beneprotein™ or Sustagen Neutral™ should be added to help ensure the meal provides adequate protein.
SOUPS

Sometimes soup is all a resident may choose to eat for a meal. When this is the case, it is essential that soups are substantial. Thin consommé type soups or broths can take the edge off appetite without providing much more than water. Packet soup made on water are a poor source of nutrition.

All soups should be made as nourishing as possible. Thick creamy soups based on milk with added cream are good. Good old-fashioned hearty soups with plenty of vegetables, barley and legumes with meat are recommended. Soups made with stock powder or soup bases alone without the addition of other nourishing ingredients do not provide sufficient nutrition and are unacceptable.

It is best to enrich all soups that are served, in case that is all a resident may eat for some meals. Protein powders are suitable additions e.g. Proform™, Sustagen Neutral™ or Beneprotein™.

The following tips should be considered in preparing soups

- Aim for a portion size of 180ml
- If using canned or powdered soups add extra vegetables, noodles, barley, legumes or meat. These extra ingredients may need to be cooked before adding
- Crème soups should be based on milk or enriched milk. (Refer to recipe. Page 114)
- Cream may be added, just before serving. Use sour cream as a garnish for soups such as pumpkin, sweet potato, broccoli etc.
- It is preferable that soups contain a protein food such as meat, chicken, fish or legumes
- Red lentils are good to add to soup as they don’t require soaking or cooking before adding and they cook quickly. Allow one to two tablespoons per serve
- Vegetables included in soups count toward the daily recommended number of serves
- When writing the menu state exactly what the soup is, not ‘soup of the day’, ‘soup’ or ‘soup du jour’. This will enable a more thorough appraisal of the menu
- Serve bread, bread rolls, toast or croutons with the soup. Toast with melted cheese goes well with soup and provides additional protein and calories

<table>
<thead>
<tr>
<th>Soups with significant nutrient value</th>
<th>Soups with lesser nutrient value. Fortify where possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pea and ham</td>
<td>Tomato</td>
</tr>
<tr>
<td>Chicken and vegetable</td>
<td>Thick vegetable</td>
</tr>
<tr>
<td>Chicken and corn</td>
<td>Pumpkin</td>
</tr>
<tr>
<td>Chicken, noodle and vegetable</td>
<td>Cauliflower</td>
</tr>
<tr>
<td>Oxtail and barley</td>
<td>Celery</td>
</tr>
<tr>
<td>Beef and vegetable</td>
<td>Mushroom</td>
</tr>
<tr>
<td>Lamb shank</td>
<td>Asparagus</td>
</tr>
<tr>
<td>Cream of chicken</td>
<td>Potato and leek</td>
</tr>
<tr>
<td>Leek, potato and ham</td>
<td>Cauliflower and potato</td>
</tr>
<tr>
<td>Meatball and vegetable</td>
<td>Cream of spinach and mushroom</td>
</tr>
<tr>
<td>Cauliflower and ham</td>
<td>Cream of carrot</td>
</tr>
<tr>
<td>Minestrone</td>
<td>Cream of onion</td>
</tr>
<tr>
<td>Chicken and celery</td>
<td>Sweet potato and ginger</td>
</tr>
<tr>
<td>Broccoli and lentil</td>
<td>Chinese style noodle and corn</td>
</tr>
<tr>
<td>Tomato and lentil</td>
<td>Tomato and basil</td>
</tr>
<tr>
<td>Chunky sausage</td>
<td></td>
</tr>
</tbody>
</table>
SALADS

In some cases a salad may be all that a resident chooses for a meal, especially in the warmer months. Traditionally, green salads are low in calories. To ensure residents get sufficient calories, salads should be substantial with a serve of protein and carbohydrate.

- If residents choose a salad as the main component of their meal, then the salad should
  - include a protein food (65g) such as cold roast meat, ham, cheese, canned fish etc. Refer to page 27 ‘What is a serve’
  - have a starch component (75g), such as potato, rice, pasta, beans or bread
  - include at least 5 different salad vegetables
  - provide more than one protein food, should residents request it, e.g. tuna and egg, egg and cheese etc.
- Full fat mayonnaise or salad dressing is recommended with salads, unless low fat is requested by the resident
- A side salad would count as one serve of vegetables
- Vary the salads daily
- Serve with bread and butter or margarine

<table>
<thead>
<tr>
<th>Protein rich salads</th>
<th>Moderate protein salads</th>
<th>Side salads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roast beef salad</td>
<td>Egg salad</td>
<td>Side salad</td>
</tr>
<tr>
<td>Roast pork salad</td>
<td>Cheese salad</td>
<td>Greek salad</td>
</tr>
<tr>
<td>Roast lamb salad</td>
<td>Bean salad</td>
<td>Potato salad</td>
</tr>
<tr>
<td>Chicken salad</td>
<td>Devon or ‘Fritz’ salad</td>
<td>Rice salad</td>
</tr>
<tr>
<td>Ham salad</td>
<td></td>
<td>Pasta salad</td>
</tr>
<tr>
<td>Turkey meat salad</td>
<td></td>
<td>Coleslaw</td>
</tr>
<tr>
<td>Tuna salad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmon salad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corned beef salad</td>
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</tbody>
</table>
SANDWICHES

At some meals, all a resident feels like eating is a sandwich. If possible offer a sandwich with a protein filling such as egg, meat or cheese. In some cases a resident may request fillings such as jam, vegemite or honey which don’t contain any protein. If this is the case, protein must be provided in a different way.

Try and tempt these residents with a milk drink and a milky dessert.

• The standard sandwich is 2 slices of bread. The lean protein component should be greater than 50g
• Make sure fillings are moist and bread is soft as this will help those residents with dry mouth
• Offer sandwiches made on high fibre white bread, wholemeal or wholegrain bread according to each resident’s preference
• A sandwich that has significant nutrient value should be offered to residents who do not want the hot choice for a meal. Use mayonnaise or other condiments to increase calories as appropriate
• Ensure fillings are nutritious e.g. cheese, egg, chicken, meat, tuna, salmon, peanut butter
• Remove crusts if necessary as it is better to eat a whole sandwich without crusts than half a sandwich with crusts

<table>
<thead>
<tr>
<th>Sandwich fillings that have significant protein</th>
<th>Sandwich fillings that have minimal protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roast beef</td>
<td>Honey</td>
</tr>
<tr>
<td>Silverside/Corned beef</td>
<td>Jam</td>
</tr>
<tr>
<td>Ham</td>
<td>Golden syrup</td>
</tr>
<tr>
<td>Sausage</td>
<td>Vegemite</td>
</tr>
<tr>
<td>Rissole</td>
<td>Salad</td>
</tr>
<tr>
<td>Chicken</td>
<td>Tomato</td>
</tr>
<tr>
<td>Tuna</td>
<td>Beetroot</td>
</tr>
<tr>
<td>Salmon</td>
<td>Banana</td>
</tr>
<tr>
<td>Sardines</td>
<td>Marmalade</td>
</tr>
<tr>
<td>Roast Pork</td>
<td>Lemon butter</td>
</tr>
<tr>
<td>Egg</td>
<td>Nutella</td>
</tr>
<tr>
<td>Turkey</td>
<td>Hundreds and thousands</td>
</tr>
<tr>
<td>Cheese</td>
<td></td>
</tr>
<tr>
<td>Peanut butter</td>
<td></td>
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</tbody>
</table>
DESSERTS
For many residents the highlight of the meal is dessert. If desserts are nourishing there is no reason why they can’t have seconds at a meal or two desserts instead of a dessert and main meal. Desserts can also be given for mid-meals or snacks.

- All desserts should be rich sources of calcium. It is extremely difficult to meet each resident’s requirement of 1300mg of calcium per day unless each dessert contains a dairy food
- Serve yoghurt or custard with non dairy desserts
- Desserts should be offered at least twice a day
- All milky desserts should be made with full cream milk. If your residents are frail, use enriched full cream milk. Refer to page 114 for recipes
- Dairy desserts containing calcium are also good sources of protein and calories
- Sugar should be used in desserts for increased calories. Do not use artificial sweeteners. This also applies to residents with diabetes. Most milk or fruit based desserts will have a low glycaemic index. Refer to chapter 22: ‘Diabetes and the Glycaemic Index’
- Add cream to all desserts for those residents who are underweight or losing weight, to provide extra calories and nutrients
- If a resident is offered their main meal and after several attempts does not consume it, but eats dessert, a second dessert should be offered
- A serve size of a calcium rich dessert between 90g and 120g is suitable. If a low calcium dessert choice is offered, 125ml of custard, yoghurt or ice-cream should be added
- Many of the following dessert ideas are suitable for mid-meals as well. Desserts can be eaten any time if a resident is eating poorly
- Desserts can also be fortified with protein powders

<table>
<thead>
<tr>
<th>Desserts that have significant calories, high protein and calcium content</th>
<th>Desserts that have significant calories and protein. Serve with custard, ice-cream or yoghurt</th>
<th>Desserts with varying nutrient value. They provide moderate calories. Serve with custard, ice-cream or yoghurt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana custard</td>
<td>Steamed golden syrup pudding</td>
<td>Stewed fruit</td>
</tr>
<tr>
<td>Bread and butter pudding</td>
<td>Jelly milk flummery</td>
<td>Fruit crumble</td>
</tr>
<tr>
<td>Creamed rice</td>
<td>Lemon delicious pudding</td>
<td>Jelly</td>
</tr>
<tr>
<td>Panna Cotta</td>
<td>Chocolate cake and cream</td>
<td>Fruit salad</td>
</tr>
<tr>
<td>Baked rice custard</td>
<td>Self saucing chocolate pudding</td>
<td>Canned fruit</td>
</tr>
<tr>
<td>Baked sultana/date custard</td>
<td>Pineapple upside down cake</td>
<td>Banana</td>
</tr>
<tr>
<td>Baked custard</td>
<td>Sponge cake</td>
<td>Apple pie/tart/slice</td>
</tr>
<tr>
<td>Junket</td>
<td>Golden syrup dumplings</td>
<td>Apple strudel</td>
</tr>
<tr>
<td>Crème caramel</td>
<td>Powdered mousse made with milk</td>
<td>Apple Danish</td>
</tr>
<tr>
<td>Sago custard</td>
<td>Ice-cream sundaes</td>
<td>Carrot cake</td>
</tr>
<tr>
<td>Creamy sago or tapioca</td>
<td>Trifle</td>
<td>Pastries</td>
</tr>
<tr>
<td>Some cheese cakes</td>
<td>Pavlova</td>
<td>Doughnuts</td>
</tr>
<tr>
<td>Custard tart (thick custard, thin pastry)</td>
<td>Date loaf</td>
<td>Chocolate eclairs</td>
</tr>
<tr>
<td>Stirred egg custard</td>
<td>Sticky date pudding</td>
<td>Waffles</td>
</tr>
<tr>
<td>Instant vanilla pudding (made on milk)</td>
<td>Tiramisu</td>
<td>Pancakes</td>
</tr>
<tr>
<td>Vanilla slice</td>
<td>Baked apple</td>
<td></td>
</tr>
<tr>
<td>Yoghurt (full fat)</td>
<td></td>
<td></td>
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<tr>
<td>Blanccmange</td>
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</tbody>
</table>

Obtaining Expert Dietary Advice for Residents
Obtaining expert dietary advice for residents

Residents should have an opportunity to see a dietitian to receive evidence based nutrition and dietetic advice. Dietitians have the training to be experts in nutrition and are an essential part of any multidisciplinary team caring for older people.

Dietitians can train care staff to screen residents before weight loss has occurred and conduct nutritional assessments of residents to identify those who are poorly nourished.

Expert dietary advice is best obtained from a qualified dietitian with experience in aged care homes. Look for an accredited practicing dietitian (APD) in your area.

It is important to consult a dietitian with experience in residential aged care. Check with other aged care homes in your area. Ask who have they consulted for dietary advice and how helpful have they found them?

The services of an experienced dietitian with good menu planning and nutrition assessment skills can lead to decreased costs through less wasted food and/or labour savings, and a reduced risk of malnutrition for residents.

A QUALIFIED AND EXPERIENCED DIETITIAN CAN HELP YOUR AGED CARE HOME IN ALL THE FOLLOWING AREAS

Overseeing nutrition screening and conducting nutrition assessments on residents

- Developing systems for identifying residents who are at risk of malnutrition by utilising validated screening tools
- Assessing residents’ nutritional status
- Implementing nutrition care plans and reviewing these when appropriate
- Providing advice and guidelines when residents have special dietary needs
- Advising on supplement use

Writing nutrition-related policies and procedures

- Contributing to the accreditation process by ensuring quality improvement is carried out in areas relevant to identification, management and monitoring of malnutrition, dehydration and other nutrition issues
- Providing diet therapy advice to multidisciplinary teams such as wound management and continence committees
- Providing advice on drug–nutrient interactions for medication advice committees

Staff development and training on nutrition and diet therapy highlighting

- General nutrition principles for residents in aged care homes
- Special diets e.g. diabetes and the glycaemic index, texture modified diets, coeliac disease
- Malnutrition risk screening; prevention and treatment of malnutrition
- Techniques for measuring weight and height accurately
- Food safety and hygiene standards
- Preparing and serving food to minimise nutrient losses
- Education on meal and snack fortification, texture modified diets etc. for food service staff
Menu assessment, so that the menu is

- Nutritionally adequate for all residents
- Appropriate; providing enjoyment for residents
- Varied so that meals offer sufficient variety of colour, texture, flavour and shape
- Flexible enough to be suitable for texture modified or special diets
- Culturally appropriate
- Affordable for the aged care home

Individual nutrition and dietary consultations with residents and their families

- Assessing a resident’s nutrition needs
- Providing individual dietary advice for residents
- Negotiating realistic goals in consultation with resident, family and staff
- Liaising with food service staff to provide appropriate nutritional care
- Reviewing a resident’s progress and monitoring weight status
- Providing dietary transfer data if a resident requires hospitalisation
- Participating in multidisciplinary care meetings with GPs, other health professionals and care staff to develop care plans for residents

Nasogastric and PEG (Percutaneous Endoscopic Gastrostomy) feeding

- Advising volume and type of formula to meet individual resident’s nutritional requirements
- Reviewing after a minimum of six weeks and then three monthly after regimen has been established
- Troubleshooting

Quality improvement projects

- Standardising recipes
- Monitoring appropriate use of supplements i.e. implementing food service strategies and interventions, such as fortifying foods, that can reduce the reliance on costly nutritional supplements
- Monitoring plate wastage
- Providing guidelines for food ordering in quantity/quality to ensure adequate portions of food
- Advising on cost effective supplementation

Much of the work done in providing expert dietary advice is time consuming and labour intensive. So while many aged care homes consult with a dietitian they often do not use them enough to implement long term improvements. Ongoing advice is important for quality improvement.
WHAT SHOULD AN AGED CARE HOME EXPECT IN A MENU REVIEW COMPLETED BY A DIETITIAN?

A menu review will require more than just checking a paper copy of a menu. The following activities may be included in a menu review:

- A site visit to identify the details of the aged care home’s food service and to gather data on the menu not presented in the written form
- Checking of purchase orders e.g. the amount of milk, cheese, yoghurt, ice-cream and custard purchased weekly will allow the daily amount of dairy foods to be calculated for each resident per day
- Assessment of portion size. Hot meals such as casseroles will need to be assessed for the proportion of meat. Refer to chapter 5: ‘Nutrition Checklist for Menu Planning’
- Appropriate recipes or meal suggestions
- Consulting residents on their preferences
- Comprehensive report for the aged care home which includes recommendations of changes to menu, to better meet nutritional standards

A menu report as a minimum should provide information on:

1. Meat choices and quantities
2. Vegetable variety and serves
3. Fruit serves
4. Calcium containing foods
5. Beverages
6. Mid-meals
7. Adequate fibre
8. Adequate calorie (energy) content
9. Texture modified food
10. Diabetes
11. Meal appeal, palatability and suitability
12. Menu layout i.e. whether it contains sufficient detail to aid assessment
13. Recommendations

A large multi site organisation that has a menu for many aged care homes should have a nutritional analysis of the menu comparing it with the nutrient reference values (without having analysed recipes it will be difficult to conduct a thorough assessment of the menu).

FURTHER INFORMATION

- Dietitian’s Association of Australia (DAA) www.daa.asn.au
- Accredited Practicing Dietitian (APD) Hotline (locate an APD in your area) 1800 812 942
Outsourcing
Food Services
Outsourcing food services

Some aged care homes have outsourced catering to food service companies. In some cases the food is prepared in the aged care home by an external food service company, or alternatively it is prepared off-site and transported chilled or frozen to aged care homes.

Meals prepared off-site have the advantage of being prepared in purpose built facilities that are capable of producing thousands of meals. These providers often benefit from economies of scale and can provide a wider variety of meals for their clientele at a cost effective price. Some aged care homes have dispensed with a commercial kitchen and have all meals delivered.

Some food service companies have dietitians who can check on nutritional adequacy of the meals and meal components. A consistent product is produced as these providers adhere to standardised recipes, set ingredients and methods.

Though there are advantages to outsourcing, the important issue is whether each resident's nutritional needs and food enjoyment are met.

Food produced off-site and brought in chilled or frozen may mean that the menu is difficult to change at short notice. Providers may need 24 hours notice to change an order. In addition, the enjoyable cooking smells of food being prepared on-site are absent; the cooking smells associated with fresh food being prepared can stimulate residents' appetites. Some aged care homes, who use food prepared off-site, use a bread maker or fry onions to mimic the smells of fresh food being prepared.

Food and nutrition should not be thought of as a ‘hotel' service but a core component of clinical care. What might look like a saving on food provision per resident may not translate into savings if residents don’t eat the meals, lose weight, and become malnourished. So certain checks need to be in place if outsourcing food for residents.

Menu Planning

If food is outsourced it is still important to involve residents and/or family in menu planning, meal times and meal sizes. Meals are then more likely to be enjoyed as they reflect the residents’ preferences. Menus and meals prepared by external food service providers will need to be frequently reviewed and evaluated to ensure resident needs and preferences are satisfactorily catered for.

Often meals that are purchased from an outside production facility are the main meals and desserts, with other menu components being supplied by the aged care home. There needs to be good systems in place to ensure that all care staff know how to ensure the whole day's menu is planned to be nutritionally adequate, as well as how to manage special diets.

Any contract with outsourced food suppliers should include the provision for adequacy of nutrition, provision for special diets and state clearly what the minimum choices are. There should be input from the aged care home dietitian at the time a contract is being negotiated.

Aged care homes should have a menu planning policy which includes the results of consultation with residents and/or family, and staff. This should be communicated to the outsourced food service providers.

Menus planned by any food service provider should show that there has been:

- A process to ensure that outsourced meals and menus meet the nutritional needs of residents and that there are sufficient choices at mealtimes and mid-meals
- A means by which regular resident (or family) and staff feedback is obtained
- A protocol that ensures resident (or family) and staff feedback or suggestions are documented if possible and acted upon
- Guidance on the provision of special dietary needs including those determined by religious and cultural requirements
- A means by which ongoing resident likes and dislikes are identified and addressed
- A system to ensure that all staff (considering shifts and staff turnover) are aware of individual resident likes, dislikes and enjoyment of meals
- Ongoing evaluation of the menu with modifications being made according to current needs of the resident population
- ‘Resident Meal Satisfaction Surveys' have been acted upon. Refer to appendix 7
The following checklist can help aged care homes that have outsourced meals check that they are getting a resident focussed service.

<table>
<thead>
<tr>
<th>CHECKLIST FOR A QUALITY FOOD SERVICE PROVIDER</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>To help ensure nutritional adequacy, the ‘daily menu planning checklist’ from Chapter 5 should be used.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The food served is based on aged care home resident population needs and likes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The menu will maximise opportunities for residents to consume the recommended number of serves of food.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each resident can choose from a variety of foods that they enjoy, which will enable them to meet their recommended dietary intake based on the Nutrient Reference Values for Australia and New Zealand. Refer to appendix 8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meals, mid-meals and foods on the menu are fortified wherever possible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consideration has been given to out of hours food provision and staff can access food and fluid for residents when required.</td>
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</tr>
<tr>
<td>Input from a dietitian who is familiar with the needs of residents in the aged care home has been obtained.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A dietitian has provided an up to date written review and nutritional analysis of the menu.</td>
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<td></td>
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<tr>
<td>The menu is reviewed at six monthly intervals.</td>
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<tr>
<td>The menu cycle is long enough to avoid monotony. 4 weeks would be ideal.</td>
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<td></td>
</tr>
<tr>
<td>There is a summer and a winter menu making use of seasonal fruit and vegetables.</td>
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<td></td>
</tr>
<tr>
<td>There is a system in place to ensure residents have input into the menu.</td>
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<td></td>
</tr>
<tr>
<td>Resident likes and dislikes are established, monitored and accommodated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The menu is flexible and provides choice at each meal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seconds are available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menu accommodates special needs e.g. low GI choices for people with diabetes. The majority of residents can then choose from the same menu.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The great majority of menu items can be modified for texture modified diets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food is presented in a form most convenient to individual residents. This includes the provision of texture modified or finger foods when needed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meal appeal is considered in relation to colour, texture, flavour and appearance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishes on the menu have familiar names.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident favourite dishes are included.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On occasions, the menu includes theme or celebration foods.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural, ethnic and religious food preferences and cooking methods are met.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The written menu has details of all food and beverages offered at both main meals and mid-meals i.e. the type of soup, the actual vegetables, and the range of beverages.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FURTHER INFORMATION**

*Nutrition standards for menu items in Victorian Hospitals and Residential Aged Care Facilities*

Maximising Food and Mealtime Enjoyment
Maximising Food Intake and Enjoyment
Maximising food intake and enjoyment

A number of aged care homes were consulted throughout the process of writing this manual. To help make meal times the pleasant experience they should be for residents, this chapter contains information and ideas from a variety of sources including care homes.

MEAL TIMES

Three main meals, plus morning and afternoon tea as well as supper, should be routinely provided. Extra food should always be available. In general, meals and mid-meals should be planned so as not to be too close together. With aged care homes emphasising the importance of catering to individual needs, flexible mealtimes need to be considered.

In aged care homes that embrace ‘24-hour dining’, residents can access meals as well as snacks around the clock. This practice has led to improved healing of pressure injuries, weight gain and reduction in both pain and challenging behaviours.\(^1\)

Flexibility of meal times has both health and lifestyle benefits for residents. Flexible breakfast time could be a good start. The resident who likes to eat breakfast later than the scheduled time could be easily accommodated. Cereal, toast and a spread and a cup of tea should be possible.

One aged care home reported that flexible breakfast time was happening and the only drawback was that if a ‘hot’ breakfast was on, only a continental breakfast could be offered at the alternate time. However appropriate equipment and easy food ideas could mean that offering a hot choice at an alternative breakfast time is possible e.g. baked beans on toast.

Some aged care homes provide meals outside traditional meal times, if requested by residents. This can be helpful when a resident’s sleeping pattern is disturbed and a 2:00am waking time could mean ‘this is breakfast time’.

Having the means to provide a simple meal should be possible most times of the day in most situations. While this approach to meal times certainly brings challenges, it also brings benefits in relation to individual resident satisfaction, and may have a positive impact on the behaviour and temperament of some residents.

MEALTIME DURATION

Meal times should be relaxed and not rushed. This is particularly important for the slow eater who is endeavouring to remain independent. It is important to notice when a slow eater becomes tired and in need of assistance or support to finish the meal.

Subtle indications to staff about residents who are slow eaters would be useful. Suggestions include the use of different coloured placemats and trays, different shaped plates or something as simple as a small dot on a place mat. Perhaps slow eaters could be served first. It is recommended to have available means to reheat the food so that palatability is maintained for the duration of the meal.

Extended meal times are possible (and happening in many aged care homes). For example, lunch could be between 12:00 and 1:30pm and the evening meal could be between 5:00 and 7:30pm. This would mean that not only do residents have more freedom in the time they arrive in the dining room, there is also extended eating time for the slower eaters.

With the use of equipment such as a Bain Marie, food can be kept hot.
STAFFING AT MEAL TIMES

Having sufficient staff to assist at meal time is critical. ‘Assist’ may mean anything from opening food packages, helping to eat, prompting to eat or simply sitting with residents to role model and/or socialise.

At meal times, many aged care homes have all staff ‘on deck’ ie. care staff, lifestyle staff, trained volunteers and family or friends to assist residents to eat.

To maximise available staff numbers, some aged care homes have organised two sittings for the midday meal. For example one home that implemented separate sittings, had the first sitting for those residents requiring full assistance and the second sitting for residents requiring minimal assistance. With appropriate numbers of staff, separate sittings in the evening are also possible.

It has also been suggested that having staff shift changeover coinciding with meal time, will mean that more people are available to help.

THE EATING ENVIRONMENT

Variety is important when it comes to eating. This not only means what food is eaten but also where it is eaten.

Eating outside occasionally may stimulate the appetite. Residents who appear to have a small appetite may enjoy food and eat more when presented with happy hour or a barbeque.

One home (that was visited) had installed a ‘Coffee Shop’ (staffed by volunteers who even have barista training!) where residents could have a free coffee or milkshake as well as something to eat. This may not be the traditional dining area but it does provide variety and importantly, family and friends can also be served (although they had to pay), adding the important social aspect to eating and drinking.

A vending machine could also enhance lifestyle and, like the coffee shop, provides an opportunity to share with family and friends.

Cultural and family links need to be maintained especially at meal times. Sharing food with family and friends is very important from everyone’s point of view. Families should be encouraged to bring food to share with their relative or friend. Food safety guidelines will need to be explained to families.

Another opportunity for eating outside the dining room is having food preparation included in activity programs. Not only would this involve the residents, the whole experience could mean enhanced food enjoyment. One aged care home reported that they included making doughnuts and cup cakes in their activity program. The cup cakes were made using a cup cake maker (a bit like a waffle maker) Residents then iced and ate the cakes. This activity was very popular with residents.
MEAL SERVICE

An appealing and dignified meal service adds to the ambience of the dining room and can also nurture resident independence and food enjoyment.

Many homes are putting a great deal of effort into enhancing meal service.

Ideas and activities for meal service include:

• Presenting food buffet style. This will provide an opportunity for each resident to not only choose the food they want but how much they want. The food must look appetising and enticing. Drawbacks to presenting food this way may be the length of time it takes to serve residents and the possible safety issue if there are many residents with walkers. A mobile heated trolley could be an alternative especially if there are some residents who would find it difficult to get to the Bain Marie.

This style of food service may not be good for everyone. There may be a resident whose appetite is poor or who does not find the sight of large amounts of food appealing. Faced with this situation these people may choose to have nothing or very little. For some residents choosing may be too much of a challenge, disconcerting or even impossible. For these residents an appropriate amount of food already plated may be preferable

• Taking food platters around to residents works well. Salad vegetables, breads, cheese and biscuits and fruit presented this way provides residents with the opportunity to choose both the food and the quantity of food they wish to eat

• Providing condiment trolleys or individual condiment trays for each table

• Ensuring tables set nicely with appropriate table cloth or mats, cloth napkins (which can be used as clothing protectors) and a small flower arrangement contribute to a pleasant environment. In some situations residents may be able to help with table setting

• Using individual name cards and menus placed on the tables

• Providing restaurant style food service. One home had a Maître de whose presence and interaction with residents makes them feel very special. This restaurant style dining room also had ‘waiters’ taking orders. Residents did not need to order food ahead of time

• Having occasional ‘special’ experiences. One cottage style home where cooking was not normally done on site, was able to arrange for a chef to be employed one day a month for each cottage. This meant that on these occasions the atmosphere, the type of meal and the meal service was novel and much enjoyed by the residents

While it is acknowledged that not all these ideas and activities will be appropriate or possible in every aged care home situation, they do, provide food for thought and are all actually happening in aged care homes.

SOCIALISATION

It is generally accepted that positive socialisation improves the appetite of most people. ‘People tend to eat more when in the company of others compared with eating alone. This could be explained by the process of social facilitation: the enhancement of behaviour owing to the sheer presence of others’. (2)

Regular planned activities such as barbeques, happy hour, special occasion and theme meals, including meals from other cultures, not only provide variety to the mealtime, they can stimulate resident interaction. Staff will need to be supportive and facilitate socialisation.

Staff who sit and eat with residents in the dining room may be able to instigate conversation between residents. Pleasant socialisation in the dining room could result in extended mealtimes thus providing more eating time for slower eaters.

Tables and chairs need to be arranged so there is enough room for people to move around. Residents who eat while seated in their wheelchair may need the table height adjusted. Various table sizes will accommodate different sized groups. (3)

The choice and arrangement of furniture is important to enhance the opportunity for residents to socialise and eat in comfort. One home had changed their oblong tables to round tables. They found that this increased social interaction, and reduced conflict associated with residents wanting their ‘favourite spot’ at the table (although another
home reported that even at a round table, residents still had their ‘favourite’ spot. Square tables that sat four were seen by some homes to be as successful socially as round tables. If required to accommodate more people, these square tables could easily be pushed together.

New residents may prefer to sit alone in a quieter area of the dining room until they feel more settled and familiar with the dining room routine. This adjustment time may be eased if a family member or friend is able to join in. Seating family, new resident and established resident(s) at the same table may help with the settling in process. When the family isn’t present, the residents remaining at the table are ‘familiar faces’. Trained volunteers may also be able to assist especially if no family is available. People from different cultural and ethnic specific groups could be invited to volunteer if appropriate and possible.

Eating with others may be daunting for some residents particularly if they feel self conscious. Residents who spill or dribble food may be embarrassed eating in the presence of others. Serving food in a manageable form and providing appropriate cutlery or other eating utensils, may help. Perhaps these residents may like to eat earlier and then be given a manageable snack to be eaten at the table with other residents. Just sitting with other residents may diminish anxiety and eventually eating the meal with others may become comfortable.

One aged care home had two main meal sittings. Those residents requiring full assistance or who were struggling to eat, attended the first sitting, while residents requiring minimal assistance (or none) attended the second sitting. It was found that this arrangement gave both groups the social benefit of eating and being in the dining room while retaining dignity and ‘niceness’ for all. Staff of another home believed that residents shouldn’t be excluded from the dining room ‘just because of their condition’.

While eating in the dining room may be generally accepted as ‘best practice’, for some residents it is not. For some residents, being in the dining room is an anxiety-provoking experience and, consequently, they cannot eat. Not everyone feels like being sociable all of the time and some residents may always prefer to eat alone.

If a resident prefers to stay in their room for breakfast perhaps they could be encouraged to dress and go to the dining room for lunch.

There seems to be no one answer. Homes are different, resident populations are different. The aim is to provide individualised, person-centered care in which each resident’s needs and preferences are considered when devising a plan of care.

It is important to mention that all attempts to make eating pleasant and enjoyable will most likely fail if the need for resident pain management, before meal time, has been neglected.

Dining Room Ambience
Dining room ambience

There is no disputing the importance of the dining room atmosphere. The dilemma is that generally no one suggestion suits all situations. This chapter presents a range of ideas and suggestions. Some come from literature. Others have been contributed by a number of aged care homes. It is important that residents are consulted and that there is flexibility as residents and their needs change.

The dining room ambience and environment is important to maximise resident food intake and meal enjoyment. A pleasant relaxed dining room atmosphere appropriate to the culture of residents adds to their quality of life.

Issues to consider in the creation of a pleasant and appropriate dining room experience include meal service, food choice, colour schemes, furniture choice and arrangement, access to dining room, meal times, meal duration times, seating arrangements, staff involvement and support, background music, resident needs, lighting, air temperature, table setting appointments, mix of residents and importantly, socialisation.

‘Food choices and therefore food intake is influenced by a large number of factors which can be divided into internal signals (hunger, thirst, satiety, appetite) and external signals (e.g. social environment). During the ageing process the balance between the internal and the external signals seems to shift from predominately stimulated by internal to external signals’.

USE OF COLOUR

Generally pale wall colours are recommended. The colour and design of soft furnishings should also contribute to the ‘calm’ of the dining room.

LIGHTING

Dining areas should be well lit. Poorly focused light may cause eye discomfort.

AIR TEMPERATURE

Comfort is important. Considering that residents may be sensitive to cold, a draught free, moderate temperature is usually desirable.

BACKGROUND MUSIC

Gentle soothing music that is appropriate to the culture of the residents may add to the ambience of the dining experience. However, this generally accepted approach is not guaranteed. Staff at one aged care home reported that deciding on suitable music was a challenge as not all residents could agree on music choice. Staff at another home reported that when they played ‘ABBA’ food consumption increased notably! Yet another home stated that the residents in their care liked the radio playing all the time. This was a home in a rural area and residents were mostly ex-farmers who were used to playing the radio all day (down in the shed or at the dairy!) Another home stated ‘99% of their residents hated music in the dining room’. Perhaps trial and error is in order and residents will need to be consulted.

AVOIDING DISTRACTIONS DURING MEAL TIMES

Intrusive distractions such as loud music, television, loud talking and unfamiliar people or unrelated activities, can interfere with eating. It is important to have protected mealtimes so that eating and drinking are the focus.

Clearing away plates or bringing the next course while someone is still eating can be off-putting although consideration will need to be given to the fast eater who could become agitated if they have to wait.

Separating disruptive residents may be advisable. Depending on the situation, sitting in a separate part of the dining room may be all that is required and this retains a degree of socialisation.

It should be mentioned that appropriate distraction can mean that some residents may eat better. Starting a conversation with a resident about their family or their childhood memories may mean more food is eaten.
THE DINNER ROOM AMBIENCE

FURNITURE

The dining room should be easy to access especially if a number of residents are using walking aids. Manual and motorised wheelchairs may also need to be accommodated near the dining area, so appropriate ‘parking’ areas will be required, keeping in mind the need for easy and safe movement of both staff and residents. Furniture should be arranged to allow easy access by both residents and staff.

Dining chairs should be comfortable, sturdy and well balanced with arms that can support residents if they wish to transfer to or from walkers or wheelchairs.

Having cushions or foam wedges available is a good idea in case resident seating posture needs to be adjusted.

COOKING SMELLS

The smell of food cooking appeals to the senses. It can make you feel like eating even if you are not hungry! (think about walking past a ‘hot bread shop’). Cooking aromas from the kitchen may stimulate appetite. Even if food is outsourced or the kitchen is well away from the dining area, familiar cooking smells could be produced by using such small and manageable equipment as a bread maker, coffee percolator, toaster and a cup cake maker.

Homes with cottage style accommodation and a kitchen in each cottage have the opportunity to prepare food, bake cakes, use slow cookers etc. all of which produce aromas that create interest in food and stimulate the appetite.

Be aware that some residents with small appetites may be ‘put off’ by the smell of cooking food.

TABLE SETTING AND APPOINTMENTS

- An attractive table setting that is appropriate to the culture of the residents, would contribute to the positive dining experience
- Whatever table covering is used, choose something plain so it does not detract from the meal
- Traditional fabric table linen, including serviettes would be ideal but may not be appropriate for all situations. Large cloth serviettes (napkins) could be acceptable clothing protectors
- A small arrangement of fresh flowers on the table would also be ideal and would certainly add to the appeal of the dining room. Obviously there would be situations where even the smallest arrangement would not work
- Crockery plates, cups and mugs are preferable to plastic as they are more ‘homelike’. If residents require equipment that is unbreakable, avoid plastic ware that looks like it was meant for children
- Placing a clearly written menu card on each table is a personable way of informing residents of the meal. A menu written up on a white board on the wall, is not only difficult for many to read, it also challenges memory

This list of ideas is not necessarily complete. There will be other ways that care homes can enhance mealtime atmosphere for their residents.

A pleasant mealtime atmosphere enhances food enjoyment and when residents enjoy eating in the dining room there is the added value of being with others. The social aspect of mealtime usually improves appetite and food intake. The outcome of creating a pleasant mealtime atmosphere is well worth the effort.

References:

Mealtime Independence and Assistive Devices
Mealtime independence and assistive devices

Encouraging and supporting residents to eat independently is so important. Independence promotes a sense of dignity and may also minimise functional decline.

While it is acknowledged that some residents will always need assistance, many will be able to eat with varying levels of independence if provided with appropriate support.

While ever they are able, residents should retain their independence when eating. This not only helps the swallowing process but the anticipation experienced while getting food onto a utensil and into the mouth stimulates saliva production.

Ways to encourage and support independence at mealtime include

- Make sure that residents who need glasses (spectacles) are wearing them (and that they are clean)
- Make sure that residents are wearing their dentures (and that they fit)
- If necessary provide appropriate pain management before the meal allowing enough time for it to be affective
- Mealtime atmosphere should be pleasant and relaxed. See chapter 10: ‘Dining Room Ambience’
- Make sure that residents have plenty of time and the necessary help to get to the dining area. Stress about getting to the right place can be detrimental to both independence and food enjoyment
- Furniture should be comfortable and supportive. It is important that chairs give appropriate support and that tables are low enough to comfortably rest forearms. As residents should sit in an upright position the seating needs to be the correct height in relation to the table. Feet should be able to rest flat on the floor. Cushions may be needed for posture
- A person eating in their room should be seated properly considering comfort and postural needs. The meal tray position should be within easy reach. Bed rails should not obstruct access to the meal if the resident is sitting in bed
- Appropriate dinner ware and eating utensils should be provided according to resident needs. Plastic cutlery is usually not acceptable as it is difficult to hold and manipulate. Plastic cutlery is not conducive to a home like atmosphere. Keep in mind that residents from different cultures may prefer to use traditional eating utensils
- Food, cutlery and other eating utensils should be positioned on a tray or table so that they are within easy reach. They can be put into a resident’s hands if necessary
- Mealtime should allow for the slow eater. Eating should not be rushed
- Slow eaters who become tired while eating may need encouragement, prompting and assistance. It is important to be aware that food may need to be rewarmed to a palatable temperature. An accessible microwave is advisable
- Remove covers, including plastic wrap, from all food and drink before resident starts to eat. Unwrap sandwiches, open sachets, take off lids and pour bottled liquid into cups. Having to stop eating to remove coverings can actually cause a resident to not want to continue with the meal
- Food needs to be manageable. It may need to be cut into bite-sized pieces. If this is necessary it should be done with as little disruption to the food shape and appearance as possible and best done before food gets to the table. Cutting needs to be thorough so that each food piece is separate e.g. if skin is left connecting two pieces of potato, not only will it make eating more difficult, it can be a choking hazard
- Soup needs to be of a manageable consistency. Residents with a pronounced tremor may find thicker soups easier to manage
- Finger foods (foods that can be picked up with hands) may mean independence for those residents who find it difficult to use traditional utensils. The loss of the ability to use utensils does not necessarily mean loss of the ability to chew or swallow. Modification of food texture may not be necessary. It has been known for residents who have not been eating independently, and even on a puree diet, to pick up a sausage at a barbeque and
eat it. Finger foods can be important for residents from cultures where traditionally, food is eaten using hands.

- Residents who are vision-impaired may still be able to eat independently. For someone with macular degeneration, serving food on a plate that is an obvious contrasting colour to the food, will provide a defined perimeter that indicates where the food must be. Plain, deep colours are suitable, not patterns. A tablecloth or placemat colour should contrast with the crockery but once again, a pattern may cause confusion. Residents with visual field loss who may only see half their food may need help to turn their plate and place their drink in visual range. For more information to assist with residents who are vision-impaired contact organisations such as Vision Australia (ph: 1300 847 466) and Guide Dogs Australia (ph: 1800 484 333).

- Providing foods that residents enjoy may motivate independence. This means that each resident should have some involvement in food choice and menu planning.

- The occasional barbeque or special meal theme could provide the change that renews interest in food.

- Meals and mid-meals should be spaced appropriately. Extreme hunger can lead to poor control when eating. The longest period of time between meals usually happens between the evening meal and breakfast time the next day. This time should be no longer than 14 hours, making supper an important inclusion.

- Dignified management of resident clothing protection and food spillage is very important.

To remain independent at meal times some residents will require special equipment or utensils. A range of assistive devices and equipment is available. These include:

- Cutlery designed for easier holding, picking up and cutting food
- Plates and guards that make it easier to capture food
- Cups with special features such as various handle sizes and angles, spouts and straws. Use of available ‘mainstream’ products such as travel mugs with handles, may help to preserve resident dignity.

- Slip-resistant mats

Residents will need to be shown how to use assistive devices.

Independent Living Centres can be contacted regarding the range, availability and procuring of assistive devices.

**Independent Living Centres in Australia**

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<thead>
<tr>
<th>ACT</th>
<th>QUEENSLAND – LIFETEC</th>
<th>VICTORIA – YOORALLA</th>
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<tr>
<td>Tel: 02 6205 1900 or 1300 885 886 (callers outside 62 area)</td>
<td>Tel: 07 3552 9000 1300 885 886</td>
<td>Tel: 03 9362 6111 1300 885 886</td>
<td></td>
</tr>
<tr>
<td>Fax: 02 6205 1906</td>
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<td>Fax: 03 9687 1607</td>
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<td>Tel: 02 9912 5800 1300 885 886</td>
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<td>Tel: 03 6335 9200 1300 885 886</td>
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<tr>
<td>Fax: 02 8814 9656</td>
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<td>Fax: 03 6335 9224</td>
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Religious, Spiritual, Cultural & Linguistic Background of Residents
Religious, spiritual, cultural and linguistic background of residents

The population of Australia is diverse. The culture of Australian Aboriginal and Torres Strait Islander people as well as people from overseas must be recognised, respected and accommodated. It follows then that aged care homes will need to provide responsive and appropriate care.

‘Entering into residential care is a major change in anybody’s life – food can often provide the focus to make the transition easier.’(1)

The role of food is much more complex than just the provision of adequate nutrition. Food can provide comfort and may also be part of a person’s cultural and spiritual needs. Many people continue the food habits and dietary customs of their country of origin or traditional homelands. Food provided in aged care homes, should address the cultural and spiritual needs of each resident. Food connects people with their identity, homelands, family and traditions. Cultural security is important for the well being of all residents as it acknowledges and embraces the unique cultural and linguistic background of individuals. Cultural security provides opportunities for people to express their culture, have their cultural needs met, and share their cultural heritage.

Although people may have been brought up in the same country, region, homeland or have the same cultural background it is important not to generalise when it comes to providing meals. Some residents will hold strongly to their traditional dietary customs while others may embrace a more liberal eating pattern. Customs of people from the same country (or area within a country) vary and these variations should be recognised, respected and catered for.

Consideration should also be given to the person’s established eating habits and the effects a significant change of food intake may have e.g. the person who is used to eating rice as a staple may not physically cope well with a new diet where the staple carbohydrate is different.

Key considerations when planning menus to cater for cultural diversity

• Identify individual preferences including religious and cultural requirements
• Conduct assessments and reviews in preferred language of resident using family members, an accredited interpreter or bilingual health worker if possible
• Present menu choices translated to the preferred language of resident and involve resident and their families as appropriate
• Include resident’s favourite meals in menu plan
• Identify and celebrate special religious and cultural occasions appropriately
• If necessary, obtain specific meal items from external sources
• Ensure staff responsible for menu planning and food preparation are familiar with dietary preferences and culturally appropriate food. Training should be provided as required
• Ensure staff are trained in cultural awareness and appropriate communication(2)
• Supplement meals with favourite foods brought from home

Talking to each resident to establish their preferred food and eating pattern is essential. If language is a barrier, an interpreter, families or friends may be able to help. Food related pictures and other eating related items along with simple sign and body language may help to identify individual food likes, dislikes and preferences. When a resident’s family and friends are consulted, it is important that they are aware of both past and current eating patterns and habits of the resident.

‘For those from linguistically and culturally diverse backgrounds, differences in food enjoyed will not only be personal, but it will also result from regional differences in their country of birth, family traditions and religious practices. Generalisations and stereotypes about any one culture are easy to perpetuate’(2)
Sometimes accurate definitions of diet patterns may need to be clarified e.g. a resident may describe themself as a vegetarian when the only restriction is red meat. They may still include milk, eggs, fish or chicken in their diet. It is important to establish just what is meant by ‘vegetarian’ and then compile a list of suitable foods. This will avoid restricting food unnecessarily and thus the nutritional quality of the diet will be improved.

Food preferences can change, making continuous monitoring important. Talking and listening to each resident and observing their food intake and enjoyment will help to identify those changes.

Sometimes changes can come as a result of unplanned menu alteration. A rural Aboriginal Torres Strait Islander aged care home reported that their flexible menu (and cook) meant that ‘the unexpected gift of a barramundi fish was able to be prepared on the day it was received’. Not only was this a great thing to be able to do but a resident whose food likes were very limited was reminded of how nice this fish was and its links to the past.

As encouraging resident independence is a priority, the provision of appropriate utensils is an important part of eating. Chopsticks, spoons and fingers may be preferred to knife and fork. Food served in bowls may be more acceptable than food served on a plate.

**ADDITIONAL IDEAS TO MAXIMISE FOOD ENJOYMENT**

- Compile a list of recipes other residents from the same background have enjoyed
- If possible, ask residents or family to provide recipes for resident’s favourite dishes
- Identify religious and cultural occasions where food plays an important role. Try and accommodate some, if not all of these
- Contact other aged care facilities with residents from similar backgrounds and exchange ideas
- Encourage the family to bring in some traditional meals and foods from time to time. Some food safety guidelines will be needed
- Add multicultural flavour to the food by having a pantry containing a selection of culturally traditional ingredients that can be incorporated into dishes and menu
- Provide condiments at the table that are traditionally used. Examples include soy sauce, olive oil, chilli, Tabasco sauce, vinegar as well as salt and pepper
- Document the food preferences of each resident. This information should be updated as necessary and needs to be available to all staff
- Access community groups that work with people from culturally and linguistically diverse backgrounds
FURTHER INFORMATION

Partners in Culturally Appropriate Care (PICAC) Program

The Partners in Culturally Appropriate Care (PICAC) Program aims to equip aged care providers to deliver culturally appropriate care to older people from culturally and linguistically diverse communities.

New South Wales and ACT
Physical address NSW
117 Corrimal Street
Wollongong NSW 2500
Web: www.mcci.org.au
Ph 4227 4222

Australian Capital Territory
Physical address
6/65-67 Tennant Street
Fyshwick ACT 2609

Queensland
Diversicare
Physical address
49-51 Thomas St, West End QLD 4101
Mailing Address
P O Box 5199
Mt Gravatt QLD 4122
Web: www.diversicare.com.au
Ph (07) 3846 1099

Western Australia
Fortis Consulting Pty Ltd
Ground Floor, The Grosvenor
12 St Georges Terrace W.A
Web: fortisconsulting.com.au

Northern Territory
Council on the Ageing (NT) Inc
Physical address
65 Smith Street
Darwin NT 0800
Ph (08) 8941 1004
Mailing address
GPO Box 852
Darwin NT 0801
Web: www.cotant.org

Tasmania
Migrant Resource Centre (Southern Tasmania) Inc
P.O Box 259 Glenorchy TAS 7010
Web: www.mrchobart.org.au
Ph (03) 6221 0999

Victoria
Centre for Cultural Diversity in Ageing
Physical address
Level 1/789 Toorak Road
Hawthorn East Vic 3123
Mailing address
PO Box 5093
Glenferrie South VIC 3122
Web: www.culturaldiversity.com.au
Ph (03) 8823 7900

South Australia
Multicultural Aged Care Incorporated
Physical address
94 Henley Beach Road
Mile End SA 5031
Mailing address
PO Box 488
Torrensville Plaza SA 5031
Web: www.mac.org.au
Ph (08) 8241 9900

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SECTION 2
CHAPTER 13

Oral Health
Oral health

Oral health of older people, whether they have natural teeth, dentures or no teeth at all, is important to health and well being.

‘Poor oral health and dental pain impact on older adults’ general well being and their quality of life. Poor oral health impacts on eating ability, diet type, weight changes, speech, hydration, behavioural problems, appearance and social interaction’. (1)

Poor oral care causes a build up of dental plaque. Plaque harbours bacteria that can enter airways and blood and this can lead to aspiration pneumonia, heart attack, stroke, lowered immunity and poor diabetic control. (2)

WHY ARE RESIDENTS IN AGED CARE HOMES AT HIGH RISK OF POOR ORAL HYGIENE?

• Frail and dependent residents are at high risk of worsening oral health if their daily oral hygiene is not maintained adequately.
• Many residents take medicines that contribute to dry mouth.
• The onset of major oral health problems takes place well before the older person moves into residential aged care.

The important message is that residents are in a high risk group for oral health problems and need to have preventative measures in place to protect their oral health from deteriorating. (2)

CAUSES OF POOR ORAL HEALTH, TOOTH DECAY AND GUM DISEASE INCLUDE

1. DRY MOUTH

Dry mouth symptoms include dry oral tissues. A dry tongue should be easy to see and there may be thick stringy or foamy saliva that comes from the corner of the mouth.

While ageing may mean a decline in saliva production, commonly prescribed medicines such as antihistamines, drugs for high blood pressure and antidepressants, play a large part in reducing saliva flow. Dry mouth is uncomfortable, unpleasant and can impair taste, chewing, swallowing and speech. It can also increase the likelihood of mouth ulcers and tooth decay.

Saliva not only lubricates food when chewing, it helps to protect teeth against decay and this is important for residents with their natural teeth.

What can be done?

• Use saliva substitutes or oral lubricants before meals.
• Keep lips moist with water-based lip balm.
• Use oral lubricants which can be in the form of a spray, mouth moisturising gel, dry mouth toothpaste or alcohol free mouthwash. If a toothbrush is used to apply, it should always be soft.
• A dentist may recommend the use of Tooth Mousse, a product that has been designed to protect and strengthen tooth enamel. Tooth Mousse can also help to alleviate dry mouth (which can lead to decay). Tooth Mousse is not suitable for people with a milk protein allergy.
• Encourage residents to drink small amounts of water as often as they can. Do not give acidic fluids to moisten mouth e.g. orange juice, soft drinks (including low joule). These promote tooth decay and can cause pain to those residents with worn teeth.

‘Pineapple, lemon and other citric juices may over stimulate and exhaust the salivary glands causing the dry mouth condition to worsen’. (2)
2. SOFT FOOD TEXTURES

Firm and crisp textured food helps reduce the risk of tooth decay and gum disease by stimulating saliva flow. These food textures can also help clean debris from teeth.

What can be done?
- Residents should not be on soft and pureed diets any longer than is necessary
- Ensure menu contains a variety of textures for residents who don’t need to be on a specific texture modified diet
- Some residents need only one part of the meal texture modified eg. meat
- Include milk or cheese based food item as part of the meal e.g. mornay, custard or a glass of milk. Casein in milk and cheese, helps prevent tooth decay
- Rinse mouth with water after each meal. Clean teeth at least twice a day (morning and night)
- Ensure that mouth is cleared of food at the completion of each meal and snack

3. FREQUENT EATING AND DRINKING

A significant factor contributing to tooth decay is frequency of eating though it is acknowledged that small frequent meals and snacks are essential for some residents. It is also acknowledged that minimising sugary snacks between meals is important to help prevent tooth decay; however this may compromise calorie intake and consequently extra calories would then need to be added elsewhere in the diet.

What can be done?
- After eating encourage resident to rinse mouth out with water. Brush teeth at least twice a day (morning and night) with staff assistance where necessary. If using high concentrate fluoride toothpaste, follow directions
- Try to include milk or a cheese based food item at each meal and mid-meal as the casein contained in these foods can help protect from decay
- Make sure that the mouth is cleared of food at the completion of the meal or mid-meal

4. TEETH NOT BEING CLEANED REGULARLY OR PROPERLY

Proper and regular cleaning of teeth is important to help prevent tooth decay. It is also important to note that the tooth roots exposed as the gums recede, need careful attention as they are very prone to decay.

Staff should have appropriate and ongoing training as well as access to relevant information to enable them to correctly support and encourage residents who are:
- Cleaning their own teeth
- Totally reliant on staff for oral hygiene
- Who present with challenging behaviour when it comes to oral hygiene

What can be done?
- A soft toothbrush and high fluoride toothpaste are recommended. It is important to brush well at the gum line
- Residents should be encouraged to spit rather than rinse after brushing as this will allow fluoride to better soak into tooth enamel
• Tooth brush alternatives or aids may be needed e.g. for some residents an electric toothbrush may make cleaning teeth easier without causing soft tissue irritation or abrasion
• If teeth cannot be brushed regularly or adequately, the resident should be encouraged to rinse their mouth with water after each meal and mid-meal. Rinsing after medicine can also be helpful
• Meals and mid-meals containing milk or cheese may help prevent tooth decay
• Topical fluoride will help prevent decay of teeth and exposed teeth roots. Professional application every three months is the best option however the opportunity for this to happen is probably limited. Dental hygienists may be available to visit aged care homes and provide this service and some areas may have access to mobile dental vans
• The use of alcohol free antimicrobial gels or sprays may help prevent tooth decay and gum disease by reducing the growth of pathogenic bacteria in the mouth. It is important to note that these products cannot be used at the same time as a fluoride product. There should be a minimum of two hours between using a fluoride product and using an anti microbial product

DENTURE CARE
Correct oral care for residents who wear dentures is essential to help prevent mouth infections, thrush, mouth odour, and irritation to soft tissues (gums) under dentures, unpleasant appearance and, importantly, pain and discomfort.

Dentures and denture containers should be clearly labelled with owner’s name. Containers need to be cleaned daily.

Cleaning dentures
Dentures should be cleaned daily to prevent accumulation of food and build up of plaque and calculus
• Dentures should be removed from mouth for cleaning
• Rinse dentures in cool to warm running water after meals. If this is not possible, encourage resident to drink some water after eating
• Brush at least once a day, preferably twice (i.e. morning and night) using a soft brush or denture brush with water and mild soap
• Do not use abrasive powders or toothpaste as these will scratch dentures making them more susceptible to collecting food, thrush, plaque and stains. When brushing, hold dentures gently and avoid cleaning over a hard surface that may cause dentures to break if dropped
• Dentures should be disinfected once a week
• When out of the mouth dentures should be kept wet in order to maintain their fit
• Gums (and tongue) should be gently cleaned daily using a soft toothbrush or a washcloth. This removes food and plaque
• Some residents will simply not allow their dentures to be removed for cleaning. When this is the case seek advice from a dentist
• Wearing dentures all of the time can result in gum infection and ulcers. If possible, dentures should be removed for 6-8 hours daily, preferably overnight
• Oral hygiene is important for residents who have no teeth and do not wear dentures. Gums and tongue should be carefully and gently brushed with a soft toothbrush both morning and night

DENTURE FIT
Poorly fitting dentures may be caused by
• Reduction in gum size
• Lower jaw receding
• Loss of muscle tone that leads to reduced control of lower denture
• Loss of weight

Uncomfortable dentures may cause
• Mouth discomfort
• Chronic cheek biting
• Red and inflamed mouth tissues and mouth ulcers
• Speech difficulties
• Decreased ability to bite and chew
• Discomfort and pain when eating
• Decreased eating enjoyment
• Reduced appetite
• Refusal of some foods
• Weight loss and malnutrition
It is important to seek professional advice regarding appropriate ways to correct or relieve problems, including pain management, resulting from poorly fitting dentures.

Teeth and mouth problems can have a major impact on food enjoyment and intake. Any changes in behaviour and eating patterns may be an indication of a deterioration of oral health.

‘Good oral hygiene through routine mouth care is important to maintain the pleasure of oral feeding. All symptoms that may reduce the desire to eat or the pleasure of eating such as pain, glossitis and dryness of the mouth should be relieved’.(3)

The ‘Better Oral Health in Residential Care, Facilitator and Professional Portfolios’(2) contains a comprehensive tool for assessing the status of resident's oral health both on entry into the aged care home and throughout care. This assessment tool is reproduced with permission in appendix 11.

**IMPORTANT**

- Residents who are nil by mouth or on nasogastric or PEG nutrition still need all the oral hygiene attention that someone eating would need. Oral thrush is a common problem in this group.
- Poor oral hygiene can be a major risk factor for aspiration pneumonia for residents who are nil by mouth.
- Regurgitation or reflux of gastric juice that eventually enters the mouth is a major contributor to tooth tissue loss. Longstanding reflux requires attention that includes medication (not just antacid).

### Oral Health Assessment Tool

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### Resources

Dental Rescue: A Guide for Carers of the Elderly
www.dentalrescue.com.au
Dental Rescue
PO Box 335
The Junction NSW 2291 Australia

SA Dental Service
Better Oral Health in Residential Care Professional Portfolio, Facilitator Portfolio
Staff Portfolio

SECTION 3

Malnutrition Prevention and Treatment
Malnutrition
Malnutrition

Residents are at increased risk of malnutrition for a number of reasons. Prevention, identification and treatment of malnutrition is of utmost importance. The purpose of this chapter and the following four chapters is to support care staff in the management and treatment of malnutrition.

CONSEQUENCES

Malnutrition is a deficiency of protein, calories and other nutrients impairing the body and its functioning usually resulting in weight loss. Malnutrition lowers resistance to infection and impairs wound healing. It results in loss of lean body mass or muscle and is frequently connected with poor health outcomes.\(^1\) This loss of muscle mass is called sarcopenia, which limits physical activity, increases the risk of falls and reduces overall quality of life of affected residents.

Residents entering aged care homes these days are older and frailer than ever before, with acute and chronic health problems. Any loss of muscle in already frail residents leads to decreased mobility and increased reliance on care staff as well as the loss of some basic activities such as the ability to cough or sit upright. This increases the risk of other health problems such as pneumonia. The loss of mobility as a result of decreased muscle mass increases the risk of blood clots and pressure injuries and falls.

Malnutrition in residents greatly increases their risk of complications by up to 20 times compared with well nourished residents with the same disease.\(^2\) Ultimately malnutrition leads to increased illness and death of residents in aged care homes.

CAUSES

Causes of malnutrition are many and varied, however weight loss is due to two main reasons:

1. Inadequate nutritional intake
2. Increased caloric requirements

If calorie intake is lower than needed or if requirements are increased and aren't met by the food and fluid consumed, weight loss will occur.

The following are risk factors for malnutrition. Risk is increased if several factors are present.

- Weakness, illness, chronic disease, physical inactivity
- Loss of appetite
- Impaired cognition, dementia
- Depression
- Poor oral health
- Teeth, mouth or swallowing problems
- Lack of staff to assist residents with eating\(^3\)
- Gradual loss of taste perception and food preferences
- Some medicines
- Recent hospitalisation
- Pain
- Restrictive diets
- Inadequate menu with insufficient food offered\(^4\) i.e. menu that does not meet individual resident’s food preferences or requirements
**PREVENTION**

Prevention of malnutrition is easier and more cost effective than treating it. Screening each resident on admission to an aged care home and regular screening after that is important for early detection of malnutrition, so nutrition support can be started early. Compared with younger people, older people are less able to recover from a period of undernutrition and find it difficult to regain lost weight.\(^5\) Thus prevention of weight loss is vital.

The following can reduce the risk of malnutrition:

- Resident input on meal times and menu choices
- Improving the meal time dining atmosphere, flexible mealtimes, protected mealtimes
- Serving foods that the resident likes
- Monitoring each resident's dietary intake
- Early and routine malnutrition screening
- Staff education and awareness of preventing and treating malnutrition
- Multidisciplinary approach to malnutrition prevention and treatment
- Improved nutrition and hydration practices in aged care homes
- Optimising each resident’s oral health
- Providing nourishing mid-meals

*Remember nutrition is not a hotel service, or an optional extra, but an integral component of each resident’s care.*

**MALNUTRITION RISK SCREENING/ASSESSMENT**

The number of residents identified at risk of malnutrition increases when screening procedures are used.

Without screening, malnutrition may go unrecognised and untreated, resulting in further decline in nutritional status.

Nutrition screening is the process of quickly identifying residents who are at risk of becoming malnourished. Screening tools are simple and can be easily administered by staff with minimal nutrition training. Screening times get faster with practice, but should only take about five minutes for each resident.

There are a number of malnutrition screening tools that are valid and reliable for use in aged care homes.\(^6, 7\) These include:

- MNA – SF (Mini Nutritional Assessment - Short Form)
- MST (Malnutrition Screening Tool)
- MUST (Malnutrition Universal Screening Tool)
- SNAQ (Simplified Nutrition Appetite Questionnaire).

Refer to chapter 16: ‘Malnutrition Screening’ for more information.

Malnutrition risk screening can be done by care staff. Those residents found at risk of malnutrition need a more thorough nutrition assessment which can be carried out by a dietitian. Nutrition assessment is the process of confirming that a resident has malnutrition.

**TREATMENT**

Each resident whether malnourished or not, needs a nutrition care plan. It should include a:

- Weight and height assessment including BMI and nutrition screening results based on the screening tool of choice. Unintentional weight loss is a better predictor of malnutrition than a weight or BMI at a single point.\(^6\)
- Dietary assessment i.e. type of diet, appetite, food likes and dislikes, allergies, religious and cultural requirements, relevant medical history, medicines, dexterity, chewing and swallowing ability and food texture required
- Eating assessment i.e. what assistance they require with eating such as prompting or cutting up food, whether assistive devices such as plate surrounds are required and seating/positioning information

Commence residents at risk of malnutrition on a high protein/high calorie diet without delay as their protein reserves are often low and further muscle loss is to be avoided.
Nutritional support should be based on ‘everyday’ food. Fortifying foods and offering high protein/high calorie foods should be the first step. A protein/calorie dense menu is important if many residents are underweight or at nutritional risk. Nourishing mid-meals are vital. Small frequent meals may be better tolerated. Therapy activities e.g. making pikelets, donuts, cupcakes etc. can stimulate interest in food for some residents.

Staff should be able to provide foods that are rich in protein and calories. High protein drinks can be used to supplement the menu. Home made milkshakes and smoothies can offer similar protein and calorie profiles to commercial supplements depending on their ingredients. Commercial products are available, however, be aware of flavour fatigue.

Refer to page 114-116 for high calorie smoothie and milkshake recipes. Studies show that oral supplements produce a small consistent, weight gain in older adults. Protected meal times and dining room atmosphere can also help improve food intake. Refer to chapter 10: ‘Dining Room Ambience’.

A nutritional care plan should take into account the nature, severity and probable outcomes of any underlying diseases.

During the last weeks of life of an older person the primary objectives of nutritional support should be ‘pleasure and comfort’. Enteral or parenteral feeding is not recommended at this stage.

MONITORING/FOLLOW UP

Malnutrition screening should be incorporated into standard processes e.g. admission forms and weight charts. Screening should be done on admission and then every month e.g. on a resident’s special care day.

For residents identified at risk of malnutrition, a process for assessment, a nutrition plan and follow up monitoring should be in place.

Nutritional support started in aged care homes should be continued in hospital and vice versa.

Measuring each Resident’s Weight and Height
Measuring each resident’s weight and height

Measuring each resident’s weight and height is a commonly used method to estimate nutritional status. A more complete picture of nutritional status would include blood tests, dietary recalls and assessing clinical signs and symptoms.

Knowing a resident’s weight and height enables calculation of their Body Mass Index (BMI) which is required in some malnutrition screening tools such as the MUST and MNA-SF.

ESTIMATING RESIDENTS’ HEIGHT

A number of factors affect the accurate measuring of residents’ height. These include:

- Discs in the spine become compressed with age
- Inability to stand upright due to a loss of muscle tone
- Curvature of the spine

For most residents it can be difficult to measure their height because they may not be able to stand safely. Height can be estimated from ulna length.

Height will only need to be estimated by ulna length once, so accuracy is important.

MEASURING ULNA LENGTH

The ulna is the arm bone which runs from the elbow to the point that sticks out on the wrist on the side of the little finger. Calculating height using ulna length is minimally intrusive and can be done with all residents. When measuring ulna length:

1. Explain the procedure to the resident
2. Put resident’s right hand on their left shoulder. If right arm is sore, use left arm
3. Use a tape measure to measure from the point that sticks out on the little finger side at the wrist, to the tip of the elbow
4. Record the ulna length
5. Find the estimated height from the ulna conversion table over page
6. Use the resident’s height to estimate their BMI
7. If measured accurately, ulna length and estimated height do not need to be measured again

Photo courtesy of Priority Research Centre for Gender, Health and Ageing University of Newcastle
### ESTIMATED BODY HEIGHT (M)

<table>
<thead>
<tr>
<th>Measured ulna length (cm)</th>
<th>Men 65 years or less</th>
<th>Men over 65 years</th>
<th>Women 65 years or less</th>
<th>Women over 65 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.5</td>
<td>1.46</td>
<td>1.45</td>
<td>1.47</td>
<td>1.40</td>
</tr>
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<td>19.0</td>
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<td>1.49</td>
<td>1.48</td>
<td>1.50</td>
<td>1.44</td>
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<td>20.0</td>
<td>1.51</td>
<td>1.49</td>
<td>1.51</td>
<td>1.45</td>
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<td>1.53</td>
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<td>21.0</td>
<td>1.55</td>
<td>1.52</td>
<td>1.54</td>
<td>1.48</td>
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<tr>
<td>21.5</td>
<td>1.57</td>
<td>1.54</td>
<td>1.55</td>
<td>1.50</td>
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<tr>
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<td>1.56</td>
<td>1.56</td>
<td>1.52</td>
</tr>
<tr>
<td>22.5</td>
<td>1.60</td>
<td>1.57</td>
<td>1.58</td>
<td>1.53</td>
</tr>
<tr>
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<td>1.58</td>
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<td>1.60</td>
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<tr>
<td>25.0</td>
<td>1.69</td>
<td>1.65</td>
<td>1.65</td>
<td>1.61</td>
</tr>
<tr>
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<td>1.71</td>
<td>1.67</td>
<td>1.66</td>
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<td>1.80</td>
<td>1.75</td>
<td>1.73</td>
<td>1.71</td>
</tr>
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<td>1.82</td>
<td>1.76</td>
<td>1.75</td>
<td>1.73</td>
</tr>
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<td>29.0</td>
<td>1.84</td>
<td>1.78</td>
<td>1.76</td>
<td>1.75</td>
</tr>
<tr>
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<td>1.79</td>
<td>1.77</td>
<td>1.76</td>
</tr>
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<td>1.94</td>
<td>1.87</td>
<td>1.84</td>
<td>1.84</td>
</tr>
</tbody>
</table>


To check a height based on ulna length it may be useful to ask the resident how tall they were or ask the family. If height is overestimated the BMI will be lower than it should be, conversely underestimating height will result in a higher BMI. This can be the difference between someone being screened at low risk or high risk of malnutrition.
HOW TO MEASURE WEIGHT ACCURATELY (4)

Each resident’s weight should be measured:

- On admission, then
- Monthly if no weight loss
- More frequently e.g. weekly, if weight loss has occurred or if they are already malnourished. Less frequently if frail and palliative

Correct weight is important to monitor any weight changes and to determine nutritional risk.

For many residents obtaining a weight is difficult, particularly those who are chair or bed-bound.

THINGS TO CONSIDER WHEN MEASURING RESIDENT’S WEIGHT

1. Decide on the appropriate method.
   - If the resident can walk, use stand-on scales. For those who can’t walk use chair or wheelchair scales. If the resident is bed-bound use a hoist with a scale
2. Ensure the equipment is clean and calibrated
3. Scales should be placed on a hard flat surface and zeroed before use
4. Use the same scales each time to weigh. Have scales checked and recalibrated at least yearly
5. If using chair scales, make sure the brakes are on and the foot rests are out of the way
6. Make sure the resident has gone to the toilet recently or has dry continence pads
7. Explain procedure to the resident
8. Resident should have minimal clothing or light underclothing
9. Assist the resident to transfer onto the chair scales (using your organisational manual handling techniques)
10. Have the resident sit in the centre of the chair with their feet on the footrests and not leaning or holding onto anything
11. Ask the resident to remain as still as possible. Record the weight
12. Assist the resident to get off the scales and resume their previous activity
13. Report any weight loss to the care manager and consider screening or re-screening for nutritional risk
14. Measurements should be taken to the nearest 0.1kg (100g)
15. Weigh resident at the same time each day
16. Check the weight with the previous recorded weight

Weight change indicates change in nutritional status. It can also be caused by fluid shifts due to oedema and diuretic use. These should be noted when recording weight.

---

Malnutrition Risk Screening
Malnutrition Risk Screening

When a new resident enters an aged care home, screening for possible malnutrition must be undertaken. An individualised nutrition care plan should be developed, carried out and monitored regularly. Ongoing screening for possible malnutrition is important and should be carried out at regular intervals e.g. monthly or whenever there is suspicion that a resident is malnourished.

The following four screening tools have all been identified as valid and reliable for use in aged care homes\(^1,\ 2\) and they are free to use so long as they are not altered in any way. We have included all four malnutrition screening tools as all four are being used by various aged care homes and no one tool is being used exclusively. It is up to each aged care home to decide which tool they prefer to use for their residents. Each tool requires the collection of different information. A decision as to which is the most appropriate will need to be made by individual aged care homes.

The tools are:

- **SNAQ (Simplified Nutrition Appetite Questionnaire)**
- **MST (Malnutrition Screening Tool)**
- **MNA-SF (Mini nutritional Assessment – Short Form)**
- **MUST (Malnutrition Universal Screening Tool)**

**SNAQ** focuses on appetite and predicts future weight loss.

**MST** focuses on recent weight loss and decrease in appetite.

**MNA-SF** focuses on food intake, weight loss, mobility, recent disease, neuropsychological problems and BMI.

**MUST** focuses on BMI, weight loss and acute illness.

If a resident is screened and found to be at risk of malnutrition, then a high protein/high calorie diet needs to be commenced. If an aged care home is identifying a large number of residents at risk of malnutrition the food offered should be fortified and high calorie mid-meals given. Refer to chapter 17: ‘Eating to Prevent Weight Loss’.

**Be aware that screening is not assessment when it comes to malnutrition.** Screening should be done by trained care staff to quickly identify residents who are at malnutrition risk. Residents will need a more thorough investigation of their nutritional status by a dietitian if screened at high risk of malnutrition. The dietitian performs a comprehensive assessment and develops an individual management plan.
MALNUTRITION RISK SCREENING

Simplified Nutritional Appetite Questionnaire (SNAQ)

The SNAQ (3) requires no measuring of weight or height and is quick to complete. It can assist staff to identify a resident who may lose weight in the future. Residents must be able to answer the 4 questions. (Therefore the SNAQ is difficult to use with residents who have communication difficulties or cognitive impairment). If this is the case choose one of the other screening tools.

Name .............................................................................................
Screening date............................. Age.................................

**ADMINISTRATION INSTRUCTIONS**
If possible, ask the resident the following questions and then tally the results. If not possible another screening tool should be used.

The sum of the scores for the individual items constitutes the SNAQ score.

<table>
<thead>
<tr>
<th>A. Resident’s appetite is</th>
<th>Very poor = 1</th>
<th>Poor = 2</th>
<th>Average = 3</th>
<th>Good = 4</th>
<th>Very good = 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. When they eat, they</td>
<td>Feel full after eating only a few mouthfuls = 1</td>
<td>Feel full after eating about a third of a meal = 2</td>
<td>Feel full after eating half a meal = 3</td>
<td>Feel full after eating most of the meal = 4</td>
<td>Hardly ever feel full = 5</td>
</tr>
<tr>
<td>C. Food tastes</td>
<td>Very bad = 1</td>
<td>Bad = 2</td>
<td>Average = 3</td>
<td>Good = 4</td>
<td>Very good = 5</td>
</tr>
<tr>
<td>D. Normally the resident will eat</td>
<td>Less than one meal a day = 1</td>
<td>One meal a day = 2</td>
<td>Two meals a day = 3</td>
<td>Three meals a day = 4</td>
<td>More than three meals a day = 5</td>
</tr>
</tbody>
</table>

**Has the resident lost weight recently without trying?**
If No................................................................. 0
If Unsure ...................................................................... 2
If Yes, how much weight (kg) has the resident lost?
From 0.5 to 5.0kg ........................................ 1
From 5.0 to 10.0kg ........................................ 2
From 10.0 to 15.0kg ......................................... 3
More than 15.0kg ............................................ 4
Unsure ................................................................. 2

**Has the resident been eating poorly because of a decreased appetite?**
No.............................................................................. 0
Yes.............................................................................. 1

<table>
<thead>
<tr>
<th>Total</th>
<th>Low risk: MST = 0-1</th>
<th>Moderate risk: MST = 2</th>
<th>High risk: MST = 3-5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>© Elsevier. Used with permission</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© John Morley SLU Saint Louis University. Used with permission
MINI NUTRITIONAL ASSESSMENT – SHORT FORM (MNA-SF)

The MNA-SF focuses on BMI, weight loss, mobility, stress or illness, poor appetite, dementia/depression. If BMI can’t be obtained, calf circumference can be used instead. A score of 11 or less indicates nutrition risk. This means that a resident requires full nutritional assessment using the full MNA by a dietitian or staff member trained in its use.

### Mini Nutritional Assessment

**MNA®**

**Nestlé Nutrition Institute**

<table>
<thead>
<tr>
<th>Last name:</th>
<th>First name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex:</td>
<td>Age:</td>
</tr>
</tbody>
</table>

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

#### Screening

**A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?**

- 0 = severe decrease in food intake
- 1 = moderate decrease in food intake
- 2 = no decrease in food intake

**B Weight loss during the last 3 months**

- 0 = weight loss greater than 3 kg (6.6 lbs)
- 1 = does not know
- 2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
- 3 = no weight loss

**C Mobility**

- 0 = bed or chair bound
- 1 = able to get out of bed / chair but does not go out
- 2 = goes out

**D Has suffered psychological stress or acute disease in the past 3 months?**

- 0 = yes
- 2 = no

**E Neuropsychological problems**

- 0 = severe dementia or depression
- 1 = mild dementia
- 2 = no psychological problems

**F1 Body Mass Index (BMI) (weight in kg) / (height in m)²**

- 0 = BMI less than 19
- 1 = BMI 19 to less than 21
- 2 = BMI 21 to less than 23
- 3 = BMI 23 or greater

**IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.**

**DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.**

**F2 Calf circumference (CC) in cm**

- 0 = CC less than 31
- 3 = CC 31 or greater

**Screening score (max. 14 points)**

- 12 - 14 points: Normal nutritional status
- 8 - 11 points: At risk of malnutrition
- 0 - 7 points: Malnourished

### References


For more information: [www.mna-elderly.com](http://www.mna-elderly.com)
MALNUTRITION UNIVERSAL SCREENING TOOL (MUST)

The MUST focuses on BMI, weight loss and illness and is quick to complete (less than 10 minutes). It includes a treatment plan based on the screening score. It provides alternative measures and subjective criteria for use when BMI cannot be obtained.

**Medium risk = 1:** Commence food record charts and review in three days.

**High risk = 2:** Referral to dietitian for full assessment and management plan.

### Step 1
BMI score

<table>
<thead>
<tr>
<th>BMI kg/m²</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;20 (&gt;30 Obese)</td>
<td>0</td>
</tr>
<tr>
<td>18.5-20</td>
<td>1</td>
</tr>
<tr>
<td>&lt;18.5</td>
<td>2</td>
</tr>
</tbody>
</table>

### Step 2
Weight loss score

<table>
<thead>
<tr>
<th>Unplanned weight loss in past 3-6 months %</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<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
Acute disease effect score

- If patient is acutely ill and there has been or is likely to be no nutritional intake for >5 days: **Score 2**

### Step 4
Overall risk of malnutrition

Add scores together to calculate overall risk of malnutrition:
- Score 0 Low Risk
- Score 1 Medium Risk
- Score 2 or more High Risk

### Step 5
Management guidelines

**0 Low Risk**
- Routine clinical care
  - Repeat screening
    - Hospital – weekly
    - Care Homes – monthly
    - Community – annually for special groups e.g. those >75 yrs

**1 Medium Risk**
- Observe
  - Document dietary intake for 3 days
  - If adequate – little concern and repeat screening
    - Hospital – weekly
    - Care Home – at least monthly
    - Community – at least every 2-3 months
  - If inadequate – clinical concern
    - Follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly

**2 or more High Risk**
- Treat*
  - Refer to dietitian, Nutritional Support Team or implement local policy
  - Set goals, improve and increase overall nutritional intake
  - Monitor and review care plan
    - Hospital – weekly
    - Care Home – monthly
    - Community – monthly
  - Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.

All risk categories:
- Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary.
- Record malnutrition risk category.
- Record need for special diets and follow local policy.

Obesity:
- Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.

Re-assess subjects identified at risk as they move through care settings.

See The ‘MUST’ Explanatory Booklet for further details and The ‘MUST’ Report for supporting evidence.
MALNUTRITION FLOW CHART

All residents entering an aged care home should have malnutrition screening on admission and monthly after this. The following chart provides guidelines on what to do for residents who are screened at high, moderate or low risk of malnutrition.

All residents, no matter what their risk should receive meals and mid-meals that have been fortified as standard. Extra milk drinks and then supplements can be added for those at moderate or high risk of malnutrition.

<table>
<thead>
<tr>
<th>New or current resident at</th>
<th>High Risk of Malnutrition</th>
<th>New or current resident at</th>
<th>Moderate risk of Malnutrition</th>
<th>New or current resident at</th>
<th>Low risk of Malnutrition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNAQ Score: 15 or more</td>
<td></td>
<td>MST Score: 2</td>
<td>MNA-SF Score: 8 - 11</td>
<td>SNAQ Score: 14 or less</td>
<td></td>
</tr>
<tr>
<td>MST Score: 3 - 5</td>
<td></td>
<td>MNA-SF Score: 0 - 7</td>
<td>MUST Score: 1</td>
<td>MST Score: 0 - 1</td>
<td></td>
</tr>
<tr>
<td>MUST Score: 2 or more</td>
<td></td>
<td></td>
<td></td>
<td>MNA-SF Score: 12 - 14</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MUST Score: 0</td>
<td></td>
</tr>
</tbody>
</table>

Weigh on admission then weekly
Height from ulna length or direct measurement on admission
BMI calculated monthly
Rescreen monthly
Assumption: Basic menu is fortified. Refer to chapter 17: ‘Eating to Prevent Weight Loss’

Refer to dietitian for nutrition assessment
High protein/high calorie meals and mid-meals including home made milk drinks
Assess eating related problems
Recheck likes and dislikes
Assistance with meals and mid-meals
Document food and fluid intake for 3 days
Develop nutritional care plan
Consider commercial supplements. Drinks, powders or puddings refer to page 106
If still losing weight try 2 Calorie/ml ‘Med Pass’ program
Monitor and reassess

Continue current care
Monitor progress

1. Isenring EA, Bauer JD, Banks M, Gaskill D. The malnutrition screening tool is a useful tool for identifying malnutrition risk in residential aged care. Journal of Human Nutrition & Dietetics. [Randomized Controlled Trial 2009 Dec; 22(6):S45-S50.
2. Evidence based practice guidelines for the nutritional management of malnutrition in adult patients across the continuum of care. Nutrition & Dietetics; 2009; 66 (Suppl. 3: S1):34.
Eating to Prevent Weight Loss
Eating to prevent weight loss

In aged care homes, underweight, loss of muscle and frailty are bigger problems than overweight. There is evidence suggesting residents are better to be overweight rather than underweight. If the majority of residents are underweight and have small appetites then consideration has to be given to providing fortified, nourishing, small, frequent meals and mid-meals. Having a core menu that is high protein/high calorie will be more effective than a menu which has to be supplemented with high protein/high calorie drinks.

Many residents are totally reliant on the food served to them to meet their daily nutritional requirements. For these residents getting out to the shops or even having food brought in by a visitor or relative may not be an option. This means that it is essential that the food and drinks served by your aged care home completely meet the nutritional needs of each resident.

For this reason low calorie foods or diet foods should not be used, unless specifically requested by a resident. This applies even to residents with diabetes or who are mildly overweight. Refer to chapter 22: ‘Diabetes and the Glycaemic Index’.

KNOWING YOUR RESIDENT’S NEEDS

The characteristics of your resident population and their level of care will determine the type of menu you will need to meet their nutritional requirements. For example you will need to assess:

• Whether they have large or small appetites?
• How many are poor eaters?
• How many have lost weight or are losing weight?
• How many need assistance with meals?
• How many have swallowing problems and need a texture modified diet?
• How many have diabetes?
• If they have illnesses that increase the protein or calorie requirements?
• How many suffer from constipation?
• What are their particular cultural and religious backgrounds?

• What are the age and activity levels?
• What are individual likes and dislikes?

Once all of these have been taken into account, a resident focussed menu can be created.

Weight loss is not a normal part of growing old. As people age it should not be considered normal or expected that weight loss occurs. Better health is achieved by maintaining weight or by being slightly over weight. As a rule, low calorie diets are not recommended in aged care homes.

FREQUENT SMALL MEALS WITH MID-MEALS

Meeting each resident’s nutritional requirements won’t be possible if the food provided is not rich in protein, calories, vitamins and minerals. If mid-meals are small or non existent, nutritional needs are unlikely to be met. Some aged care homes don’t provide supper or dessert with the lighter, usually evening, meal. This is not good practice and will impact on residents’ nutritional intake. Always serve three meals and three nourishing mid-meals. Refer to page 191 for nourishing mid-meal ideas.

A cup of tea or coffee and a plain biscuit for mid-meals will not enable residents to meet their nutritional requirements.

Older people who have mid-meal snacks have higher protein, fat and calorie intakes. In older people, snacks can contribute almost a quarter of calorie intake and significant amounts of protein. Mid-meals are an important way of helping each resident consume a diet adequate in calories and protein. Refer to appendix 10 for suitable mid-meal ideas. For residents requiring assistance, mid-meals take less time than main meals and are an opportunity to maximise their intake. Offering fortified mid-meal snacks may be less expensive and more effective than oral liquid supplements and could be tried first before commencing liquid supplements. Some residents may need both
MEAL FORTIFICATION

The overall characteristics of your resident population will help guide the type of food and drink served. If most residents at your aged care home are underweight or a normal weight, or if you have many on high protein/high calorie supplements, it will be better to provide a core menu with meals and foods that are already fortified and thus high in protein and calories to meet these residents’ needs. Refer to chapter 17: ‘Eating to Prevent Weight Loss’ for practical ideas about fortifying foods.

Example: Fortifying rolled oats:

<table>
<thead>
<tr>
<th>Recipe</th>
<th>Weight (g)</th>
<th>Protein (g)</th>
<th>Calories Kilojoules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example 1</td>
<td>Traditionally made rolled oats made on water with added milk and sugar</td>
<td>0.4 cup rolled oats (38g) 220ml water 50 ml full cream milk 20 g brown sugar</td>
<td>322</td>
</tr>
<tr>
<td>Example 2</td>
<td>Rolled Oats made with high protein milk, cream and sugar</td>
<td>0.4 cup rolled oats (38g) 220ml full cream milk 2 tablespoons full cream milk powder 50 ml cream 20 g brown sugar</td>
<td>344</td>
</tr>
</tbody>
</table>

In example one, rolled oats are made the usual way; that is, on water and served with a little milk to cool it down and brown sugar. This provides 250 calories per serve (322g).

However in example two, with fortification, the rolled oats are made on full cream milk fortified with extra full cream milk powder and cream added to cool it down, plus brown sugar. This supplies 630 calories for virtually the same amount of food (344g). (Refer to page 114 for bulk fortified milk recipe.)

Thus a resident who can only eat a bowl of rolled oats for breakfast will get over 2½ times the calories and protein from the fortified compared to the regular rolled oats. Refer to chapter 17: ‘Eating to Prevent Weight Loss’ for more practical tips on meal fortification.

Residents suffering from malnutrition will benefit from being offered frequent, small serves of food that they like; even greater benefit if these foods have been fortified.
VARIETY

Residents need enjoyable meals offering as many different foods as they wish rather than being put on restrictive diets that reduce calorie intake. By the time most residents have entered into an aged care home, diets such as cholesterol lowering, weight control, low fat, and low sugar are rarely needed. That’s not to say residents, their families or GPs won’t request such diets. A careful explanation about the importance of maintaining weight should persuade them to relax dietary restrictions.

Some residents prefer to eat the same things every day and are happy to do this. So long as these foods are nutritious and the resident is getting their protein and calorie needs, their preferences should be respected. Variety for variety’s sake should not negatively impact on residents’ enjoyment of food.

In some cases residents are overweight. However being overweight doesn’t necessarily mean being well nourished. Some residents are overweight due to oedema. Residents suffering pressure injuries often have low serum albumin and the wounds can’t heal until protein status is improved. Oedema surrounding pressure injuries reduces the passage of nutrients such as protein, vitamin C and zinc that are essential for wound healing.

Weight reduction may lead to loss of muscle (sarcopenia) which will increase functional decline.

A resident may have lost a large amount of weight without trying, and would be classified as malnourished even though their BMI may still be in the obese range.

HIGH PROTEIN/HIGH CALORIE SUPPLEMENTS

High protein/high calorie supplements are useful, but should be given in addition to meals that have been fortified. These supplements can increase nutritional intake, weight and improve clinical outcomes.\(^4\),\(^5\)

It may be better to offer these supplements between meals to prevent residents from eating less at the main meal. Supper in particular is a good time to offer these supplements as it will not interfere with the next meal.

Solutions for Flavour Fatigue

- Try fruit juice style drinks that have been fortified with protein powders, rather than milk. Try different flavours and temperatures
- Change supplement flavour daily or try different supplements through the day
- Use supplements in food e.g. protein powders in tea or coffee or desserts
- Use calorie dense snacks for mid-meals
- Change the presentation of the supplement, e.g. freeze liquids and use them as desserts, snacks or ice cubes to suck

In some facilities, wastage of these supplements can be high. This can be avoided by:

- Routinely reviewing each resident’s like or dislike of the supplement
- Changing flavours to avoid flavour fatigue
- Changing temperatures and consistency e.g. warm milk drinks, thicker fruit smoothies and milkshakes
- Prompting or assisting each resident to drink supplements
- Providing supplements according to nutritional care plan

When giving supplements, compliance increases with a Med Pass™ program, where a smaller volume (usually 60ml) of high calorie (2 calories/ml) supplement is prescribed and offered 4 times a day.
Before supplements are used, the core menu should be fortified. Refer to page 111.

Powder or liquid supplements are available from several different companies or you can make your own high protein milk which can be used in milkshakes, milo, fruit smoothies, desserts and breakfast cereals. See page 114. Full cream milk and full cream milk powder should be used routinely in aged care homes. Avoid low or reduced fat products as they are lower in calories and fat soluble vitamins.

Commercial supplements vary enormously, however they can be divided into a few basic categories. Some common ones are listed in the table below.

### Commonly available commercial supplements

<table>
<thead>
<tr>
<th>Type</th>
<th>Company</th>
<th>Product name</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruit based supplements (non milky)</td>
<td>Nutricia</td>
<td>Fortijuice™</td>
<td>Good for residents tired of milky drinks</td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abbott</td>
<td>Resource Fruit™ Beverage</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enlive Plus™</td>
<td></td>
</tr>
<tr>
<td>Puddings</td>
<td>Nutricia</td>
<td>Forticreme™</td>
<td>Suitable for residents on thickened fluids or texture modified diets.</td>
</tr>
<tr>
<td></td>
<td>Abbott</td>
<td>Ensure Pudding™</td>
<td>Different texture to milk</td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Sustagen Instant Pudding™</td>
<td></td>
</tr>
<tr>
<td>Supplements able to be added to fortify existing foods (Usually powders)</td>
<td>Nestlé</td>
<td>Sustagen Neutral™</td>
<td>Fortifying meals, mid-meals and desserts without increasing the</td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Sustagen Hospital Formula with Fibre™</td>
<td>volume of food</td>
</tr>
<tr>
<td></td>
<td>Abbott</td>
<td>Ensure™</td>
<td>*Can be made on milk as liquid supplement</td>
</tr>
<tr>
<td></td>
<td>MG Nutritionals</td>
<td>Proform™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Resource Beneprotein™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutricia</td>
<td>Fortisip powder™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutricia</td>
<td>Polyjoule™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prime Nutrition</td>
<td>Enprocal™</td>
<td></td>
</tr>
<tr>
<td>Pressure Injury specific</td>
<td>Nestlé</td>
<td>Arginaid Extra™</td>
<td>Contain nutrients reputed to aid wound healing if taken in sufficient</td>
</tr>
<tr>
<td></td>
<td>Nutricia</td>
<td>Cubitan™</td>
<td>quantity</td>
</tr>
<tr>
<td></td>
<td>Prime Nutrition</td>
<td>Enprocal Repair™</td>
<td></td>
</tr>
<tr>
<td>1.0-1.5 Cal/ml</td>
<td>Abbott</td>
<td>Ensure™</td>
<td>Used as routine milk based supplements</td>
</tr>
<tr>
<td></td>
<td>Abbott</td>
<td>Ensure plus™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutricia</td>
<td>Fortisip™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Resource protein™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Resource plus™</td>
<td></td>
</tr>
<tr>
<td>2.0 Cal/ml</td>
<td>Abbott</td>
<td>Two Cal™</td>
<td>Med Pass™ programs or residents on fluid restrictions or small</td>
</tr>
<tr>
<td></td>
<td>Abbott</td>
<td>Nepro™</td>
<td>appetites</td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Resource 2.0™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nestlé</td>
<td>Resource 2.0™ plus Fibre™</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutricia</td>
<td>Benecalorie™</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fortisip Compact™</td>
<td></td>
</tr>
</tbody>
</table>

Practical Suggestions to Maintain Weight or Regain Lost Weight
Practical suggestions to maintain weight or regain lost weight

Residents need to make the most of what they eat. This means eating foods rich in calories, protein, vitamins and minerals. When the resident’s appetite is poor this is difficult. The following suggestions may help to maximise protein and calorie intake.

PERSONAL PREFERENCES

- Develop a list of the resident’s likes and dislikes. Finding the kinds of foods they preferred to eat in the past can be a good starting point. Write these likes and dislikes down on the ‘Resident Food and Nutrition Communication Card’. Refer to appendix 1
- If a resident wants unusual foods such as dessert for breakfast or breakfast cereal for morning tea, these wishes should be accommodated. Food enjoyment is important. Maintaining weight should not be compromised by trying to achieve a healthy balanced diet. If the diet is unbalanced a broad spectrum vitamin and mineral preparation is useful
- If residents do not want their main meal but prefer two desserts, then this should be accommodated. If catering to these preferences and the resident isn’t eating a balanced diet, again consider providing a multivitamin and mineral supplement
- Residents often perceive tastes differently. A supplement that may seem very sweet may be just right for one of your residents

MEAL TIPS

- Fortify meals e.g. add milk powder to mashed potato, high protein/high calorie milk for cereal, cheese, sour cream and margarine on vegetables and wheat germ to baked products. Always use full cream dairy products. For more ideas, refer to page 111
- The use of high calorie sauces and gravies with meals can improve protein and calorie intake without affecting the volume of food eaten
- Use protein supplements to fortify soups, drinks, casseroles etc. such as Sustagen neutral™, Proform™, Beneprotein™ or milk powder
- Encourage residents to eat their meal before filling up on low nutrient foods and drinks like tea/coffee
- Serve food on a smaller plate or bread and butter plate so as not to overwhelm residents with large quantities of food. Offer seconds
- Softer meals e.g. casseroles, scrambled eggs, omelettes etc. may be easier to manage than those requiring more chewing, especially if residents tire easily
- When offering high protein/high calorie fluids, provide plenty of variety. There are both commercial and home prepared varieties. When preparing supplements, think of all the different flavourings and fruits that can be used to tempt residents
- If a resident is being assisted to eat, offer the protein component first e.g. main meal before the soup, meat before the vegetables or custard before the fruit. That way, if they tire, they will have eaten the most important part of the meal
- Make coffee with cream

MID-MEALS

- Small, frequent meals or ‘grazing’ may mean more food is eaten throughout the day compared with the traditional three main meals and three mid-meals
- Provide high protein/high calorie fluids, usually milk-based drinks, between meals. Suppertime may be the best time, so as not to interfere with appetite for other meals
- Make mid-meals and snacks really count. Rather than fill up on tea, coffee or water, offer residents who need ‘building up’ milkshakes, ice-cream, flavoured yoghurt, custard, crackers and cheese, cake, hot buttered raisin toast, crumpets, muffins, scones or pikelets with jam and cream or even chocolate biscuits, apple pie and ice-cream and other dessert items
**DINING ENVIRONMENT**

- Make meal time as enjoyable as possible. Refer to chapter 10: ‘Dining Room Ambience’
- If nausea is a problem, keep affected residents away from the cooking smells from the kitchen when food is being prepared
- Allow residents plenty of time to finish their meal. Slow eaters may take up to an hour to finish eating. Reheat food as necessary. Access to a microwave will be helpful
- Arrange staff meal breaks so that they do not coincide with resident mealtimes. ‘All hands on deck’ for staff to help residents with meals is essential
- Encourage families and friends to help residents at meal times. Have all available staff help residents at all meal times. Some aged care homes organise to have nursing change-over coincide with main meals so that there are maximum numbers of staff available to help. Some aged care homes have involved the local community who volunteer to help assist residents at mealtimes
- If possible, discuss with the resident or their representative why it is important not to lose weight and encourage them to eat what they can. Seek family support where appropriate
- Remember that a large proportion of residents are dependent on assistance with eating and so sufficient staff are required to spend the time to assist with eating and drinking. It doesn’t matter how nice the food is and how rich in nutrients, if residents cannot get it from the plate into their stomachs, then all is wasted. Studies have shown that residents receiving mealt ime assistance had better nutritional status than those apparently capable of independent eating. So keep an eye on those apparently not requiring help with eating

**MEDICINES**

- Review medicines that may be affecting appetite
- Use nourishing fluids to take medicines instead of water. (Unless contraindicated)
- Try a ‘Med Pass’ type program where 60ml high protein/high calorie formula (2 calories/ml) is served in medicine glasses and given out as part of the medication round four times a day. Prescribed by the doctor/dietitian it is given as a medicine and can contribute significant amount of protein and calories to resident’s diets
MAKE EVERYTHING EACH RESIDENT EATS AND DRINKS COUNT

There is always something that can be added to the food served to increase the calories and/or protein. These high calorie ingredients can be added to many foods that are supplied in bulk from external catering companies. Better still approach such companies and request them to fortify meals wherever possible.

| CREAM | • whipped  
| • pouring cream  
| • thickened cream | • add to coffee  
|  | • stir through cream soups and sauces  
|  | • serve with fresh or canned fruits  
|  | • add to desserts  
|  | • spoon onto scones, cake, muffins, pikelets  
|  | • stir through rolled oats  

| SOUR CREAM  
SAVOURY DIPS  
AVOCADO  
PEANUT BUTTER | • stir through soups  
|  | • add a dob to cooked potatoes  
|  | • garnish salads and vegetables  
|  | • spread on crackers  

| MARGARINE  
BUTTER  
VEGETABLE OIL | • melt over potato, vegetables, rice or pasta  
|  | • spread thickly on bread, toast, crumpets, muffins, crackers or sandwiches  
|  | • fry meat, fish, chicken, eggs in oil  

| MAYONNAISE  
TARTARE SAUCE | • add a dollop to vegetables and salads  
|  | • spread generously on sandwiches  
|  | • spread on fried/crumbed fish  

| FULL CREAM MILK  
• powder  
• evaporated  
• sweetened condensed | • add to fresh milk and milk drinks  
|  | • stir through cream soups and sauces  
|  | • add to milk, desserts etc.  

| CHEESE  
• grated  
• sliced  
• cheese spread | • stir through egg dishes (scrambled eggs, omelettes)  
|  | • melt over pasta, baked beans and tinned spaghetti  
|  | • sprinkle over vegetables and salads  
|  | • add a slice or spread to sandwiches, toasted sandwiches, crackers  
|  | • stir through white sauce and add to vegetables  

| WHEATGERM | • add to baked products such as cakes, slices etc.  

| SUGAR, JAM, HONEY | • spread generously on pikelets, scones or toast  

| PROTEIN POWDERS  
• Beneprotein™  
• Sustagen Neutral™  
• Proform™ | • add to most foods and drinks such as tea, coffee and milk drinks. Do not add to boiling water as clumping may occur  

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RECIPE

High calorie cakes

These cakes are for people who have a poor appetite or who are underweight. Each cake contains 300 calories and 7 grams of protein. This is the same number of calories as 4 slices of bread or 7 wheatmeal biscuits. Mixture makes at least 24 cakes.

**INGREDIENTS**

- 250g margarine
- 1½ cups sugar
- ½ cup of oil
- 5 eggs
- ½ cup water (enough to make a soft batter)
- 3½ cups full cream milk powder
- 3 cups self raising flour
- 1 tsp vanilla

**METHOD**

1. Slightly melt margarine, add sugar, cream well
2. Add oil and vanilla to margarine
3. Beat in eggs one at a time
4. Add water
5. Fold through combined dry ingredients i.e. milk powder and flour
6. Spoon into muffin or patty cake tins
7. Bake 150-170°C for 10 minutes or until cooked

*Note: cakes burn easily if the oven is too hot*

**VARIATIONS**

- Ice or make into butterfly cakes
- Replace water with concentrated orange juice
- Add 2 cups of dried fruit e.g. dried dates
- Use for fruit batter pudding
- May be cooked in a cake tin and cut up when cooked. Line the cake tin with a couple of thicknesses of baking paper to help prevent burning

**HINTS AND TIPS**

- These cakes are easy to make but may burn easily, so make sure the oven is not too hot
- Cakes may be frozen and are able to be reheated in a microwave
High calorie biscuits

Each biscuit contains 5.5g protein and 155 calories, which is about the same as 2 slices of bread. The protein powder is unflavoured soy protein, available at supermarkets Sustagen Neutral™, Beneprotein™, Proform™ etc. could be used instead. Mixture makes about 40 biscuits.

**INGREDIENTS**

- 400g margarine or unsalted butter
- 2 cups brown sugar
- 4 eggs (beaten)
- 1½ cups wheat germ
- 3 cups self raising flour
- 1 cup full cream milk powder
- 2 cups protein powder
- 100g chocolate bits or grated chocolate OR
- 1 cup of chopped dates

**METHOD**

1. Preheat oven to 150°C
2. Line base of baking trays with at least 2 layers of baking paper (to help prevent burning the bottom of biscuits)
3. Collect all ingredients
4. Melt margarine but do not allow to get hot
5. Add sugar to melted margarine and mix until the sugar is dissolved
6. Stir in the eggs
7. Combine wheat germ, flour, milk powder, protein powder and chocolate then add to the margarine, sugar, egg mix. Fold through thoroughly
8. Place approximately one tablespoon of mixture for each biscuit, onto baking trays. Leave about one centimetre space between each biscuit
9. Using a fork, flatten each biscuit slightly
10. Bake 15-20 minutes. They will still be soft but not raw. Allow to cool and firm before removing from tray
11. When cool place in airtight container

**HINTS AND TIPS**

- These biscuits can be frozen. They could be iced before serving (for extra flavour and calories)
- If dough is too soft to manage, add extra self raising flour - approximately half a cup
MAINTAINING OR REGAINING WEIGHT

High calorie drinks

**ENRICHED MILK**
Makes 8 x 150ml serves
1 litre full cream milk
10 tablespoons (1 cup) full cream milk powder
Sprinkle milk powder on milk and whisk until dissolved.
Per 150ml serve: 150 calories
7.5g protein
250mg calcium
(approx. volume of a Styrofoam cup = 150ml)

**STRAWBERRY FROST**
Makes 15 x 150ml serves
1250ml fruit juice or nectar
500g yoghurt full cream, flavoured
5 cups strawberries
5 tablespoons sugar
Combine all ingredients and blend well.
Serve chilled.
Per 150ml serve: 87 calories
2.9g protein
71mg calcium

**HINTS AND TIPS**
- Use this high protein milk whenever you use normal milk or even in place of water e.g. on cereal, milkshakes, desserts, canned or packet soups, commercial supplement drinks, sauces and omelettes
- Enriched milk can also be used in white sauce, mashed potato, custard, baked custard and creamy soups

**ICE-CREAM SPIDER**
Makes 10 x 150ml serves
1250ml soft drink
5 scoops vanilla ice-cream
5 tablespoons full cream milk powder
Serve chilled.
Per 150ml serve: 105 calories
1.6g protein
57mg calcium

**FRUIT SHAKE**
Makes 10 x 150ml serves
1100ml fruit juice or nectar
8 scoops vanilla ice-cream
10 tablespoons full cream milk powder
5 tablespoons sugar
Combine all ingredients and blend well.
Serve chilled.
Per 150ml serve: 150 calories
3.7g protein
114mg calcium

**FRUIT SIP**
Makes 10 x 150ml serves
800ml fruit juice or nectar
600g yoghurt full cream, flavoured
5 tablespoons sugar
Combine all ingredients and blend well.
Serve chilled.
Per 150ml serve: 120 calories
3.4g protein
111mg calcium
HIGH CALORIE FRUIT SMOOTHIE
Makes 10 x 150ml serves
1000ml milk (full cream)
10 tablespoons cream milk powder
5 scoops vanilla ice-cream
3 medium bananas
5 tablespoons sugar
Combine all ingredients and blend well. Serve chilled.
Per 150 ml Serve: 190 calories
6.6g protein
213 mg calcium

HIGH CALORIE ICED COFFEE
Makes 10 x 150ml serves
Milk (full cream) 1000ml
10 tablespoons full cream milk powder
10 scoops vanilla ice-cream
10 teaspoons instant coffee
5 tablespoons sugar
Combine all ingredients and blend well. Serve chilled.
Per 150 ml Serve: 187 calories
6.7g protein
227 mg calcium

HIGH CALORIE MILO*
Makes 10 x 150ml serves
1000ml milk (full cream)
10 tablespoons full cream milk powder
10 scoops vanilla ice-cream
5 tablespoons milo
Combine all ingredients and blend well. Serve chilled.
* Other powders such as Horlicks™, Aktavite™ or Ovaltine™ are suitable
Per 150 ml Serve: 166 calories
7.0g protein
240 mg calcium
HIGH CALORIE MILKSHAKE

Makes 10 x 150ml serves

1000ml milk (full cream)
10 tablespoons full cream milk powder
10 scoops vanilla ice-cream
100ml chocolate topping

For variety try other flavourings such as malt, yoghurt, fruit, honey, vanilla, caramel, strawberry, lime or spearmint.

Combine all ingredients and blend well.
Serve chilled.

Per 150 ml Serve: 182 calories
6.6g protein
227mg calcium

HIGH CALORIE THICKSHAKE

Makes 15 x 150ml serves

1100ml milk (full cream)
10 tablespoons full cream milk powder
15 scoops vanilla ice-cream
100ml chocolate topping
400ml cream
5 tablespoons sugar

For variety try other flavourings such as malt, yoghurt, fruit, honey, vanilla, caramel, strawberry, lime or spearmint.

Combine all ingredients and blend well.
Serve chilled.

Per 150 ml Serve: 288 calories
5.5g protein
186mg calcium

APRICOT LASSI

Makes 10 x 150ml serves

5 cups apricots canned in juice (including juice)
2.5 cups yoghurt
3 tablespoons honey
Serve chilled.

Per 150 ml Serve: 100 calories
3.4g protein
104mg calcium

1. Woo J, Chi I, Hui E, Chan F, Sham A. Low staffing level is associated with malnutrition in long-term residential care homes.
Food, Nutrition and Dementia
Food, nutrition and dementia

Community Care is enabling older people to stay in their own homes for longer and consequently, when they enter residential aged care, they are older and often have higher care needs. Aged care homes have always had residents with impaired cognition as a result of dementia, but now there is a greater percentage of residents with one of the many forms of dementia.

Addressing food related behaviours that may come with dementia requires a common sense, trial and error approach. Most of the content of this chapter is the result of input from aged care homes and dementia care specialists.

A person centred approach to identifying triggers behind behaviours of concern associated with dementia, is the best approach to maintaining each resident's nutrition and hydration status.\(^{[5]}\)

Poor nutrition is an issue for many residents, but for those with dementia there are extra challenges. Residents with dementia may:

- Not realise it is mealtime
- Have difficulty locating the dining area
- Refuse to eat or open their mouth
- Forget how to chew and swallow or chew constantly
- Refuse to wear dentures
- Suffer from a dry mouth
- Develop an insatiable appetite
- Crave sweet foods
- Need increased calories as a result of pacing or other forms of agitation
- Forget they have already eaten
- Suffer from appetite loss
- Not recognise food or drink so don't know what to do with the meal
- Not remember what to do with eating utensils
- Not be able to use eating utensils because of diminished eye/hand co-ordination
- Spoil a meal by adding too much salt, pepper, sauce etc
- Spit food out, 'squirrel' or pocket food in cheeks or hold food in mouth
- Not be able to keep food or drinks properly within the mouth because of poor muscle control
- Not finish a meal because they are easily distracted, have a poor attention span or are slow eaters and become fatigued
- Be from a culturally or linguistically diverse background and fail to recognise foods that are not part of their original cultural cuisine. These residents may also revert to their first language or dialect, making communication difficult
GENERAL INFORMATION RELATED TO RESIDENT FOOD CHOICE, MEALS AND MEAL TIME INDEPENDENCE

‘Persons with dementia tell us everyday their preferences, sometimes with words, sometimes not. We must only observe and listen exquisitely’. (1)

- Make sure that plenty of time is allowed for meals. Some people may need an hour (or more)
- Ask residents what they would like to eat and drink. Obtaining a diet history from family and/or friends may be necessary
- Resident food preferences may change from day to day, as they age, if health alters or if there are changes to medicines. This means that resident preferences should be continuously updated particularly if food intake and independent eating deteriorate
- When planning menus, variety should be considered. While this is important, it is also important to keep in mind that new and unfamiliar foods may add to confusion of the resident with dementia. It may be advisable to limit menu choices to familiar foods and dishes. If a resident will eat and enjoy baked beans on toast (for example) yet eat very little else, offering a wide variety may be of little value

- Breakfast can be the most important meal for some residents as this is the time when they will eat most. It has been a long time since the evening meal or supper the day before. Some residents may consider a cooked breakfast is an important start to the day and part of their culture. A continental breakfast may not be in the best interest of their nutrition or food enjoyment
- Having a hot breakfast could mean that a light lunch and a cooked evening meal would be an acceptable meal pattern. Some homes report that the residents with dementia are more settled at night if they have a substantial evening meal as hunger can be a trigger for movement during the night. It is recognised that this meal pattern may not suit all residents with (or without) dementia
- Flexible breakfast time may be important for the resident with dementia. Having a later breakfast could mean a resident is more alert and willing to eat. Some homes have reported that they are offering a continental style breakfast later than the traditional breakfast time. An easy to prepare, hot breakfast may also be possible. Foods that can be easily heated in a microwave such as creamed corn, canned mushrooms, baked beans and spaghetti, could be offered

One high care dementia specific care home (and cottage style design) provided breakfast if it was requested by residents whose sleeping pattern was greatly disturbed. This could have meant that their waking time for breakfast was 2:00am. Accommodating this need had significant benefits in terms of resident care, satisfaction and minimising difficult to manage behaviours.

Food should always be available throughout the night.
FOOD, NUTRITION & DEMENTIA

The traditional three meals a day approach to eating may not work. Food and beverages (or the means to prepare them) should always be available. Lots of well chosen mid-meals can be successful. Residents who are up a lot during the night, need to have access to suitable snacks and beverages that don’t necessarily have to be refrigerated e.g. fruit, cheese and biscuits (individual and sealed portions of processed cheddar can be left out of refrigerator), vegemite, jam or honey sandwiches, muesli bars, fruit cake and dried fruit. Some residents will be able to access these foods themselves while others will require staff assistance.

Offering food that the resident likes, any time of day is very acceptable. It could be something as simple and easy as canned fruit and custard or ice-cream in a cone.

Sandwiches are popular and easy to organise. Choose fillings that don’t fall out easily. Breads and fillings that become ‘gluggy’ or sticky in the mouth may have to be avoided as this texture can be difficult to manipulate and swallow e.g. very fresh, soft bread, peanut butter and some cheeses.

Finger foods can play an important part in keeping the resident with dementia well nourished. For more information refer to chapter 20: ‘Finger Foods’.

Food and beverage temperature needs to be safe. Some residents have reduced ability to feel excessive heat and to verbalise complaints. Some residents don’t like cold fluids. Really cold food may not have much flavour. For some residents, cold drinks can stimulate the senses while for others, a warm drink is more acceptable. Having an accessible microwave is advisable. Before serving, stir then check temperature of food and drink that has been heated in microwave.

Age (and some medicine) can diminish sense of taste. Salt, spices and sauces may help. Other flavour-enhancing ideas include the addition of bacon, ham or tart foods such as lemon juice, pickles, mayonnaise. Marinating meat in ‘sweet and sour’ marinades or fruit juice adds flavour.

Some residents may be sensitive to spicy flavours, preferring blander food.

Continuous resident satisfaction monitoring is important.

If a resident has a dry mouth, not only will food need to be moist but additional moisture will probably be necessary. Gravies, dressings, mayonnaise, sauces, custards, cream, butter and margarine are all good options. If a cook/chill catering system is used, extra moisture may need to be added at mealtime. Instant gravies, sauces and custards make this easy. Take care that sauce, gravy etc. does not hide the food.

Some residents have difficulty managing two food consistencies in the one mouthful e.g. vegetable pieces in liquid such as in soup. Even tiny lumps can be an issue. Careful texture modification of such foods may be necessary i.e. blend into a creamy soup.

Tough, crunchy, sticky and dry food textures that could cause choking need to be avoided. Bread may be difficult to swallow as it can stick around the teeth and to the roof of the mouth. Some residents may manage toast or oven dried bread more easily (seek advice from a speech pathologist).

Support mealtime independence by serving food with texture, consistency and form that can be managed with cutlery, assistive devices or fingers (depending on resident’s ability and needs).

A sensory program for the more agitated residents may be of benefit when it comes to dining independently. One aged care home reported great success when such a program was implemented. A couple of hours before meal time, residents were seated in a quiet area. With a background of soft music and lighting, they were treated to hand and shoulder massage. Meals were served in the same area so that there was no disruption to the ‘calm’. The result was a much improved food intake.
• Serve food on plain coloured crockery that contrasts with table covering. Bold, plain, distinctly coloured crockery (especially red) will frame food. Patterned crockery can cause confusion
• Serve one course at a time. Serving beverages at the completion of meal may avoid confusion
• Indicate to resident that food has ‘arrived’
• Make sure all food packaging, coverings and lids are removed
• Residents with dementia will most likely need some type of support at meal time both initially and throughout the meal. Examples of such support include:
  - Having staff sit with residents to prompt, guide and assist
  - Placing utensils in resident’s hand and guiding to mouth
  - Encouraging, reminding and praising
  - Having prompts that residents may associate with food and eating e.g playing ‘Green sleeves’ music as afternoon tea trolley arrives (hopefully with ice-cream cones!)
  - Saying ‘Grace’ before a meal
  - Having fish and chips wrapped in newspaper (greaseproof or butcher’s paper first) will often prompt memory. New and different finger foods could then be presented the same way
  - Allowing residents to smell food cooking may stimulate the desire to eat. Having something as simple as a bread maker baking or coffee percolating could do the trick
• Keep in mind that hunger can trigger challenging behaviour

When it comes to food and food related issues, there are two things the carers must ask themselves:
1. Will it improve quality of life?
2. Will it minimise distress and suffering?

‘There was a resident with Alzheimer’s disease and agnosia, which meant that she didn’t know what to do with her meal. Placing a fork in her hand and pointing to the food did not cause any action. When it was demonstrated what she needed to do, she mimed very well. She wanted to eat. She had the physical capability to eat’. (2)

As dementia progresses, residents may have difficulty swallowing. This will need to be assessed by a speech pathologist. Food and beverage texture may need to be modified. Staff will also need advice on correct positioning of resident and the best way to assist swallowing. No matter the level of assistance, clear instructions on how to approach the resident and how to offer food and fluids should be readily available to staff.

If a resident can no longer eat independently and needs to be fully assisted:

• Use safe utensils. No sharp prongs or edges. This probably means a ‘special’ spoon
• Position of resident should be comfortable and safe for eating. A speech pathologist will provide recommendations
• The person assisting should sit to the side of the resident and at eye level
• The meal should be described if necessary and resident asked what they would like with each mouthful. If this is not possible or appropriate, explaining what food is to be given next would be good practice
• Each mouthful of food should be manageable in terms of safety and resident comfort
• Food should not be pureed unless necessary. A speech pathologist will be able to advise. When served, pureed, foods should not be mixed together. For more information refer to chapter 21: ‘Swallowing and Food Texture’
• Meal time should not be hurried
• The resident (and not the person assisting) should decide when they have had enough
• Only one resident should be assisted at a time and if possible the same person should assist for the duration of the meal
Continued observation and evaluation of resident behaviour and ability will direct care plans that encourage and nurture resident independence.

MAINTAINING HYDRATION

Poor hydration can result in urinary tract infections, constipation and exacerbation of dementia symptoms.

Maintaining adequate fluid intake is challenging in both summer and winter. In winter residents may be less inclined to drink and staff may overlook dehydration that occurs when heaters and air conditioners are turned on. It is helpful to know that fluid includes water, soft drink, milk, jelly, juice, tea, soup, ice-cream, cordial, coffee as well as custard. Active persistence is necessary to help ensure adequate fluid intake.

Possible solutions include

• Give poppers, ice blocks, icy poles and even water ice blocks
• Assign a staff member to specific resident(s) and decide how frequently to give fluid
• Pouring a liquid into a cup while resident watches may be a prompt to drink. Water already in a glass is difficult to see
• Drinking cups should be easily managed and allow an appropriate flow of liquid. Handles should be big enough for different size fingers. One size may not suit all. No handles may be preferable for some. Bendable, wide straws are better than narrow straws that require major effort to suck liquid (especially if liquid is thickened)
• The resident on thickened fluid will need to be offered liquid more frequently to make up for the fact that some of the volume is thickener. Residents who find thickened fluid difficult to drink may be happier using a spoon
• When giving a drink to one resident, give a drink to others. Most people don’t like to miss out
• Have a ‘cuppa’ with residents, i.e. modelling behaviour
• Offering beverages after the meal may avoid confusion and improve fluid intake

For more information refer to chapter 4: ‘Hydration Needs’

WHAT ABOUT ALCOHOL?

For someone who has been in the habit of having alcohol at meal time, continuing the ‘habit’ may be beneficial. It is the habit that is important and not so much the alcohol. Why not try alcohol free champagne, sparkling grape juices, Clayton’s tonic™, or a less than 1% alcohol beer. All could prove to be beneficial. Obviously these drinks contribute to the fluid intake.

RESTLESS RESIDENTS

Constant activity accompanied by poor food intake usually results in weight loss. Challenging behaviour may be as a result of hunger. The following ideas may help address this concerning issue.

• Some residents will sit for a short time in a chair with a tray in front of them
• An restless resident may need to be separated from others in the dining room to minimise distractions
• Setting the table in a way that is familiar to a resident’s past may be the cue to sit down and eat. Simply using a tablecloth may be enough
• Provide food that may be safely eaten ‘on the move’. Staff could hand residents a piece of food or a drink in a cup with a lid every time they walk past. This should help maintain an acceptable level of nutrition and hydration without interfering with residents’ desired activity. See chapter 20: ‘Finger Foods’ for ideas
• Distracting the resident for a short period of time may be achievable (time enough for them to stop and eat something)
• Some carers report that warm drinks like Horlicks™ or Milo™, if made with milk, have a calming effect and that residents often settle after being given a hot drink with bread and butter. Obviously, trial and error is in order
• Active residents may be exhausted and go to bed before the evening meal. It is important for these people to be provided with calories to replace this meal. Give high protein, high calorie beverages to those who go to bed early. Keep spare calorie-dense meals e.g. mornays, quiches, high calorie bars on hand in case the resident will eat before going to bed or if they wake and want to eat during the night
PEG FEEDING AND ADVANCED DEMENTIA

(Percutaneous Endoscopic Gastrostomy – PEG feeding is the placement of a feeding tube directly into the stomach).

Weight loss is commonly seen in advanced stages of dementia. Aged care homes may fear scrutiny if these residents lose weight or residents families may wrongly interpret ‘no PEG feeding’ with ‘do not feed’. An advanced care plan regarding the placement of PEG tubes would be ideal so that a resident’s wishes can be fulfilled.

While putting in a PEG might look like the aged care home or the family is doing something, PEG feeding in advanced dementia has not been shown to prolong survival, reduce the risk of aspiration, maintain skin integrity, improve nutrition or quality of life.4

With a person centred approach to care, ‘comfort feeding only’ may be better. ‘Comfort feeding only’ states what steps have to be taken to ensure resident’s comfort through an individualised food and hydration plan. Comfort feeding via careful assistance with meals offers a clear goal oriented alternative to tube feeding.5

Careful hand feeding allows for continued social and physical contact even if the goal is not to provide 100% nutrition. A resident can still enjoy the tastes and smell of food. Never force a resident to eat or drink.

ORAL HYGIENE

Oral hygiene is important to prevent tooth and gum disease that may further reduce food intake.

Finally

- Encourage family to help if they are visiting at mealtime. Guide if necessary
- Trained volunteers may be able to help at mealtime
- If possible, have all staff on duty at meal times even from the food safety point of view
- Keep residents with dementia on normal food texture as long as possible. Muscles used to speak are the same as those used to chew and chewing helps to keep those muscles functioning. Unnecessary provision of puree or soft diet may lead to premature loss of speech
- Staff need to continuously observe and evaluate in order to provide most appropriate care
- Individual assessment (including pain assessment) is important because of the various levels of functioning
- Clear care instructions for individual residents should be easily accessed


Finger Foods
Finger foods

For residents who have difficulty using, or can no longer use cutlery (or other eating utensils), finger foods may be the best way to provide nourishment, food enjoyment and (the degree of dignity that comes with) independence. While some residents may need to be assured that this way of eating is acceptable, others may be comfortable with finger foods especially if using hands is a familiar and traditional way of eating. Appropriate personal hygiene will need to be in place along with plenty of napkins or wipes.

Finger foods can be ideal for residents who find it difficult to sit at the meal table for any length of time. Staff of aged care homes have reported that finger food is the best way to get some residents with dementia to eat especially if they are ‘pacers’. Finger foods can be prepared and served five or six times a day. It is advisable to monitor and record what foods are eaten by each of these residents to ensure they are eating enough.

It is important to consider food safety in regard to the possibility of choking. Make sure that seeds, skin, bone, gristle and thick fruit pith etc. are removed. Small, slippery food items such as cocktail frankfurts, cherry tomatoes and grapes are choking hazards.

**SUITABLE FOOD IDEAS FOR BOTH MAIN MEALS AND MID-MEALS INCLUDE**

**Vegetables**
- Chunky potato chips, potato wedges, chat potatoes, Duchess potato, potato fritters, and potato cakes (potato scones)
- Pieces of cooked vegetable e.g. sweet potato, carrot, Queensland blue pumpkin (or other firm varieties), Pontiac potato (or others that hold shape when cooked), broccoli and cauliflower florets
- Baked vegetable slices e.g. zucchini slice
- Vegetable pikelets and pancakes
- Corn fritters
- Vegetable pasties and pies. Bread cases or filo pastry could be used as well as short crust pastry
- Vegetable ravioli, vegetable gnocchi
- Bread cases filled with vegetable mornay e.g. asparagus, corn or mushroom
- Salad vegetable chunks such as cucumber sticks, tomato wedges and celery sticks. Chunks are usually better than slices as slices can be difficult to pick up and get into mouth if they are floppy

**Fruit**
- Individual fruit platters; serve bite size pieces e.g. orange and mandarin segments, pear and apple pieces
- Small fruit muffins
- Individual fruit pies
- Fruit flummery served in ice-cream cones
- Banana fritters
- Pieces of fruit upside down cake (with or without icing)

**Dairy**
- Ice-cream in cones
- Frozen yoghurt in cones
- Flavoured milk ices and ice-creams
- Cheese sticks, cubes, slices, dips
- Macaroni cheese in bread cases
- Instant pudding (made on full cream milk or 50/50 milk and cream) served in ice-cream cones
- Milk in tetra paks
- Firm milky flummery served in ice-cream cones
**Finger Foods**

**Meat**
- Meat balls (small rissoles) – veal, beef, pork, chicken, fish
- Fritters
- Chicken drumsticks, lamb cutlets (remove fat or gristle that may cause choking)
- Bite size pieces of tender meat or poultry
- Small fish cakes (salmon rissoles)
- Bite size chunks of sausage. It may be necessary to remove skin. Skin free sausages are available
- Sausage rolls
- Individual meat pies such as party pies, shepherd’s pie or cottage pie. Bread cases could be used instead of pastry
- Meat ravioli
- Fish cocktails

**Egg**
- Quiche – individual or slices
- Hard cooked egg whole or halved
- Thick slices could be suitable
- Omelette pieces
- French toast

**Cereals**
- Soft muesli bars and breakfast bars
- Oatmeal slice
- Nutri-Grain™ or similar cereal that can be picked up easily

**Other**
- Crumpets
- Sandwiches that don’t fall apart (and cut into appropriate size)
- Toast, plain and fruit bread, muffins
- Pizza
- Spring rolls
- Chicken nuggets
- Pasta e.g. large spirals
- Pancakes and pikelets

*NOTE: These finger foods are ideas only. They include both commercial and ‘home made’ products. Some could be prepared in quantities to freeze. Some will need sauce or gravy. Not all will be suitable for everyone.*

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**A sample one day menu, incorporating some of the finger food ideas**

<table>
<thead>
<tr>
<th>BREAKFAST</th>
<th>MORNING TEA</th>
<th>AFTERNOON TEA</th>
<th>SUPPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholemeal or high fibre toast</td>
<td>Apple muffin</td>
<td>Pikelets and spread</td>
<td>Milo</td>
</tr>
<tr>
<td>Hard boiled egg</td>
<td>Milk, tea, coffee</td>
<td>Cheese sticks</td>
<td>Banana</td>
</tr>
<tr>
<td>Banana</td>
<td></td>
<td>Milk, juice</td>
<td>Biscuits</td>
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<tr>
<td>Milk</td>
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<tr>
<td>LUNCH</td>
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<tr>
<td>Meat balls with gravy or sauce</td>
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<tr>
<td>Potato wedges</td>
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<tr>
<td>Mini squash</td>
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<tr>
<td>Stringless green beans (left whole or cut in half)</td>
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<td></td>
<td></td>
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<tr>
<td>Fresh fruit pieces</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Ice-cream cone</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Milk, tea, coffee</td>
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<tr>
<td>TEA</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Zucchini slice</td>
<td></td>
<td></td>
<td>Milo</td>
</tr>
<tr>
<td>Cubes of ham</td>
<td></td>
<td></td>
<td>Banana</td>
</tr>
<tr>
<td>Wedges of tomato or cherry tomatoes cut in half</td>
<td></td>
<td></td>
<td>Biscuits</td>
</tr>
<tr>
<td>Slice of Apple Charlotte (or apple cake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk or juice</td>
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<td></td>
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</tbody>
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**FURTHER INFORMATION**

_Finger Foods: A Three Week Menu and Recipes_
Yvonne Coleman, Nutrition Consultants Australia, PO Box 353 Fairfield Vic 3078
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Swallowing and Food Textures
Swallowing and food texture

Texture modified food and thickened fluid is prescribed for people suffering from dysphagia (swallowing difficulty). Dysphagia has many causes including Parkinson’s disease, cancer, stroke, dementia, neurodegenerative diseases such as motor neurone disease and the side effects of some medicines. Reduced or excess saliva production and chewing difficulties may also contribute to dysphagia.

As a result of muscles in the mouth and throat not working efficiently, eating and drinking becomes difficult. Consequently there is a risk of food entering the airways.

Because residents with dysphagia have impaired chewing and swallowing they may be afraid of eating. Consequently they may reduce their food intake or stop eating altogether thus putting themselves at risk of both malnutrition and dehydration.(1)

The following information is an overview of texture modified diets. A speech pathologist and a dietitian should be consulted in order to fine-tune the requirements of individual residents. Swallowing ability should be regularly reassessed by a speech pathologist to enable ongoing provision of safe fluid and food of appropriate texture.

The ‘Australian Standardised Terminology and Definitions for Texture Modified Foods and Fluids’, developed by the Dietitian’s Association of Australia and Speech Pathology Association, are used throughout this chapter.(1)

**SIGNs OF DYSPHAGIA INCLUDE**

- Drooling and loss of food or fluid from the mouth
- Choking and coughing before, during or after swallowing
- Wet gurgly voice after swallowing
- Taking a long time to chew and swallow
- ‘Pooling’ of food in sides of the mouth
- Partially eaten or uneaten meals
- Fear of eating and swallowing
- Regurgitation
- Gradual weight loss (could also be caused by other things)
- Frequent chest infections

Staff need to be aware of signs of dysphagia

**POSSIBLE CONSEQUENCES OF DYSPHAGIA**

- Food, fluid, medicine or saliva entering the airways is aspiration. Aspiration may be silent or cause coughing. If oral hygiene is poor, the bacteria aspirated in the saliva can cause pneumonia
- Coughing episodes that are frightening, painful and tiring
- Choking that totally blocks airways making breathing, coughing and speaking impossible
- Gradual weight loss, malnutrition, dehydration and loss of muscle mass (increasing the risk of falls) and reduced energy
- Compromised immunity resulting in a greater risk of infection and poor wound healing
- Reduced quality of life

When swallowing problems occur, a speech pathologist should be consulted to assess a resident’s swallowing function and determine appropriate care. This will include advice on food texture, consistency of fluids, feeding and swallowing strategies and correct positioning of a resident before, during and after eating or drinking. A speech pathologist will also advise in regard to the timing of reassessment.
It is important that staff are trained in management and supervision of mealtimes for all residents especially those with dysphagia.

Oral hygiene practices need to be safe for residents with dysphagia. Once assessed by a speech pathologist, an oral care plan should be developed. Ideally, this will be done in conjunction with a speech pathologist, a dentist or a registered nurse who has completed training in oral and dental health. Oral hygiene practices such as rinsing residents’ mouth with water at the conclusion of a meal may not be safe and using non-foaming toothpaste may be preferable to a foaming toothpaste.

Residents on texture modified diets may experience feelings of deprivation and isolation as a result of being given ‘different’ food. To help alleviate these feelings:

- The menu should be planned so that most of the main meal and mid-meal choices can be successfully texture modified
- Where possible present food intact. If food needs to be cut up, use a very sharp knife and cut carefully so that food retains its form (as much as possible)
- If possible, use the same crockery and cutlery that is being used by everyone. Sometimes special equipment and plate style is needed to support independence
- If assisting a resident to eat, ask what they would like next from the plate, explain what the next mouthful of food will be and make sure the meal is not hurried
- Sit down next to resident. Don’t stand when assisting to eat as this encourages resident to tilt their head back. This opens airways and may cause choking

Residents who are on a texture modified diet often don’t eat enough to obtain the required amount of calories and nutrients. A dietitian should be consulted to assess nutrition and hydration requirements of each resident with dysphagia and to advise on meal plans so that a nutritious and appealing, texture modified menu is offered.(2)

Texture modified diets

‘By determining the cause and severity of the dysphagia, health professionals can determine the food texture and fluid thickness safest for an individual to swallow’.(1)

Appropriate food texture and liquid thickness make chewing and swallowing easier and safer. It is essential that once a resident is assessed by a speech pathologist, the recommended food texture and liquid thickness, is adhered to.

National Australian standards for texture modification and thickened fluids have been developed. This will make life easier and safer for both carers and people with dysphagia. Australian National terminology, labels and descriptions highlight duty of care and remove any ‘guess work’. Catering staff of aged care homes that cook on-site are now able to access clear and consistent guidelines when modifying food texture and thickening fluid for residents with dysphagia. It may be advisable for catering staff to have a speech pathologist explain and clarify the various grading scales. Aged care homes that outsource food will be able to choose providers that comply with the national standards for texture modification. As manufacturers of commercially available products will also adhere to the same standards, aged care homes can expect to receive compliant food texture and fluid thickness.

When modifying food the texture, taste, food value, calories and eye appeal should not be compromised. Food should look like food and meals should be enjoyable. Likes and dislikes need to be catered for and meal satisfaction evaluated. The texture modified menu should detail main meals, mid-meals and beverages so that nutrition and appeal is more easily assessed.

Food texture modification grading scales are:
Texture A – Soft
Texture B – Minced and Moist
Texture C – Smooth Pureed
TEXTURE A – SOFT

This grade includes foods that are naturally soft or, when cooked, become soft enough to be easily cut up with the side of a fork and easily chewed but not necessarily bitten. Soft texture foods should be moist. Gravies and sauces of correct thickness level will enhance moistness. The size of food pieces when cut up should be about 1.5 x 1.5 centimetres. Food may have to be cut up by staff especially if cutting up food tires the resident to the point where they are too exhausted to eat.

Beef, lamb, veal and pork dishes

Before cooking, meat can be softened by marinating, mincing, pounding or cutting across the grain.

Use moist cooking methods such as stewing or casseroling. If dry methods e.g. roasting are used, leave some fat on meat to help produce a moist product; do not overcook. Meat should be soft when cooked and there should be no bones, gristle or chewy fat. Always serve with gravy or sauce. If sausages are on the menu, remove skin before serving. If in doubt as to the suitability of a dish for a soft diet refer to the definition of a soft texture.

When making mince dishes such as rissoles and meatloaf, premium quality mince tends to produce hard, dry results. To get a softer result:

• Use three quarters mince to one quarter sausage mince
• Use mince that contains about 15% fat for a soft, palatable result. This grade mince is suitable for dishes such as Shepherd’s pie

Fish

• Use fresh or smoked fillets (boneless, skinless). Canned fish is suitable. Bones of canned fish can be removed or mashed well and eaten
• Steam, poach or bake fish in foil or covered container to obtain a soft result that can be easily broken up
• To moisten add white sauce, cheese sauce or Tartare sauce
• Use canned fish in mornays and fish cakes
• Use mashed sardines, salmon or tuna on soft bread and butter for sandwiches

Chicken and chicken dishes

• Stir fry chicken tenderloins. If stir frying breast meat, cut into small pieces across the grain before cooking and take care not to overcook as breast meat can become tough and dry. Serve with gravy or sauce
• Baked chicken may be suitable for some soft diets. Leave the skin on during cooking as melting fat helps keep the meat moist. Remove skin before serving and make sure there is no soft gristle through the meat. Serve with gravy or sauce
• Grilling can cause chicken meat to become dry, especially on the surface. Chicken thigh fillets grill quite well without drying if basted during cooking
• Gentle moist cooking e.g. stews, casseroles, fricassee and steaming will produce soft, tender results if not overcooked. Remove skin before cooking as moist cooking makes it difficult to bite and chew, thus creating a choking hazard

Eggs

Suitable egg dishes include:

• Savoury baked custard
• Scrambled egg. Do not over cook as this causes a tough, lumpy watery result
• Omelettes are suitable for some. Take care not to overcook as this causes the surface to dry out and become chewy. A sauce, for example cheese sauce should be served with omelette
• Soufflés may be suitable especially when served with a sauce
• Quiche with a soft pastry base or quiche without a base

Eggs and egg dishes should be cooked by low or moderately low temperatures to help prevent over cooking and toughening. Avoid keeping eggs and egg dishes hot for any length of time before serving as this may toughen result. Fried eggs are not suitable as the whites can become too firm and sometimes dry at the edges.
Cheese

- Dry cheddar cheeses incorporate well into sauces. Low fat cheddar cheeses do not blend well. Low fat dairy products are not recommended for residents in aged care homes.
- Cheeses that become sticky and ‘gluey’ in the mouth when eating are not suitable.
- Cottage and ricotta cheeses are suitable for a soft diet.
- Cooked cheese on top of dishes such as mornays or savoury ‘toppers’ is not suitable as it becomes stringy, tough hard or even crisp.

Vegetables

- Softly cooked vegetables are suitable; cut up or mash then moisten with sauce, sour cream, butter or margarine. Flavourings such as garlic, yoghurt, parmesan cheese or cinnamon could be added depending on taste of the resident.
- Raw or crisp or floppy salad vegetables even if grated or chopped, are not suitable.
- Soft salads such as roast vegetable salad, cooked beetroot salad, potato salad and pasta salad can be included in a soft diet.
- Cooked and mashed legumes e.g. butter beans, soy beans or canned baked beans can be included in a soft diet. Outer skin needs to be tender, remove if tough. The skin of broad beans can be removed and the centre mashed.
- Hearty, thick vegetable soups, especially crème soups based on milk, are an important menu item. The texture and size of any lumps of vegetable or other ingredients in the soup will need to be soft and small. Blend vegetable soup for residents who cannot cope with mixed consistency or are on thickened fluid.
- Stringy and fibrous vegetables are not suitable e.g. celery, asparagus stalks (tips are usually soft) spinach stalks and cabbage.

Fruits

- Soft canned fruits such as plums, apricots and fruit salad are suitable as long as there are no seeds and skin is soft.
- Stewed, peeled fresh fruit. Apples and peaches generally soften well. Although pears can remain firm they may be soft enough when cut into small pieces.
- Stewed dried fruit such as peaches and apricots are a change from fresh fruit. Cut up once cooked. Ensure the skin is tender and cut through properly otherwise it can ‘string’ pieces of the fruit together.
- Soft fresh fruit e.g. banana, avocado, paw paw, mango, ripe pear, soft melon, ripe plums and peaches (without the skin) are usually suitable.
- Hard, crunchy or fibrous fruits such as dried fruit, raw apple and pineapple are not suitable.
- Fruits such as whole grapes and whole cherries can easily cause choking. Make sure that they are not in commercially prepared fruit salad.

Bread and cereals

- Soft bread and soft bread sandwiches without crusts can be offered. When in the mouth soft white bread can become ‘doughy’ and difficult for some residents’ to manage. Wholemeal bread may be a suitable alternative. Sandwiches need moist fillings. Grainy, crusty or chewy bread is not suitable.
- Breakfast cereals that soften easily with milk are suitable. Breakfast biscuits such as Weet Bix™ or Vita Brits™ and Nutri-Grain™ soften well especially with warm milk. There should be no hard lumps, seeds or nuts.
- Semolina, polenta and rolled oats are valuable inclusions. Oat flakes that are small or more processed may give a better result. To increase their nutritional value cook using milk instead of water.
- Medium grain rice cooked until soft and mushy.
- Well cooked, bite sized pasta such as shell pasta, small macaroni and riceroni are suitable.

‘Chewing stress required for bread is similar to that of a raw apple. For this reason individuals who fatigue easily may find bread difficult to chew. Bread requires moistening with saliva for effective mastication. Bread does not dissolve when wet; it clumps. It poses a choking risk if it adheres to the roof of the mouth or pockets in the cheeks’(6)
Desserts
Most milk based and soft fruit based desserts will be suitable

- Creamed sago, tapioca or rice (use medium grain rice). Ground rice makes a creamy dessert
- Baked egg custard, baked rice custard, bread and butter custard (no crusts)
- Flummery, blancmange, junket, mousse
- Stewed or soft canned fruit
- Soft cake puddings such as fruit upside down cake and steamed pudding. Serve with custard, cream or ice-cream
- Yoghurt, Fruche™
- Trifle (no coconut). Cover custard while it is cooling to help prevent ‘skin’ forming. Before serving remove any custard skin that may have formed on custard
- Lemon sauce or lemon delicious pudding
- Sweet dumplings and cream or custard. (savoury dumplings are good in stews)
- Soft, cake-pastry pies and flans e.g. fruit, caramel, pumpkin, chocolate, lemon

Mid-meals
Mid-meals should make a significant contribution to the daily food intake

- Soft, fresh or stewed fruit. Fruit alone will not provide many calories. Offer other suitable food as well e.g. thick custard, ice-cream or yoghurt
- Soft, moist plain cake
- Soft baked products e.g. scones (cover with plastic wrap as soon as they are out of the oven to help produce a soft crust). Soften with milk, cream or custard if necessary
- Soft bread sandwiches, moist fillings, no crusts
- Biscuits that soften when moistened. To do this, place biscuit in a dessert dish and cover with juice, cream, ice-cream or custard and allow to soften evenly
- Fruit smoothies, Fruche™, yoghurt (may contain small pieces of soft fruit)
- Milk puddings and desserts
- Suitable breakfast cereals could be offered

TEXTURE B – MINCED AND MOIST
A minced and moist texture modified diet consists of soft foods that are easy to chew using the tongue to break up the food.
Food needs to be soft, minced, mashed and cut into very small pieces approximately 0.5 centimetres in size. Naturally soft foods such as ripe bananas, mangoes and avocados can be cut up, mashed and included in a minced and moist diet.

Someone who is on a minced diet may still be able to manage small variations in food texture. Meat may need to be minced while vegetables are cut up. A thick puree containing small soft, round lumps could be offered.

Meat (beef, veal, lamb and pork) fish, poultry (chicken and turkey)

- Minced or finely cut up very tender meat, chicken or fish. No skin, gristle or bones. As moistness is important, serve with sauce or gravy. If necessary, blend casseroles to reduce particle size. Do not add tough, fibrous or stringy vegetables such as celery, peas, corn and chick peas to moist meat dishes.
  Remove tomato skins before adding to casseroles and stews (or use canned skinless tomatoes).

Eggs

- Include soft scrambled egg. Cook using low to moderate heat to obtain a soft result and remove from heat as soon as cooked. Avoid keeping hot for any length of time as this may cause the egg to toughen and shrink, squeezing out some of the liquid which can be a problem for those people on thickened fluids
- Soft quiche can be offered as long as the pastry is very soft and there are no hard lumps, such as bacon chunks. The quiche may need to be mashed just prior to eating. Quiche can be made without a pastry base

Cheese

- Soft cheese with small lumps such as cottage and ricotta cheese can be offered. Cheddar cheese can be incorporated into a white sauce
Vegetables

- Softly cooked vegetables diced and easily mashed with a fork. Serve with butter, margarine, white sauce or sour cream. Vegetables that require chewing as corn, peas and cabbage are not suitable
- Well cooked legumes such as butter and haricot beans (baked beans), that soften and mash easily. The outer skin must be soft or removed
- If serving tomato, the skin will need to be removed and the tomato will need to be soft enough to mash

Fruits

- Soft fresh fruit, diced or mashed with a fork is suitable e.g. banana, very ripe pear, ripe mango, soft avocado
- Canned and stewed fresh cut into small pieces or pureed can be offered. Tough skin will need to be removed. Juice in canned or stewed fruit and fruit puree may need to be thickened for the resident on thickened fluids

Breads and cereals

- Soft moist baked products such as sponge and plain cake. Soften completely and evenly with custard, cream or ice-cream
- Biscuits that soften easily and evenly if soaked in custard, fruit nectar, cream or ice-cream
- Bread (without crusts) that has been soaked in cream, custard, milk, jelly (jelied), juice or gravy until it is completely soft and able to be eaten with a spoon can be included
- Breakfast cereals should be smooth and have no large or hard lumps or ‘bits’. Included would be soft rolled oats, soft creamy cereals such as instant porridge, semolina and fine rice cereal. Breakfast biscuits such as Weetbix™ and Vitabrits™ when completely softened with warm milk, are also suitable
- Well cooked, small pasta (as long as the size is 0.5 or less) e.g. risoni, should be used in dishes such as macaroni cheese
- Well cooked medium grain and risotto rice holds together well and can be offered

Desserts

- Smooth, milky desserts are suitable e.g. custard, bread and butter custard (no crusts), mousse, blancmange, milk puddings, yoghurt and ice-cream. Modification of thickness may be needed for some of these desserts if resident is required to have thickened fluid
- Serve cake that has been moistened with cream, custard, fruit juice or jelly. Trifle would be a suitable dessert and includes both custard and cake. Fruit in the trifle should be soft and cut up or pureed
- Desserts of soft fresh fruit with custard and/or cream fruit. The fruit will need to be cut up into small pieces, minced or mashed

Mid-meals

Mid-meals should make a significant contribution to the daily food intake. They are as important as main meals.

Foods that could be offered include

- Soft fruit, canned or fresh that has been mashed. As fruit alone does not provide many calories, also offer other suitable food such as custard or yoghurt
- Soft plain cake that has been soaked in cream, juice or custard
- Biscuits that can be softened evenly by soaking in cream, milk, custard or ice-cream
- Soft breakfast cereal
- Custard, Fruche, milk pudding or other milky desserts
- Milk, milk shakes and smoothies (as long as thickness is acceptable for residents on thickened fluids)
TEXTURE C – SMOOTH PUREED

Pureed food is smooth, moist and lump free

A smooth pureed diet may be recommended by a speech pathologist, for people who have difficulty biting and chewing. Pureed food can be easier to hold in the mouth than particles of dry food. Pureed food should not be given to residents just because they are slow eaters or because it makes easier for staff assisting residents to eat. Puree food should not be given because soft or minced menu choices are not available. A resident should not be kept on a puree diet any longer than is necessary. The speech pathologist is able to reassess and recommend texture changes if appropriate.

As pureed diets can be monotonous leading to a lack of interest in food, it is important that pureed food be varied, visually appealing and palatable.

As far as possible the main menu should be designed so that most items lend themselves to being pureed. This may help to maintain variety and interest in food and reduce feelings of social isolation (it should also be good news for food service staff!).

Pureed food should

• Have a smooth even texture
• Be cohesive enough stay on a spoon or hold together when plated
• Form a peak like whipped cream
• Stay in the mouth long enough for resident to swallow safely

Pureed food should NOT

• Be dry, sticky or gluggy
• Be sloppy, runny or watery
• Vary in consistency. There should be no lumps. A fine, grainy texture is acceptable e.g. breakfast semolina
• Liquefy in the mouth as jelly or ice-cream does

Not all foods need to be pureed. Some come ready to serve while others mash easily. Foods ready to serve include plain or flavoured yoghurt (no fruit bits), mousse, thick stirred custard, Fruche™, blancmange, soft scrambled egg, rice cereal, fine texture cooked cereals such as semolina (especially nutritious if made with milk instead of water), instant mashed potato. Foods that mash easily include well cooked potato, sweet potato and butternut pumpkin as well as soft fruit such as banana, paw paw and avocado.

Meat (beef, veal, lamb and pork), fish and poultry (chicken and turkey)

Make sure that there is no skin, bones, gristle or lumps of fat present. Puree to pâté consistency then gradually add appropriate liquid (not water) to obtain a thick moist consistency. It may be preferable to add the liquid before pureeing.

Vegetables

• Any vegetable is suitable if, when pureed or mashed, the result is smooth and lump free. Well cooked potato need only be mashed. Blending potato can result in a sticky product. For a change in flavour, mash potato together with sweet potato or butternut pumpkin provides a good puree texture. Instant mashed potato is suitable and very palatable
• If the vegetable puree is too thin or there is a risk of liquid separating out, add instant mashed potato or rice cereal to establish and stabilise correct texture
• Blended or strained vegetable soups can be offered as long as the thickness is suitable for those residents on thickened fluid
• Baked beans can be pureed. If the result is a bit too thick, a little milk could be added
**Fruit**

- Most stewed fruits are suitable to puree. Before pureeing stewed or canned fruit, drain well. If result does need to be thickened, fine soft plain cake crumbs or rice cereal are usually suitable.
- Fresh fruits that mash well or can be offered. Examples include ripe banana, soft avocado, ripe mango and paw paw.
- Commercial pureed fruits are available.
- Pulp free fruit juice can be given. Thicken as necessary.

**Breads and cereals**

- Smooth, lump free breakfast cereals such as semolina and pureed porridge are suitable. Smooth rice cereal is also suitable.
- Rice and pasta can be pureed, if combined with a sauce or milk that is part of the dish e.g. macaroni cheese.
- Soft moist plain cake and very soft cake-pastry can be offered if, after soaking in custard, fruit puree, ice-cream or cream then mashed, they are soft and smooth.

**Dessert**

- Smooth milk pudding desserts, custards and smooth yoghurts are suitable as long as they are compliant for residents who are also on thickened fluid.
- Jelly and ice-cream cannot be offered. As both of these items melt in the mouth, they are not suitable for residents who are on thickened fluid.
- Plain cake softened by soaking in custard, fruit puree, cream then mashed, could be served with milk puddings.

**PUREE MID-MEAL IDEAS**

As the food intake and nutrition of residents on a puree diet can be compromised, it is important to ensure that a pureed diet includes substantial mid-meals. A serve of pureed fruit alone would not be considered enough.

**Suitable menu items include**

- Fruche™, Dairy Snack Packs™, Yogo™
- Yoghurts – natural and frozen (those without fruit pulp)
- Custard
- Instant mousse, instant puddings (made on milk)
- Flavoured milks and lump free fruit smoothies
- Fruit puree
- Forticrème™
- Ensure™ puddings
- Sustagen™ instant pudding powder
- A beverage should also be served; preferably a high protein/calorie dense drink, e.g. Milo™, Malt, Nesquick™, Sustagen™ and coffee made on milk
- Breakfast cereal such as pureed Weetbix™ or porridge (porridge is especially nutritious if made on milk)
- Puree menu dessert items

Importantly, ensure that all food containing fluid (e.g. soup) and all beverages offered, comply with any requirements for thickened fluids.
APPEARANCE OF PUREED MEALS

- Eye appeal of a meal is important for everyone. Residents on a pureed diet may have a poor appetite and food that looks good is more likely to be eaten.
- Importantly, foods should be pureed individually and served separately, not mixed together. The experience of tasting each food is usually an important aspect of eating.
- Presenting a pureed meal need not be restricted to ‘scoops’ of food on the plate. Certain foods could be layered in clear containers. Desserts served ‘parfait style’ are very attractive. Piping bags can be used in combination with scoops. Better still, the use of food moulds give food a realistic appearance. Food moulds are available from www.pureefoodmolds.com.

Be aware that food moulds may not have the capacity to hold the recommended serve size of the various foods being served. If this is the case, rather than increasing the number of moulded foods on the plate (which would probably prove to be overwhelming and off-putting to the resident with a poor appetite) fortify the pureed food to increase the nutritional value. A dietitian will be able to advise:

- Garnishes of appropriate texture and condiments such as apple sauce, will further improve appearance of the meal.
- Some foods may require addition of a thickener in order to prevent loss of water when being reheated.
- Add a small amount of protein powder to the puree mix as well, some margarine to increase the amount of protein and calories of the pureed food.
HOW TO PROVIDE EXTRA FIBRE FOR RESIDENTS ON A PUREED DIET

The fibre content of a pureed diet may need ‘boosting’. The following suggestions may help:

- Serve high fibre breakfast cereal e.g. pureed rolled oats, completely softened and smooth Weetbix™ or Vitabrits™
- Add fine texture wheat bran, oat or rice bran to breakfast cereal. Don’t add too much. Half to one tablespoon per serve should be enough
- Add fine texture wheat bran to meat, chicken, fish, stewed fruit and vegetables then puree. No more than one tablespoon per serve as it should not spoil flavour or mouth feel of food
- Add red lentils to soups, stews and casseroles. These not only provide fibre, they thicken liquid, disintegrate readily and have a mild flavour. Add approximately one tablespoon per serve

Fibre cannot relieve constipation without plenty of fluid in the diet.

IMPORTANT

When planning to increase the fibre content of food, talk to a speech pathologist to make sure it will be consistent with food texture recommendations and thickened fluid requirements.

SUPPLEMENTS

A puree diet can be low in calories and nutrients particularly if the resident has a small appetite (as is mostly the case). All pureed food should be routinely fortified. e.g. make porridge on milk not water, add extra margarine to vegetables, add extra milk powder to vegetables and use enriched (fortified) milk wherever possible especially in milk based desserts and milk drinks. See recipe for enriched milk on page 114.

Dietitians often recommend that at least one high protein, high calorie drink be provided daily to residents on a pureed diet (recipes pages 114-116). Offer at a time when it is least likely to interfere with appetite (e.g. suppertime)

A dietitian will be able to advise in regard to multivitamin supplements.

It is important that a resident is not given a texture modified diet, particularly a puree diet, longer than is necessary. Residents can quickly become disinterested in pureed food, further compromising their nutrition, food enjoyment and quality of life. While many residents will need to remain on texture modified diets, the swallowing of some residents may improve so that they are able to manage a lesser degree of texture modification.

It is essential that there be regular reassessment by a speech pathologist. Reassessment is necessary to identify any swallowing improvement, deterioration or change in food texture requirements.

If food to be pureed requires additional liquid use high calorie, nutritious and flavoursome ‘liquids’ such as melted butter sauce, cheese sauce, cream soups, pureed thick soup, sour cream, butter or margarine, coconut milk, sweet white sauce, double strength powdered milk, yoghurt, stirred custard, cream. Apple sauce, fruit nectar, thin fruit puree can also be used although they are not so high in calories. If possible, choose a liquid so that the natural colour and flavour of food is retained. Water is definitely not suitable as it provides no protein or calories and ‘dilutes’ the nutrition.
THICKENED FLUIDS

‘Regular fluids require excellent muscle control and accurate timing between the swallowing system and the breathing system. Thickened fluids slow the act of swallowing and by doing so, enhance safe swallowing’.\(^{(1)}\)

Thickened fluid assists people whose swallow is delayed or poorly co-ordinated. It reduces, but does not eliminate, the risk of aspiration.

Most liquids can be thickened. Pureed soups, sauces, gravy, water, milk, tea, Sustagen™, soft drink, even beer! The stability of thickened fluid and the amount of thickener required to achieve desired results, will vary between fluids and thickeners.

Some liquids may be a suitable consistency without being thickened e.g. custard, fruit smoothies (especially if yoghurt has been added). Be aware that some thick, liquid based foods e.g. ice-cream, jelly and other gelatine based desserts, become thin fluids once in the mouth and thus pose a swallowing problem.

A speech pathologist will assess and advise on the need for thickened fluids and the type of thickener to use.

**Note that:**

- A thickened fluid is only as nutritious as the fluid being thickened
- A starch-based thickener will add extra calories, a bonus for the underweight or poor eater. Condensed or evaporated milk in thickened coffee can enhance flavour and add calories. Gum based thickeners do not add calories
- The consistency of some thickened fluids changes if left to stand. Fluids thickened with xanthan gum will retain their correct consistency
- Care plans should be developed to ensure a resident always receives fluid of recommended consistency. Staff should be aware of the importance of the correct fluid thickness and should receive training so that they are able to choose and follow the appropriate thickened fluid recipe

### National Australian Standards for Thickened Fluids

<table>
<thead>
<tr>
<th>Unmodified – Regular Fluids</th>
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</thead>
<tbody>
<tr>
<td>Mildly Thick – Level 150</td>
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<tr>
<td>Moderately Thick – Level 400</td>
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<tr>
<td>Extremely Thick – Level 900</td>
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**Unmodified – Regular Fluids**

The thickness of these fluids can vary from thin e.g. water, to thicker e.g. fruit nectar. These fluids will flow easily.

**Mildly Thick – Level 150**

These fluids are thicker than regular fluids but not as thick as a thick shake. They will pour from a cup but more slowly than regular fluid. They can be drunk from a cup (or through a standard straw) but may leave a coating on the inside of the cup. Mildly thick fluid will run through the prongs of a fork but will leave a light coating on the prongs.

**Moderately Thick – Level 400**

These fluids are similar to room temperature honey or a thickshake. It is possible to drink them from a cup but they flow very slowly and they are very difficult to drink through a straw. Using a spoon may be the best option. This fluid slowly drips in dollops through the prongs of a fork.

**Extremely Thick – Level 900**

This thickness is similar to the thickness of a pudding or mousse. There is no flow and it holds its shape on a spoon. Using a spoon to consume this extremely thick fluid is the only option. It will not flow through the prongs of a fork. **Note:** it is too thick if a spoon is able to stand upright in it unsupported.\(^{(1)}\)

### IMPORTANT

Residents on thickened fluids need to be given fluid frequently in order to maintain adequate hydration.
To save time and to ensure that fluids are thickened to the required degree and have uniform viscosity, commercial, pre-thickened fluids are available in both individual serve and larger amounts. Check that the commercial products ordered for your residents are compliant with the *Australian standards for thickened fluids*.

Residents who are on a pureed diet or thickened fluids need regular oral care as they usually lack the tongue function to clear their mouth. This places them at high risk of dental caries and gum disease.

Some residents may refuse thickened fluid and so be at risk of dehydration (monitoring and recording intake is advisable). Carers, a speech pathologist, a dietitian, doctors and the resident concerned, will need to investigate and discuss alternatives that may include giving unthickened fluids as safely as possible.

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**FURTHER INFORMATION**

**Puree to Perfection a Guide to Implementing the Approach**  
Recipes and menus for puree diets  
Instructs on the use of moulds for puree meals  
Dietetics Department, Osborne Park Hospital  
Osborne Park, Stirling WA 6021  
Ph (08) 9346 8000

**Australian Standards for Texture Modified Foods and Fluids Poster.**  
Available from Nestlé Healthcare Nutrition  
1800 671 628

**Food molds:**  
www.pureefoodmolds.com

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Diabetes and Glycaemic Index
Diet therapy has always been the cornerstone in the management of diabetes, with the aim being to reduce diabetes related complications by normalising blood glucose levels. However, there have been many changes to diet therapy for diabetes over the years with no universally agreed optimal diet. For residents with diabetes it is important that they are able to enjoy a wide range of food. It is also vital that residents with diabetes do not become malnourished as a result of having a restricted range of foods. The glycaemic index approach to dietary management allows residents to enjoy a wider range of foods. Compared with traditional sugar-free or portion diets, the glycaemic index approach provides for a more varied diet which improves the taste and enjoyment of meals, and it has been found to be beneficial for improving the blood glucose control in people with diabetes.(2)

Since the 1970s, the recommended diet for people with diabetes was high in complex carbohydrate (starch) and low in simple carbohydrates (sugars). It was thought that all sugars required little or no digestion and so would enter the bloodstream quickly, causing the blood glucose level to rise too fast and too high. Consequently table sugar and sugary foods such as honey, cakes, sweet biscuits etc. were banned or rationed.

On the other hand, starch was thought to be digested slowly and gradually release glucose into the bloodstream. For this reason, starchy foods such as bread, cereal, pasta, etc. were seen as the ideal for people with diabetes.

While starch was seen as the ‘good’ carbohydrate, intake needed to be controlled throughout the day. This was done by carbohydrate exchanges or portions. This approach assumed that the same portion (or dose) of all starchy foods produced a similar blood glucose level.

All these previous assumptions were wrong. Research since 1980 has revealed that complex carbohydrates (starches) are not necessarily digested slowly and simple carbohydrates (sugars) are not necessarily digested quickly.
Because of this, the words ‘complex’ and ‘simple’ are no longer helpful in relation to the effect of carbohydrates on blood glucose level. Slowly digested or quickly digested carbohydrate is the issue and this is expressed in terms of glycaemic index (GI).

**WHAT IS GLYCAEMIC INDEX?**

The GI is a system of ranking carbohydrates (starches and sugars) based on their short term effect on blood glucose level.

Carbohydrate foods that digest quickly have the highest GI and cause a fast, high blood glucose response.

Carbohydrate foods that digest slowly, release glucose gradually into the bloodstream and are said to have a low GI. Low GI carbohydrate foods promote better control of blood glucose for people with diabetes.

**HOW IS THE GI OF A CARBOHYDRATE FOOD DETERMINED?**

Food portions that contain 50 grams of carbohydrate are eaten. Blood glucose level is then tested at half hourly intervals for the next two to three hours. The results are plotted on a graph and compared to a graph showing what blood glucose response is when 50 grams of pure glucose is given. Glucose is the ‘yardstick’ by which foods that contain carbohydrate are compared.

The area under the pure glucose curve is given the value of 100. By comparison, the area under the curve for spaghetti is 41. The GI for glucose is 100; the GI for spaghetti is 41.

A GI value of 70 or more is high, 56 through to 69 is medium and 55 or less is low. The lower the GI, the better for blood glucose management.

To make choices practical and easy, the GI value of food can simply be categorised as low, medium or high.

It is important to realise that the GI of a food doesn’t make it good or bad nutritionally; foods that have a high GI can still be nutritious e.g. bread and potatoes.13)

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**Glucose**

**Spaghetti**

(reference food)

(test food)

From: The New Glucosw Revolution. Prof Jennie Brand-Miller, Kaye Foster-Powell, Assoc Prof Stephen Colagiuri. Hodder Headline Australia Pty Ltd
It is important to include low GI foods as often as possible; at least one low GI food at each main meal and mid-meal would be ideal. Studies show that combining low GI foods with high GI foods will result in a meal that has a moderate GI.

This is good news as it means that foods with a higher GI can be included in the menu provided they are balanced by foods with a low GI, e.g. a baked dinner would not seem complete without a baked potato, but most potatoes have a high GI. So, have the potato but include lower GI vegetables such as sweet potato, corn or peas. Add to this a low GI dessert such as stewed apples or plums with custard and the end result is a meal with a low to moderate GI. This approach to menu planning is suitable for all residents.

WHAT ABOUT SUGAR?

When it comes to sugar (sucrose), residents with diabetes can have ordinary amounts of sugar in their diet. For example

- Sugar in a cup of tea
- Sugar on breakfast cereal
- Ordinary jam or marmalade on toast
- Custard sweetened with sugar
- Canned fruit in natural juice or syrup

Residents with diabetes can have ordinary cordial and soft drink. However, if they drink large amounts of these or use large amounts of added sugar blood glucose levels may be adversely affected.\(^4\)

Note that some residents may prefer to continue with established habits such as having artificial sweeteners in tea or on cereals and this will need to be accommodated.

‘In aged care, the primary focus must be on meeting the nutritional needs of the resident rather than perfect control of blood glucose levels. If unnecessary dietary restrictions are placed on older residents in a long term care setting there is a risk of malnutrition and dehydration. It is preferable to make medication changes rather than impose dietary restrictions to control blood glucose levels’.\(^5\)

Experience shows that residents eat better when they are given a less restrictive diet. Therefore it is appropriate to serve residents with diabetes the food from regular (unrestricted) menus, with consistent amounts of carbohydrates at meals and mid-meals. Calories should not be restricted to less than daily needs to control blood glucose levels because of the risk of malnutrition.

‘A fat restriction is not indicated for the majority of residents in aged care homes because of the risk of malnutrition. Increased quality of life, heightened satisfaction, improved nutritional status and decreased feelings of isolation are potential benefits to residents with this (more liberal) approach’.\(^5\)

The main menu in aged care homes can be planned to suit the majority of residents’ needs, including residents with diabetes. (Note that type 1 and type 2 diabetes are the same as far as food requirements are concerned). As the main menu should be planned so that each meal and mid-meal provides carbohydrate and as the meals are usually served at consistent times each day, the dietary needs of the residents with diabetes should be catered for.\(^5\)

Carbohydrate containing foods such as bread, cereals, milk and milk products, starchy vegetables and fruit can now be ranked according to their GI. The table over the page shows a list of low, medium and high GI foods.
## Diabetes & Glycaemic Index

### Breads
- Burgen™ breads
- Fruit loaf/raisin bread
- Tip Top 9-grains™
- Pumpernickel
- Sourdough

### Medium GI (moderate acting) 56-69
- Pita bread
- Hamburger bun
- Crumpets
- Croissants
- Pancakes

### High GI (fast acting) 70 or more
- White bread
- Wholemeal bread
- High fibre white breads e.g. Wonder White™

### Cereal Foods
- All Bran™
- Nutri-Grain™
- Untoasted muesli
- Rolled oats (not instant)
- Special K™
- Semolina
- Pearl barley
- Pasta e.g. spaghetti, macaroni, vermicelli, noodles, instant noodles

**Note:** Fresh and dried pastas have a low GI – this is not the case for canned spaghetti.

- Sunrise™ Low GI Clever Rice

### Milk and Dairy Foods
- Milk
  - Full cream, skim
  - Flavoured
  - Soy
  - Yoghurt
    - plain, flavoured and drinking
    - frozen
- Vanilla ice-cream
- Paddle Pops™
- Custard
- Glucerna SR™, Sustagen™, Ensure Plus™, Ensure Pudding™
- Sanitarium ‘Up and Go™’
- Instant pudding
- Yakult™

**Note:** Sweetened condensed milk

### Vegetables
- Parsnip
- Legumes e.g. baked beans, 4 bean mix, Lima beans, chickpeas, split peas, haricot beans, kidney beans, red, green and brown lentils, soy beans
- Sweet corn, carrots, taro
- Butternut pumpkin
- ‘Carisma’ potatoes
- ‘Nadine’ potatoes

**Note:** New potatoes (canned only)
- Sweet potato (orange)
- ‘Nicola’ potatoes

**Note:** Broad beans
- Instant potato
- Potato (most varieties)
- Sweet potato (purple)
<table>
<thead>
<tr>
<th>FOOD</th>
<th>LOW GI (slow acting) 55 or less</th>
<th>MEDIUM GI (moderate acting) 56-69</th>
<th>HIGH GI (fast acting) 70 or more</th>
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<tr>
<td>FRUIT</td>
<td>• Apples, banana</td>
<td>• Paw Paw</td>
<td>Watermelon</td>
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<tr>
<td></td>
<td>• Apricots (fresh/canned) in</td>
<td>• Peaches (in syrup)</td>
<td>Rockmelon</td>
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<tr>
<td></td>
<td>natural juice</td>
<td>• Pineapple</td>
<td>Lychees (canned)</td>
</tr>
<tr>
<td></td>
<td>• Grapefruit, grapes</td>
<td>• Raisins</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Kiwi Fruit, mango</td>
<td>• Sultanas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Oranges, peaches</td>
<td>• Cherries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(fresh/canned in juice or light</td>
<td>• Lychees (fresh)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>syrup)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pear (fresh, canned in juice)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Plums</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Dried apricots, dried apple</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Prunes, dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unsweetened juice e.g.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>apple, grapefruit, orange,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cranberry, apple and</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>blackcurrant</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Paw Paw</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Peaches (in syrup)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pineapple</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Raisins</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sultanas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cherries</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lychees (fresh)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BISCUITS</td>
<td>• Jatz™</td>
<td>• Milk Arrowroot Biscuits™</td>
<td>• Saos™</td>
</tr>
<tr>
<td>CAKES</td>
<td>• Oatmeal™</td>
<td>• Shredded Wheatmeal™</td>
<td>• Rice crackers</td>
</tr>
<tr>
<td></td>
<td>• Rich Tea™</td>
<td>• Bran muffin</td>
<td>• Rice Cakes™</td>
</tr>
<tr>
<td></td>
<td>• Apple muffin</td>
<td>• Breton™</td>
<td>• Cruskits™</td>
</tr>
<tr>
<td></td>
<td>• Banana cake, carrot cake</td>
<td>• Ryvita™</td>
<td>• Premium™</td>
</tr>
<tr>
<td></td>
<td>• Sponge cake</td>
<td></td>
<td>• Morning Coffee™</td>
</tr>
<tr>
<td></td>
<td>• Apple Danish/crumble</td>
<td></td>
<td>• Vanilla Wafers™</td>
</tr>
<tr>
<td></td>
<td>• Fruit cake</td>
<td></td>
<td>• Water crackers</td>
</tr>
<tr>
<td></td>
<td>• Snack Right™ fruit slice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Chocolate chip cookies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Barbeque Shapes™</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td>• Pure honey</td>
<td>• Golden syrup</td>
<td>• Glucose</td>
</tr>
<tr>
<td></td>
<td>• Marmalade</td>
<td>• Table sugar</td>
<td>• Maltose</td>
</tr>
<tr>
<td></td>
<td>• Jam</td>
<td></td>
<td>• Maltodextrins</td>
</tr>
<tr>
<td></td>
<td>• LoGiCane™ low GI sugar</td>
<td></td>
<td>• Corn starch</td>
</tr>
<tr>
<td></td>
<td>• Pure maple syrup</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The above table does not contain all the foods that have been tested for their GI value. There is however, a comprehensive range of foods to select from when planning menus. For a more complete range see ‘LOW GI DIET Shoppers Guide 2015’. Revised edition published by Hachette Australia.

- Many vegetables do not contain significant amounts of carbohydrate and can be eaten without concern for blood glucose response e.g. green leafy vegetables, lettuce, zucchini, squash, choko, mushrooms, tomato and other salad vegetables.
- It is important to remember that all fruit and vegetables are healthy foods. None should be deleted from the menu because they have a high glycaemic index. Simply combine with low glycaemic index foods (at the same meal). The same applies for bread and cereals.
- There is no need to provide low joule ice-cream, condiments or spreads. It is acceptable to use ordinary jam and pure honey.
INCORPORATE LOW GI INGREDIENTS TO HELP LOWER THE GI OF MEALS

Barley
- Add to soups, stews and casseroles

Rolled oats (not instant)
- Include on breakfast menu every day
- Use in meatloaf and rissoles instead of breadcrumbs
- Add to biscuit recipes. Experiment with quantities before standardising recipes
- Use rolled oats in crumble topping e.g. apple crumble. 50:50 flour to rolled oats

Legumes
- Use red lentils in soups, stews and casseroles. Red lentils are easy to use as there is no need to soak or cook before adding. Red lentils disintegrate when cooked by moist heat and this usually only takes about 20 minutes. Allow approximately one tablespoon per person
- Green or brown lentils may be added to soups, stews and casseroles. They should be cooked before adding. Soaking will speed up the cooking process. Cooked lentils can be mashed and added to mince when making rissoles and meatloaf. It is suggested that the ratio of cooked legumes to minced meat should be no more than one quarter cooked legumes to three quarters mince otherwise the flavour and texture of the legumes could be too noticeable
- Haricot, soya, Lima, butter, red kidney beans or chick peas can be cooked and then added to vegetable soup, minestrone soup and Bolognais sauce. Soaking these legumes will speed up the cooking time. Cooked or canned, these legumes can be served as a salad vegetable or as a hot vegetable with the main meal
- Baked beans can be included often on the breakfast menu, as a sandwich filling or in toasted sandwiches. Baked beans are also suitable for mid-meals

Pasta
- Fresh and dried pastas have a low GI. Canned spaghetti has a high GI because of the processing involved

ADVANTAGES OF INCORPORATING GI PRINCIPLES WHEN MENU PLANNING INCLUDE

- People with diabetes no longer need to have such limited food choices as once thought. Removal of the harsh restriction on sugar means a wider variety of foods can be offered. Even some cakes and muffins (especially fruit ones) are suitable and can be served to all residents. Resident satisfaction is almost sure to improve
- Catering staff should find food preparation easier as it is not necessary to prepare or provide different food for residents with diabetes e.g. custard sweetened with sugar is suitable for all
- Menu planning and food ordering is easier as dietary alternatives are not required. Products such as low joule jam, low joule jelly and artificially sweetened canned fruit are no longer necessary
- Low GI food choices are often cheaper as many low GI foods are basic, minimally processed, cheaper food items. Special diet foods can be expensive

When menu planning, aim to include at least one food that has a low GI at each main meal and mid-meal. This is not difficult to do. Rolled oats and semolina are low GI breakfast cereals; serve 4-bean mix with salad; include fruit cake, raisin toast or fruit muffins at mid-meal time; plan desserts to include custard, instant pudding or yoghurt.

Meal enjoyment contributes to quality of life. For the resident with diabetes, it may be better to make medicine changes than to restrict food choices. A resident who has elevated blood glucose levels can lose weight as their body cells aren’t getting the glucose for energy. Poorly controlled diabetes can result in weight loss and requires a medical review and an assessment by a dietitian.
The following is a checklist to help the provision of an appropriate, varied and enjoyable menu for residents with diabetes. The answer should be YES to each of the following:

<table>
<thead>
<tr>
<th>Item</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least two low GI cereals are available at breakfast time</td>
<td></td>
</tr>
<tr>
<td>Ordinary jam is provided</td>
<td></td>
</tr>
<tr>
<td>Honey is available</td>
<td></td>
</tr>
<tr>
<td>Low GI e.g Basmati rice is used whenever possible in suitable rice dishes</td>
<td></td>
</tr>
<tr>
<td>Vinaigrette dressing is on offer with salads and fish</td>
<td></td>
</tr>
<tr>
<td>Barley is included in most soups</td>
<td></td>
</tr>
<tr>
<td>Legumes are added to soups and stews</td>
<td></td>
</tr>
<tr>
<td>Low GI biscuits such as Rich Tea™ and Oatmeal™ are available</td>
<td></td>
</tr>
<tr>
<td>Cake, slices and scones etc. are offered to all residents</td>
<td></td>
</tr>
<tr>
<td>Ordinary table sugar (sucrose) is used in custard, desserts and baked products</td>
<td></td>
</tr>
<tr>
<td>Sugar (sucrose) is provided for tea/coffee and breakfast cereal</td>
<td></td>
</tr>
<tr>
<td>Regular ice-cream and jelly is provided</td>
<td></td>
</tr>
<tr>
<td>Canned fruit in juice or syrup is provided</td>
<td></td>
</tr>
<tr>
<td>Raisin toast is on the menu</td>
<td></td>
</tr>
<tr>
<td>Main menu desserts are offered to residents with diabetes</td>
<td></td>
</tr>
<tr>
<td>Fresh fruit is available to all residents</td>
<td></td>
</tr>
</tbody>
</table>

It is important that the resident with diabetes, the resident's family and all care staff understand the GI approach to diet. If this understanding is not established, the dietary benefits and meal satisfaction that result from this more liberalised approach may be lost.

FURTHER INFORMATION

- [www.glycemicindex.com](http://www.glycemicindex.com)
- In NSW : Australian Diabetes Council 1300 342 238

Fibre, fluid and constipation

Constipation affects as many as two out of three residents in aged care homes. It can lead to a feeling of discomfort or a feeling of fullness causing a reduced desire to eat. This can contribute to malnutrition.

Constipation is defined as the infrequent passing of small or hard stools with or without straining. Symptoms include:

• Infrequent passing of stools
• Incomplete defecation
• Unduly hard stools
• Unusual straining

Residents usually gauge constipation based on their symptoms such as pain, stool hardness or straining or difficulty in passing a stool, rather than stool frequency. Normal stool frequency could be from three times a day to three times a week.

The three ingredients to help prevent constipation are dietary fibre, fluids and exercise. Residents need:

• 25-30g fibre per day
• At least 6-8 cups of fluid (1½ - 2 litres) [1 cup = 250 ml] per day
• Exercise – even a small amount of gentle exercise such as being walked to the toilet is better than no exercise at all. Chair or bed bound residents are at higher risk of constipation

Other factors such as delaying the urge to defecate, needing to rely on others for assistance, lack of privacy or out-of-the-way toilets can all contribute to constipation. Some medicines are a major cause of constipation such as those containing codeine.

WHY IS FIBRE INTAKE SO LOW IN AGED CARE HOMES?

Residents of aged care homes often have low fibre intakes. Combined with an inadequate fluid intake this is a recipe for constipation. Reasons for their low fibre intake include:

• Poor menu planning, with insufficient foods that are good sources of fibre
• If residents have a poor appetite and eat very little it is difficult to get enough fibre
• If residents miss meals or do not eat all of their meal they will not get the 25-30g fibre needed each day
• Poor menu choices by residents and lack of guidance from staff mean low fibre choices are chosen in preference to high fibre foods
• Residents on puree diets tend to have a reduced fibre intake because they eat less breads, cereals and fresh fruits
• Poor oral health, so residents avoid the more fibrous fruit and vegetables

Staff should have the knowledge of foods that are good sources of fibre and encourage residents to choose them. The table on page 161 of this chapter lists foods common to aged care homes and the amounts of fibre they contain in average serves. See how close your menus go to providing the recommended 25-30 grams of fibre.

Unprocessed bran is a concentrated source of fibre, however no more than two tablespoons a day is recommended. Larger quantities of unprocessed bran can bind minerals and increase gas. Psyllium fibre supplements may have fewer side effects compared with unprocessed bran.
**DIETARY MEASURES TO PREVENT CONSTIPATION**

Compare the two menu examples

The menu in table 1 provides only nine grams of fibre for the day. The second menu in table 2 shows that with relatively small changes the fibre content can be substantially increased to about 39 grams. The numbers inside the brackets indicate how many grams of fibre are present.

**Table 1 – Daily menu indicating POOR fibre intake**

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Midday Meal</th>
<th>Evening Meal</th>
<th>Mid-meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice Bubbles™ (0)</td>
<td>Crème of chicken soup (0)</td>
<td>White bread sandwich (2)</td>
<td>Tea/coffee (0)</td>
</tr>
<tr>
<td>milk (0)</td>
<td></td>
<td>with cheese, ham and tomato (1)</td>
<td>and biscuits (0)</td>
</tr>
<tr>
<td>1 slice white toast (1)</td>
<td>Meat (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass juice (0)</td>
<td>3 average serves (¼ cup) vegies e.g. potato, beans, pumpkin (5)</td>
<td>Custard and cheesecake (0)</td>
<td></td>
</tr>
<tr>
<td>Scrambled egg (0)</td>
<td>Jelly and ice-cream (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>= 1g fibre</strong></td>
<td><strong>= 5g fibre</strong></td>
<td><strong>= 0g fibre</strong></td>
</tr>
</tbody>
</table>

**DAILY FIBRE** = 9g

**Table 2 – Daily menu indicating GOOD fibre intake**

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Midday Meal</th>
<th>Evening Meal</th>
<th>Mid-meals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Weetbix™ (4) milk (0)</td>
<td>Crème of chicken and barley soup (2)</td>
<td>Wholemeal or high fibre white sandwich (4) with cheese and salad (3)</td>
<td>Fruit platter or cake with dried fruit (4) tea/coffee (0)</td>
</tr>
<tr>
<td>1 slice wholemeal bread or high fibre white bread (2)</td>
<td>Meat (0)</td>
<td>4 smaller serves (¼ cup) of vegetables e.g. potato, beans, pumpkin, broccoli (7)</td>
<td>Custard, sponge cake &amp; canned plums (2)</td>
</tr>
<tr>
<td>Baked beans (7) Egg (0)</td>
<td>Canned pears and ice-cream (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 stewed prunes (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>= 15g fibre</strong></td>
<td><strong>= 11g fibre</strong></td>
<td><strong>= 9g fibre</strong></td>
</tr>
</tbody>
</table>

**DAILY FIBRE** = 39g
WHERE IS FIBRE FOUND?
Fibre is found in plant foods such as wholemeal breads and cereals, fruit, vegetables, nuts, seeds and legumes. Animal foods such as meat, eggs and cheese do not contain fibre.

Often fibre has been removed from foods during processing. Thus, fruit juice, some breakfast cereals, white flour, white rice and white bread contain very little fibre.

Many high fibre foods tend to be bulky or filling without many calories e.g. fruits and vegetables. They may lead to an early feeling of fullness in residents. For residents with poor appetites it may be better to get fibre from more calorie dense foods such as breads, cereals and baked products made with added wholemeal flour and wheat germ.

A high fibre breakfast cereal is essential to achieve a high fibre diet.

HOW DOES FIBRE WORK?
There are two types of fibre; soluble and insoluble. Soluble fibre is found in oats, peas, psyllium, legumes and in some fruit and vegetables e.g. apples, pears and broccoli. Insoluble fibre is found in wheat, corn and rice. Fibre acts as the fuel for the beneficial bacteria in the large bowel, enabling them to multiply rapidly. The stool becomes softer because bacteria multiply and add bulk. Insoluble fibre also increases bulk by its ability to attract and hold water. Both types are useful in preventing constipation.

HOW DOES YOUR FOOD SERVICE RATE?
You should be able to say ‘yes’ to the following

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lentils and/or barley are added to vegetable based soups</td>
</tr>
<tr>
<td>Red lentils are added to wet dishes such as casseroles</td>
</tr>
<tr>
<td>Prunes are available at all meal times, not just breakfast</td>
</tr>
<tr>
<td>Prune Apple Bran mix is available for residents who enjoy it (refer to recipe below)</td>
</tr>
<tr>
<td>High fibre breakfast cereals are offered e.g. All Bran™, Sultana Bran™, Bran Flakes™, etc.</td>
</tr>
<tr>
<td>High fibre white breads are provided for residents who dislike wholemeal bread</td>
</tr>
<tr>
<td>Dried fruits such as sultanas, dried apple or dates are added to baked products if suitable</td>
</tr>
<tr>
<td>Baked products have at least 25% wholemeal flour to 75% white flour</td>
</tr>
<tr>
<td>Wheatgerm is added to baked goods where possible</td>
</tr>
<tr>
<td>Unprocessed bran or psyllium is available</td>
</tr>
</tbody>
</table>

Prune Apple Bran Mix Recipe
Combine ⅛ cup unprocessed bran with ⅛ cup stewed prunes and ⅛ cup of apple puree. Makes 10 x 2 tablespoon serves.
SECTION FOUR

FIBRE, FLUID & CONSTIPATION

FLUIDS

Sufficient fluids are essential to help prevent and relieve constipation.

Residents need on average 6-8 cups of fluids each day. Refer to hydration chapter 4: ‘Hydration Needs’.

To prevent dehydration and constipation it is important to regularly monitor fluid intake.

The sense of thirst can diminish in older people; they may need fluid but may not feel thirsty.

Special attention is required with those on thickened fluids to ensure they receive enough fluid.

Tips to increase fluid intake in residents who are poor drinkers:

• Give small drinks frequently
• Provide an increased variety of drinks
• Provide ice blocks or ice chips to suck
• Use suitable cups
• Serve drinks at each meal and mid-meal and with medicines
• Provide straws for residents who can’t manage the last of their drinks
• Add cordial to the bedside water
• Fill cups twice during the meal
• Have a staff member who is assigned to make regular rounds with a beverage trolley
• If allowed, beer and other low alcohol beverages can contribute to fluid intake
• Consider putting a symbol (e.g. a water drop) above the beds of residents at risk of dehydration
• Residents needing thickened fluids require extra monitoring
• Refer to Chapter 4 for further tips to increase fluid intake

Pear juice daily may be useful to prevent constipation. The sorbitol and fructose in the pear juice has an osmotic effect. 150ml twice a day is recommended. Too much may cause wind and diarrhoea in susceptible individuals.

Ensure residents consume enough fluids. Try sweet fluids such as lemonade, cordial, smoothies or flavoured milk.

Leave fluids in easy reach of residents. Better still, put the drinks in their hands.

Ask residents to have a drink rather than asking if they want a drink (remember the diminished sense of thirst).

Don’t restrict fluids if residents are incontinent or are taking diuretics. Reducing fluid intake does not decrease incontinence, nor does it reduce trips to the toilet. As the urine becomes more concentrated it irritates the bladder and increases the urge to void, leading to frequent small voids.

Many medicines, such as tranquillisers and neuroepileptic drugs, can cause constipation. The constipating effects of these and other medicines need to be anticipated and treated. Providing extra fluids and fibre may still not be enough. Prune apple bran mix, commercially available aperients and more fluids may be required.

DIET FOR DIVERTICULAR DISEASE

Diverticular disease is a condition that affects the large bowel and can be a result of eating a diet low in fibre. It results in pockets being formed in the large bowel, which can become inflamed, as well as thickening of the bowel wall and narrowing of the bowel.

Many residents complain of ‘diverticulitis’ and avoid certain foods to prevent a flare up. People were once told to avoid nuts and seeds of tomato, passionfruit or sesame etc. There is no scientific evidence that eating these can result in blocking of the diveticulae, or causing a bout of diverticulitis. If a resident prefers to avoid these or other foods due to diverticular disease, that is their choice.

A gradual increase in dietary fibre is important in preventing flare-ups of diverticular disease, known as diverticulitis. Aim for 25-30grams of fibre a day. Some residents may also require a bulking agent like psyllium.

EXERCISE

Any exercise is better than none. Abdominal muscles support gut motility. A few steps to the bathroom are better than using the bedpan.
The following table is a list of the fibre content of foods commonly found in aged care homes. Aim to provide residents with 25-30g fibre per day.

<table>
<thead>
<tr>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BREAD</strong></td>
<td></td>
<td></td>
<td><strong>VEGETABLES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1 slice</td>
<td>0.7</td>
<td>Asparagus</td>
<td>3 spears</td>
<td>1.5</td>
</tr>
<tr>
<td>White toast</td>
<td>1 slice</td>
<td>0.7</td>
<td>Beans (green)</td>
<td>½ cup</td>
<td>1.8</td>
</tr>
<tr>
<td>English muffin</td>
<td>½ muffin</td>
<td>1.0</td>
<td>Beans (kidney, baked)</td>
<td>½ cup</td>
<td>6.6</td>
</tr>
<tr>
<td>White roll</td>
<td>1 roll</td>
<td>1.1</td>
<td>Beetroot</td>
<td>1 medium</td>
<td>2.3</td>
</tr>
<tr>
<td>High fibre white</td>
<td>1 slice</td>
<td>1.3</td>
<td>Broccoli</td>
<td>½ cup</td>
<td>2.9</td>
</tr>
<tr>
<td>Multi-grain</td>
<td>1 slice</td>
<td>1.3</td>
<td>Brussels sprouts</td>
<td>4 sprouts</td>
<td>2.9</td>
</tr>
<tr>
<td>Fruit loaf with light fruit</td>
<td>1 slice</td>
<td>1.3</td>
<td>Cabbage</td>
<td>½ cup</td>
<td>1.4</td>
</tr>
<tr>
<td>Wholemeal</td>
<td>1 slice</td>
<td>1.5</td>
<td>Lettuce</td>
<td>2 leaves</td>
<td>0.2</td>
</tr>
<tr>
<td>Wholemeal roll</td>
<td>1 roll</td>
<td>1.8</td>
<td>Celery</td>
<td>1 piece</td>
<td>0.3</td>
</tr>
<tr>
<td>Fruit loaf with heavy fruit*</td>
<td>1 slice</td>
<td>2.5</td>
<td>Sweet potato</td>
<td>¼ small</td>
<td>0.4</td>
</tr>
<tr>
<td>Light rye</td>
<td>1 slice</td>
<td>2.5</td>
<td>Choko</td>
<td>¼ medium</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mushrooms</td>
<td>½ cup</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cauliflower</td>
<td>½ cup</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pumpkin</td>
<td>100g</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tomato</td>
<td>1 small</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Potato (without skin)</td>
<td>1 small</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Zucchini</td>
<td>1 medium</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Silver beet</td>
<td>½ cup</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parsnip</td>
<td>½ large</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carrots</td>
<td>½ cup</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Potato (with skin)</td>
<td>small</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Corn kernels</td>
<td>½ cup</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mixed vegetables</td>
<td>½ cup</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Turnip</td>
<td>1 medium</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Corn (creamed)</td>
<td>½ cup</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Peas</td>
<td>½ cup</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Side salad</td>
<td>1 average</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bean salad</td>
<td>½ cup</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>CRACKERS AND CRISPBREADS</strong></td>
<td></td>
<td></td>
<td><strong>FRUIT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholemeal cracker</td>
<td>1 cracker</td>
<td>0.4</td>
<td>Grapes</td>
<td>22 medium</td>
<td>0.6</td>
</tr>
<tr>
<td>Water cracker</td>
<td>1 cracker</td>
<td>0.4</td>
<td>Pineapple</td>
<td>1 slice</td>
<td>0.6</td>
</tr>
<tr>
<td>Sao’s™</td>
<td>1 cracker</td>
<td>0.5</td>
<td>Grapefruit</td>
<td>½ average</td>
<td>0.8</td>
</tr>
<tr>
<td>Rye crisp bread</td>
<td>1 crisp bread</td>
<td>1.4</td>
<td>Watermelon</td>
<td>1 cup</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prunes</td>
<td>6 stewed</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rock melon</td>
<td>¼ whole</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fruit salad (canned)</td>
<td>½ cup</td>
<td>1.7</td>
</tr>
<tr>
<td>Rice (white)</td>
<td>½ cup</td>
<td>0.5</td>
<td>Mandarin</td>
<td>1 medium</td>
<td>1.7</td>
</tr>
<tr>
<td>Rice (brown)</td>
<td>½ cup</td>
<td>1.3</td>
<td>Banana (peeled)</td>
<td>1 small</td>
<td>1.8</td>
</tr>
<tr>
<td>Pasta (white)</td>
<td>½ cup</td>
<td>1.3</td>
<td>Dates (dried)</td>
<td>4 medium</td>
<td>1.9</td>
</tr>
<tr>
<td>Barley (cooked)</td>
<td>100g</td>
<td>3.5</td>
<td>Raisins or sultanas</td>
<td>½ cup</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Peach</td>
<td>1 average</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Apricot</td>
<td>2 small</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Orange</td>
<td>1 medium</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kiwi fruit</td>
<td>1 medium</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Strawberries</td>
<td>10 medium</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Apple (with skin)</td>
<td>1 medium</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plums</td>
<td>2 average</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mango</td>
<td>1 medium</td>
<td>3.1</td>
</tr>
</tbody>
</table>

**RICE, PASTAS AND BARLEY**

**BISCUITS/CAKES**

**FRUIT continued**
### FIBRE, FLUID & CONSTIPATION

<table>
<thead>
<tr>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cream</td>
<td>2 biscuits</td>
<td>0.2</td>
<td>Rhubarb (cooked)</td>
<td>¼ cup</td>
<td>3.2</td>
</tr>
<tr>
<td>Plain, sweet</td>
<td>2 biscuits</td>
<td>0.3</td>
<td>Pear</td>
<td>1 average</td>
<td>3.7</td>
</tr>
<tr>
<td>Choc chip</td>
<td>2 biscuits</td>
<td>0.4</td>
<td>Nectarine</td>
<td>2 small</td>
<td>4.2</td>
</tr>
<tr>
<td>Fruit filled</td>
<td>2 biscuits</td>
<td>0.5</td>
<td>Passion fruit</td>
<td>2 average</td>
<td>5.0</td>
</tr>
<tr>
<td>Oatmeal</td>
<td>2 biscuits</td>
<td>0.5</td>
<td>Figs (dried)</td>
<td>2 medium</td>
<td>5.4</td>
</tr>
<tr>
<td>Nut</td>
<td>2 biscuits</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scone</td>
<td>1 scone (40g)</td>
<td>0.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anzac</td>
<td>2 biscuits</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bran</td>
<td>2 biscuits</td>
<td>2.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit bun</td>
<td>70g slice</td>
<td>3.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BREAKFAST CEREALS**

<table>
<thead>
<tr>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
<th>Food</th>
<th>Quantity</th>
<th>Fibre (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutri-Grain™</td>
<td>¼ cup</td>
<td>0.5</td>
<td>Wheat germ</td>
<td>1 tbsp</td>
<td>1.1</td>
</tr>
<tr>
<td>Rice Bubbles™</td>
<td>¼ cup</td>
<td>0.5</td>
<td>Unprocessed bran</td>
<td>1 tbsp</td>
<td>2.2</td>
</tr>
<tr>
<td>Corn Flakes™</td>
<td>¼ cup</td>
<td>0.7</td>
<td>Prune/Apple/Bran mix</td>
<td>1 tbsp</td>
<td>2.3</td>
</tr>
<tr>
<td>Special K™</td>
<td>¼ cup</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porridge</td>
<td>¼ cup</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weetbix™</td>
<td>2 biscuits</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muesli</td>
<td>½ cup</td>
<td>3.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sultana Bran™</td>
<td>⅓ cup</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bran Flakes™</td>
<td>¼ cup</td>
<td>4.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Just Right™</td>
<td>⅓ cup</td>
<td>5.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Bran™</td>
<td>⅓ cup</td>
<td>6.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OTHERS**

- Wheat germ
- Unprocessed bran
- Prune/Apple/Bran mix
- 1 tbsp
- 1 tbsp
- 1 tbsp

---

**FURTHER INFORMATION**

The Gut Foundation
C/- PO Box 1183, Randwick NSW 2031
Telephone: (02) 9398 9546 Fax: (02) 9398 9512 www.gutfoundation.com.au

Looking After Your Bowel. A Guide to Improving Bowel Function
Australian Government Department of Health and Ageing

Continence Foundation of Australia link to constipation page
http://www.continence.org.au/pages/constipation.html

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Tube Feeding
Tube feeding (enteral feeding)

Many aged care homes have residents who require to be fed via a tube. The main reason for commencing a tube feed is to ensure an adequate intake of essential nutrients and fluids which a resident has not been able to achieve with an oral diet alone. The special nutritional product that is given via the tube is called a ‘formula’ (liquid food).

There are many kinds of formulas made by different companies, each with their particular merits. A dietitian needs to be contacted to obtain advice and recommend the best formula for a particular resident’s needs. A dietitian will also calculate the volume of formula required each day to keep the resident well nourished. Residents’ needs can change and hence the type and volume of formula they need may also change. Regular monitoring by care staff and a dietitian is required to help determine if a resident’s nutrition needs are being met.

**MONITORING**

- Residents commencing a tube feed should be weighed every week until their weight is stable. Weight loss of more than 1kg a week or an ongoing gradual loss of weight may indicate that the resident is receiving inadequate calories or there is a problem with hydration
- Look for signs of intolerance e.g. nausea, vomiting, diarrhoea or aspiration (coughing or spluttering). See ‘troubleshooting guide’ at the end of this chapter
- Residents should be assessed by a speech pathologist before trialling or starting on any oral food or oral fluids
- Monthly malnutrition screening should be carried out

**TYPE OF TUBE**

There are several types of feeding tubes available. The most common include

- PEG (Percutaneous Endoscopic Gastrostomy) (tube directly into stomach through the abdominal wall)
- PEJ (Percutaneous Endoscopic Jejunostomy) (tube directly into jejunum through the abdominal wall)

**FORMULA ADMINISTRATION**

There are different methods of administering formula. These include:

- Electric pumps that deliver the formula
- Gravity feeds where the formula runs in by gravity
- Bolus feeds where the formula is administered by a large syringe (usually 60ml)

A dietitian will help you choose the most appropriate method. Many formula manufacturers provide pumps as part of a contract when supplying formula.
**FEEDING METHOD**

The feeding methods are continuous, intermittent or bolus.

With continuous feeding, small amounts of formula are given continuously, usually via a pump, over 24 hours e.g. 85ml/hour over 24 hours (2040ml). The resident must remain upright during the night and closely monitored.

With intermittent feeding the tube feed is stopped for a period of time through the day or night. The amount of formula given per hour will need to be increased to meet the resident’s nutritional needs.

Bolus feeding is where a larger volume of formula is given in a bolus at defined intervals throughout the day. e.g. 330mls, 6 times a day (1980ml). Aspiration is more likely as a greater volume is infused at once. When bolus feeding, ensure the formula is at room temperature. If formula has been refrigerated, pour the required amount into a clean jug and leave out of fridge for 30 minutes before feeding. Chilled formula can cause cramping and intolerance. Complete water flushes before and after a bolus to keep tube clear and provide hydration.

**FORMULA PRESENTATION**

Formula usually comes in ready-to-hang bags (closed system) or sometimes ready to use liquid formula in cans or bottles. Never add water to the ready to use formula to dilute it. This will only serve to reduce its nutritional value and does not help prevent or treat diarrhoea.

**REDUCING ASPIRATION RISK**

A resident receiving a tube feed should be sitting up or propped to at least 30° for half an hour before and after bolus feed or during continuous feeds to minimise aspiration. If possible provide formula when they are awake rather than when asleep. This helps reduce the chance of aspiration which can lead to pneumonia.

**SUPPLEMENTARY FEEDING**

Some residents may need supplementary tube feeding between meals to ensure enough intake through the day. Boluses of formula can be given via the feeding tube to meet any shortfalls in intake. Alternatively continuous feeds may be stopped prior to eating a meal and recommenced after a meal. A dietitian can help you work out a tube feed regimen to maximise nutritional intake and minimise complications. Supplementary feeding can also be given overnight via a pump.

**HYGIENE**

- Stocks of formula should be stored in a cool environment
- Check use by dates regularly and rotate stock
- Wash hands using standard hand hygiene precautions prior to preparing formula
- Use disposable gloves when preparing formula
- Use only clean equipment on a clean surface
- Wipe clean lid of can and open with a clean can opener
- Remaining formula should be decanted into a jug and left covered in the fridge. Use within 24 hours
- Record the time and date the formula was prepared
- Hang enough formula for a maximum of eight hours of feeding to reduce risk of contamination. If using a closed system formula can be hung for up to 24 hours
- Giving sets* should be replaced every 24 hours
- Giving sets, syringes and formula bags are single use items and should be discarded after use

* Giving set is the apparatus between the formula bag and the feeding tube.

Some aged care homes have residents on tube feeds all the time and are familiar with the procedures. Others may occasionally have residents that require this type of nutritional support, in which case the following checklist may help. Remember to consult a dietitian before making adjustments to the feeding regimen as a resident’s nutritional status may be compromised if insufficient feed is provided. A tube feeding checklist is found in appendix 9.
<table>
<thead>
<tr>
<th>If the problem is</th>
<th>The cause is usually</th>
<th>Try the following ideas to fix the problem</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stomach discomfort e.g. nausea, vomiting, belching or bloating</strong></td>
<td>Formula administration</td>
<td>• If it is a bolus, give the formula more slowly. Never push the formula in, let it run by gravity. Ensure the formula is at room temperature. If cold, it may be poorly tolerated. Continuous feeding may be better tolerated than bolus</td>
</tr>
<tr>
<td></td>
<td>Delayed emptying of the stomach</td>
<td>• If vomiting is present, discontinue the tube feed temporarily and discuss with the doctor. Medicines that improve gastric motility or relieve nausea may be appropriate. Continuous feeding may be better tolerated</td>
</tr>
<tr>
<td></td>
<td>Positioning</td>
<td>• Position resident at an angle of at least 30° and keep in this position for the ½ hour before and after the bolus feed. Keep at this position during continuous feeding</td>
</tr>
<tr>
<td></td>
<td>Bowel obstruction</td>
<td>• Cease formula and discuss with a doctor</td>
</tr>
<tr>
<td><strong>Constipation</strong></td>
<td>Low fibre content</td>
<td>• Use a fibre formula e.g. Nutrison Multi Fibre™, Jevity™ etc. Including prune juice in warm water with the morning formula may aid bowel motility. Following this, flush with a little extra water to clear the tube</td>
</tr>
<tr>
<td></td>
<td>Insufficient fluid intake</td>
<td>• Increase water flushes; spread the extra water out evenly over the total number of feeds. Give a water flush before the first feed</td>
</tr>
<tr>
<td></td>
<td>Decreased activity</td>
<td>• If possible, increase daily activity (even walking 20m may make a difference)</td>
</tr>
<tr>
<td></td>
<td>Medicines</td>
<td>• Review with a doctor; a stool softener or aperient may be recommended</td>
</tr>
<tr>
<td><strong>Aspiration</strong></td>
<td>Resident lying flat</td>
<td>• Position resident at an angle of at least 30° and keep this position for the ½ hour before and after the bolus feed</td>
</tr>
<tr>
<td></td>
<td>Delayed gastric emptying (delayed emptying of the stomach or reflux)</td>
<td>• Discuss medicines that will improve gastric motility with the doctor</td>
</tr>
<tr>
<td></td>
<td>Too large a volume of bolus feed</td>
<td>• Consider continuous feeding or changing to a more concentrated formula (thus enabling volume to be reduced)</td>
</tr>
<tr>
<td><strong>Blocked feeding tube</strong></td>
<td>Irregular flushing of tube</td>
<td>• Flush the tube with warm water before and after the feed</td>
</tr>
<tr>
<td></td>
<td>Administration of medicines</td>
<td>• Flush with water before and after every feed and medicine. Do not add medicine to formula</td>
</tr>
<tr>
<td></td>
<td>Feeding tube deterioration</td>
<td>• Use liquid medicines where possible. Crush tablets thoroughly, dissolve in warm water and flush with water. Discuss with pharmacist</td>
</tr>
<tr>
<td></td>
<td>Supplementary oral food intake</td>
<td>• Replace feeding tube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Flush feeding tube regularly to prevent blockages</td>
</tr>
</tbody>
</table>
### TUBE FEEDING

#### Diarrhoea

<table>
<thead>
<tr>
<th>If the problem is</th>
<th>The cause is usually</th>
<th>Try the following ideas to fix the problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhoea</td>
<td>Medicines</td>
<td>• Check with the doctor that medicines are not aggravating the diarrhoea. If unable to change, consider anti-diarrhoea medicine</td>
</tr>
<tr>
<td></td>
<td>Antibiotics</td>
<td>• Antibiotics can affect the gut and cause diarrhoea. Discuss with GP/Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Formula administration</td>
<td>• Provide prebiotics and probiotics to help normalise gut flora post antibiotics</td>
</tr>
<tr>
<td></td>
<td>Decreased fibre</td>
<td>• Administer bolus formula more slowly to allow more time for absorption or consider changing to continuous feeds if possible. Do not reduce the strength of the formula i.e. don't dilute with water</td>
</tr>
<tr>
<td></td>
<td>Constipation</td>
<td>• Use a fibre formula e.g. Jevity™, Nutrison Multi Fibre™, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Check diarrhoea is not overflow from constipation</td>
</tr>
</tbody>
</table>

#### Dehydration

<table>
<thead>
<tr>
<th>If the problem is</th>
<th>The cause is usually</th>
<th>Try the following ideas to fix the problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dehydration</td>
<td>Persistent vomiting or diarrhoea</td>
<td>• Provide an extra 500-1000ml of water per day; spread it evenly through flushes, e.g. 6 x 150ml</td>
</tr>
<tr>
<td></td>
<td>Inadequate fluid volume</td>
<td></td>
</tr>
</tbody>
</table>

#### Refeeding syndrome

<table>
<thead>
<tr>
<th>If the problem is</th>
<th>The cause is usually</th>
<th>Try the following ideas to fix the problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refeeding syndrome</td>
<td>Rapid commencement of feeding in a resident who is malnourished</td>
<td>• Give Thiamin (Vit B1). Monitor electrolytes and supplement if low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Extra care is required in the first week of tube feeding. Start low and go slow i.e. start at 50% of residents basal energy (calorie) requirements and increase gradually every second day reaching goal in one to two weeks. Check electrolytes daily. Consult with the GP to get blood electrolytes monitored</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Utilise a dietitian’s expertise in identifying who may be at risk of refeeding syndrome and the recommended feeding regime for at risk residents</td>
</tr>
</tbody>
</table>

---

### FURTHER INFORMATION

Free download on the Dietitians Association of Australia website: *Enteral Nutrition Manual for Adults in Health Care Facilities*

Pressure Injuries
Pressure injuries

A pressure injury is a localised injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, shear and/or friction, or a combination of these factors.\(^{(1)}\)

Pressure injuries require adequate calories, protein, vitamins, and minerals to heal properly. Good nutrition is important and can decrease the time it takes for pressure injuries to heal.

Pressure injuries most commonly occur in areas where the skin, or tissue under the skin, is injured. This usually happens where there is unrelieved pressure over a bony site. Older people with chronic illnesses are most at risk of pressure injuries. Pressure injuries impact hugely on quality of life; they cause pain, discomfort, decreased mobility and independence.\(^{(2)}\) In the most advanced stage (Stage IV), the pressure injury becomes so deep that it involves underlying muscle and bone, and sometimes to tendons and joints. Gangrene and death can result from pressure injuries.

Risk factors for pressure injuries include:\(^{(1)}\)

- Impaired mobility – leading to increased exposure to pressure. e.g. secondary to stroke, trauma and obesity
- Extrinsic factors that increase the shear force, friction (resistance between the skin and the contact surface) and moisture e.g. secondary to incontinence
- Intrinsic factors such as impaired circulation, poor nutritional status and diabetes

‘Poor nutrition contributes to the risk of developing pressure injuries. Wound healing is also greatly influenced by nutritional status. Not only does poor nutrition impair the healing process, it causes the body to be more susceptible to infection.’\(^{(3)}\)

ASSESSING NUTRITIONAL NEEDS OF THE RESIDENT WITH PRESSURE INJURIES

Each resident who has a pressure injury or has the potential for sustaining a pressure should be assessed by a dietitian. This is important as the stage and size of the injury as well as current nutritional status need to be ascertained if the appropriate nutrient requirements are to be determined. Monitoring and reassessment of nutritional requirements should be part of the care plan. Commence resident on a high protein high calorie diet. Refer to chapter 18: ‘Practical Suggestions to Maintain Weight or Regain Lost Weight’.

Residents may not be getting enough nutrition for their wound to heal if they have a poor appetite or oral intake.

Nutrition plays a very important part in the prevention and healing of pressure injuries. Without adequate nutrition, healing of pressure injuries will be compromised especially if the person is already malnourished.

If a resident is not eating well, tempt them regularly with small amounts of food. They may find it easier to manage six small meals spread over the day. Encourage them to:

- Eat a variety of foods for a balanced diet so they get enough of the right nutrition
- Increase their protein intake
- Get enough vitamins A and C, and the mineral zinc
- Drink plenty of (nourishing) fluids
- Maintain or increase their weight
- Control their blood glucose levels, if they have diabetes. Refer to chapter 22: ‘Diabetes and the Glycaemic Index’
The following are important for wound healing:

ENERGY (CALORIES)
Calorie requirements are increased for the healing of pressure injuries and are estimated to be 30-35 calories per kilogram of body weight each day. This means a 55kg resident would need about 1900 calories per day. Calorie needs increase with the size and degree of the injury. The main sources of calories for the body for wound healing are carbohydrates and fats. Ensuring residents have adequate calories, prevents the protein, which is needed for wound healing, being used for energy. Fat provides a greater number of calories per gram than carbohydrate or protein; (a good reason not to use low fat foods in aged care homes!)

Essential fatty acids are a component of cell membranes and the requirements for these nutrients are increased for pressure injuries to heal. As these fatty acids must be obtained from the diet, include foods containing fat such as meat and full fat dairy foods (milk, cheese, yoghurt, ice-cream), butter, cream, oils, and margarine.

Carbohydrate foods provide calories and are required in sufficient amounts to prevent protein from being used for energy. Carbohydrate foods include cereals, breads, potatoes, rice, pasta, fruit, legumes, milk, yoghurt, custard, etc.

FLUIDS
Hydration is important in wound healing. Residents with pressure injuries should be well hydrated. An adequate fluid intake (6-8 cups per day) is the normal amount; a resident with a pressure injury or at risk of a pressure injury requires more than this to maintain good skin integrity and circulation. Refer to chapter 4: ‘Hydration Needs’.

DIETS AND INJURY HEALING
If a resident is overweight they should not try to lose weight until their wound is completely healed.

Diets that reduce intake of food or groups of foods are counterproductive to the healing of pressure injuries. For residents who do need to adhere to food restrictions e.g. vegans, a dietitian’s advice is essential.

PROTEIN
Protein is essential for wound healing. Eating too little protein can delay or affect how well the wound heals. Residents will require more protein in their diet if they have a pressure injury.

The recommended daily intake is 1.5 grams per kilogram of body weight of the resident, with that amount increasing to 3 grams for the more severe pressure injury. Residents who are malnourished have depleted protein reserves which delays healing of pressure injuries.

High quality protein foods are more easily used by the body and these should be included regularly in a resident’s diet. However, any type of protein rich food should be included at every meal or mid-meal.

High quality protein foods include
- Meat (beef, pork, veal)
- Milk
- Chicken, turkey, duck
- Soy milk
- Fish
- Custard
- Eggs
- Yoghurt (plain and flavoured)
- Cheese
- Ice-cream

L-Arginine is an essential amino acid. Research has shown providing 9 grams a day of this amino acid may assist healing of pressure injuries. Supplements include Arginaid™ and Cubitan™. Improvements in wound healing should be evident two to three weeks after commencing L-Arginine. Consider L-Arginine with medical or dietetic consultation.

Note: L-Arginine may cause diarrhoea. Gradual introduction may help.
OTHER NUTRIENTS IMPORTANT FOR WOUND HEALING

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Food sources</th>
<th>Role in wound healing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C</td>
<td>Fruit and vegetables; particularly oranges, grapefruit, tomatoes, leafy green vegetables and juice</td>
<td>Needed for the synthesis of collagen. Improves injury healing and decreases the risk of infection</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Liver, milk, cheese, eggs, fish, dark green vegetables, red/orange fruits and vegetables</td>
<td>Encourages new skin growth. Promotes healing and decreases the risk of infection</td>
</tr>
<tr>
<td>Zinc</td>
<td>Red meat, fish, shellfish, poultry, eggs and milk products</td>
<td>Encourages healing and new tissue growth</td>
</tr>
<tr>
<td>Iron</td>
<td>Red meat, offal, fish, eggs, wholemeal bread, dark green leafy vegetables, dried fruit, nuts and yeast extracts</td>
<td>Delivers oxygen to the wound site and improves wound healing</td>
</tr>
</tbody>
</table>

FURTHER INFORMATION


Exercise
Exercise

Exercise helps an older person improve muscle strength, balance and mobility and enables them to continue performing daily tasks. Encouraging exercise in combination with a high protein diet will help maintain muscle mass.

Older people vary in their level of independence from those who are mobile to those immobile and very frail. Encouraging them to incorporate appropriate exercise, including strength, balance and endurance training in their daily activities, when possible, will promote continued physical and mental functioning and prolong independence.

Everyone can benefit from regular exercise or physical activity, and it’s never too late to start; even those using ‘walkers’ or wheelchairs or who have arthritis or heart disease and are on multiple medicines can benefit.

There are different forms of exercise/training that have different benefits: strength or resistance training, balance training, aerobic or cardiovascular training and flexibility training.

**STRENGTH EXERCISE – BENEFITS**

- Improved appetite
- Increased muscle strength and muscle mass
- Improved functional independence
- Slowing of chronic wasting diseases
- Improved balance and gait stability
- Increased bone density and strength
- Prevention of falls
- Improved diabetic control, glucose tolerance

**BALANCE EXERCISE – BENEFITS**

- Gait disorders
- Falls prevention
- Decreased fear of falling

**AEROBIC EXERCISE – BENEFITS**

- Reduced blood pressure
- Helps to prevent constipation
- Improved glucose tolerance, diabetes control
- Improved aerobic capacity

**FLEXIBILITY EXERCISE – BENEFITS**

- Improved functional capacity
- Increased tissue elasticity
- Increased joint range of motion

Each resident needs to have an individual plan. The prescribed exercise needs to be appropriate to the problem that is being addressed. The exercise program should begin gradually and be tailored to the person’s needs. This will be important especially if the individual has muscle wasting, poor gait and balance, visual impairment or on multiple medicines.

These benefits contribute to greater functional capacity and personal independence when performing activities of daily living and there is less need for caregiver assistance.

There is some overlap between the forms of exercise and their benefits.

Common to the older population is a decrease in skeletal muscle mass (sarcopenia) and strength, which is the result of a decline in the production of muscle tissue, and increased muscle wasting from inactivity or disease as well as age. This loss of muscle mass means residents have a harder time remaining physically active and gradually lose the ability to perform activities of daily living and as a result they become frailer.

While all types of exercise are highly recommended, only strength training, otherwise known as resistance training, can improve sarcopenia (age related loss of muscle mass). The benefits of this type of training include increased hip and thigh muscle strength. If a person can’t get out of a chair without using their hands, then their hip and thigh muscles need strengthening.

Strength training may be the preferred initial exercise. It enables them to participate more fully and safely in aerobic activities or simple tasks requiring transfers or mobility.

It makes sense to begin with moderate to high intensity resistance training which improves strength, balance, mobility and functional independence. Further improvements to health can be gained with the later introduction of aerobic and flexibility exercise for additional cardiovascular benefit and improvements in daily activities.

Providing a protein rich food or drink post exercise is beneficial for building muscle in residents.
EXAMPLES OF DIFFERENT FORMS OF EXERCISE

Strength training
• Lifting body weight out of chair
• Lifting hand held weights
• Using weighted wrist/ankle bands
• Elastic resistance bands

Weights that are chosen should be felt to be between 15 (hard) and 18 (very hard) (see below) and should allow about 8 lifts before needing to rest.

Balance training
• Standing on one leg – can be done while holding on to the back of a chair
• Stepping over objects
• Standing on heels and toes
• Walking heel to toe
• Sitting on a balance ball
• T’ai Chi

Aerobic training
• Walking, treadmill
• Gardening
• Exercise bike
• Climbing stairs
• Swimming
• Dancing

Flexibility training
• Stretches
• Yoga

Exercise intensity scale

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Very very light</td>
</tr>
<tr>
<td>7</td>
<td>Very light</td>
</tr>
<tr>
<td>8</td>
<td>Fairly light</td>
</tr>
<tr>
<td>9</td>
<td>Somewhat hard</td>
</tr>
<tr>
<td>10</td>
<td>Hard</td>
</tr>
<tr>
<td>11</td>
<td>AEROBIC ZONE</td>
</tr>
<tr>
<td>12</td>
<td>Somewhat hard</td>
</tr>
<tr>
<td>13</td>
<td>STRENGTH TRAINING ZONE</td>
</tr>
<tr>
<td>14</td>
<td>Hard</td>
</tr>
<tr>
<td>15</td>
<td>Very hard</td>
</tr>
<tr>
<td>16</td>
<td>Very very hard</td>
</tr>
</tbody>
</table>

Independence and quality of life are improved with exercise. The effects of exercise are evident in just a few weeks. Particularly resistance training can produce significant gains in strength and power.

A strength training program has been shown to improve walking, bathing, dressing and getting in and out of chair and bed. People climb stairs more easily, walk faster and have improved appetite. They are more likely to achieve greater benefits from their nutritional supplements if taken in conjunction with strength training. For strength training to be effective, weights should feel ‘hard’ to lift, but not cause pain, and should be increased by 0.5 to 1.0kg as soon as they no longer feel ‘hard’ to lift, using proper form.

While it is never too old to begin strength training, it is surely advantageous to start sooner rather than later. It is therefore recommended that the person you care for has access to well-designed strength training programs.

FURTHER INFORMATION

• Progressive Resistance Exercises and Balance Training for Older Adults, Training Manual for Staff and Exercise Leaders. Maria A Fiatarone Singh, MD. Contact University of Sydney, School of Exercise & Sports Science, Cumberland Campus, PO Box 170, Lidcombe NSW 1825
• Choose Health: Be Active. A Physical Activity guide for Older Australians. Ph 1800 500 853 or (02) 6269 1080

SECTION 5
# Resident Food and Nutrition Communication Card*

<table>
<thead>
<tr>
<th>Resident's name</th>
<th>DOB</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicines</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Initial Nutrition Screen

<table>
<thead>
<tr>
<th>Date</th>
<th>Height (m)</th>
<th>Weight (kg)</th>
<th>BMI</th>
<th>Ideal weight range (BMI 22-27)</th>
<th>Screening Score</th>
<th>Screening Risk</th>
</tr>
</thead>
</table>

## Screening Tool (choose one)

<table>
<thead>
<tr>
<th>MUST</th>
<th>MNA-SF</th>
<th>SNAQ</th>
<th>MST</th>
</tr>
</thead>
</table>

## Physical Assistance Required with Eating and Drinking

- Does the resident require assistance with eating? [ ] Yes [ ] No
- Does the resident require assistance with drinking? [ ] Yes [ ] No

If yes specify the assistance needed:

- Cutting up food
- Opening all packets
- Prompting
- Specialised eating utensils e.g. cutlery, plates, cups
- Some assistance with eating
- Some assistance with drinking
- Full assistance with eating
- Full assistance with drinking

## Dietary Requirements

- Type of diet:
  - [ ] Full
  - [ ] High Protein/High Calorie
  - [ ] Diabetic
  - [ ] Vegetarian: Vegan
  - [ ] Ovo-Lacto
  - [ ] High Fibre
  - [ ] PEG
  - [ ] Other

- Appetite: [ ] Good [ ] Average [ ] Poor
- Fluid Intake: [ ] Good [ ] Average [ ] Poor

- Food/fluid likes
- Food/fluid dislikes

## Spiritual/cultural requirements

- [ ] No [ ] Yes

## Fortification of meals and snacks required

- [ ] Yes [ ] No

## Nutrition supplements required

- [ ] Yes [ ] No

Please specify type of nutrition supplement and amount:

## Difficulty with swallowing

- [ ] Yes [ ] No

- Texture: [ ] Full [ ] Cut Up
  - [ ] Texture A (Soft)
  - [ ] Texture B (Minced and Moist)
  - [ ] Texture C (Smooth Pureed)

- Fluids: [ ] Normal
  - [ ] Mildly thick Level 150 (Nectar)
  - [ ] Moderately thick Level 400 (Honey)
  - [ ] Extremely thick Level 900 (Pudding)

---

*This card should be updated monthly. Monthly malnutrition screening is recommended.*
Residents should be screened monthly. Their score and risk should be recorded. Choose the one tool that is most suitable for your residents. One tool need only be used.

Some care homes may have to use a variety of tools to enabling screening of each resident.

<table>
<thead>
<tr>
<th></th>
<th>SNAQ Simplified Nutritional Appetite Questionnaire</th>
<th>MST Malnutrition Screening Tool</th>
<th>MNA-SF Mini Nutritional Assessment Short Form</th>
<th>MUST Malnutrition Universal Screening Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low risk</td>
<td>15 or more</td>
<td>0 -1</td>
<td>12 -14</td>
<td>0</td>
</tr>
<tr>
<td>Medium risk</td>
<td></td>
<td>2</td>
<td>8 -11</td>
<td>1</td>
</tr>
<tr>
<td>High risk</td>
<td></td>
<td>14 or less</td>
<td>3 - 5</td>
<td>0 - 7</td>
</tr>
</tbody>
</table>

**Example**: 4 High

January

February

March

April

May

June

July

August

September

October

November

December

January
## RESIDENT MONTHLY WEIGHT CHART

### Instructions:
- Affix Resident Sticker here
- Fill in the resident’s weight (Wt) in kilograms (Kg).
- Record estimated height using ulna length.
- Refer to table page 90 to obtain height from ulna length.
- Record date and weight at the bottom of the graph and plot result on graph.
- Draw Lines to show BMI cut off of 22.
- A BMI of 22–27 is ideal for residents in care homes.
- A BMI of 18.5 or less is a high risk for malnutrition.
- Calculate BMI using the formula: BMI = Wt (Kg) / (Ht (m)²)
- Record ideal weight range (BMI 22-27).

### Table:

<table>
<thead>
<tr>
<th>Date</th>
<th>Weight kg</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60</td>
<td>61</td>
<td>62</td>
<td>63</td>
<td>64</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
<td>69</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td></td>
<td>72</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>76</td>
<td>77</td>
<td>78</td>
<td>79</td>
<td>80</td>
<td>81</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>84</td>
<td>85</td>
<td>86</td>
<td>87</td>
<td>88</td>
<td>89</td>
<td>90</td>
<td>91</td>
<td>92</td>
<td>93</td>
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<td></td>
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<td>96</td>
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<td></td>
<td></td>
<td>108</td>
<td>109</td>
<td>110</td>
<td>111</td>
<td>112</td>
<td>113</td>
<td>114</td>
<td>115</td>
<td>116</td>
<td>117</td>
<td>118</td>
<td>119</td>
</tr>
</tbody>
</table>

### Notes:
- Record estimated height using ulna length.
- BMI under 20 is underweight for this resident.
- A BMI of 22–27 is ideal for residents in care homes.
- A BMI of 18.5 or less is a high risk for malnutrition.

(Refer opposite for Body Mass Index Chart)
### BODY MASS INDEX CHART

| HEIGHT* | WEIGHT |  
|---|---|---
| **Feet** | **Metres** | **Ideal Weight Range (BMI: 22 - 27)** | **Underweight BMI 18.5 - 20 (see MUST Screening Tool)** |
| 4'6 | 1.37 | 41 - 51 | 35 - 38 |
| 4'7 | 1.40 | 43 - 53 | 36 - 39 |
| 4'8 | 1.42 | 45 - 55 | 37 - 40 |
| 4'9 | 1.45 | 46 - 57 | 39 - 42 |
| 4'10 | 1.47 | 48 - 59 | 40 - 43 |
| 4'11 | 1.50 | 49 - 61 | 42 - 45 |
| 5'0 | 1.52 | 51 - 63 | 43 - 46 |
| 5'1 | 1.55 | 53 - 65 | 44 - 48 |
| 5'2 | 1.57 | 54 - 67 | 46 - 49 |
| 5'3 | 1.60 | 56 - 69 | 47 - 51 |
| 5'4 | 1.63 | 58 - 71 | 49 - 53 |
| 5'5 | 1.65 | 60 - 74 | 50 - 54 |
| 5'6 | 1.68 | 62 - 76 | 52 - 56 |
| 5'7 | 1.70 | 64 - 78 | 53 - 58 |
| 5'8 | 1.73 | 66 - 81 | 55 - 60 |
| 5'9 | 1.75 | 68 - 83 | 57 - 61 |
| 5'10 | 1.78 | 70 - 85 | 59 - 63 |
| 5'11 | 1.80 | 72 - 88 | 60 - 65 |
| 6'0 | 1.83 | 74 - 90 | 62 - 67 |
| 6'1 | 1.85 | 76 - 93 | 63 - 68 |
| 6'2 | 1.88 | 78 - 95 | 65 - 71 |
| 6'3 | 1.91 | 80 - 98 | 67 - 73 |
| 6'4 | 1.93 | 82 - 101 | 69 - 74 |
| 6'5 | 1.96 | 84 - 103 | 71 - 77 |
| 6'6 | 1.98 | 86 - 106 | 73 - 78 |

* If height cannot be accurately measured from a standing position, it may also be calculated from:

**Ulna Length**: Put resident’s right hand (if right arm is sore use left) on their left shoulder. Use a tape measure to measure from the point that sticks out at the wrist to the tip of the elbow. Record the ulna length. Refer to page 90 to convert ulna length to height.
**RESIDENT HEALTHY WEIGHT RANGE BMI 22-27**

Aged Care Home Residents Healthy Weight Range

<table>
<thead>
<tr>
<th>Height m</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.44</td>
<td>31 kg</td>
</tr>
<tr>
<td>1.46</td>
<td>32 kg</td>
</tr>
<tr>
<td>1.48</td>
<td>33 kg</td>
</tr>
<tr>
<td>1.50</td>
<td>34 kg</td>
</tr>
<tr>
<td>1.52</td>
<td>35 kg</td>
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<td>1.58</td>
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<td>42 kg</td>
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<td>43 kg</td>
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<td>1.70</td>
<td>44 kg</td>
</tr>
<tr>
<td>1.72</td>
<td>45 kg</td>
</tr>
<tr>
<td>1.74</td>
<td>46 kg</td>
</tr>
<tr>
<td>1.76</td>
<td>47 kg</td>
</tr>
</tbody>
</table>

Food and Nutrition Manual for Aged Care Homes
NUTRITION NOTES FOR RESIDENTS EATING POORLY AND AT RISK OF MALNUTRITION

This chart covers 2 days of meals. Please fill out these nutrition notes as accurately as possible. Specify the type of food and beverage that was selected and write in the corresponding box. Indicate the amount of food eaten by the resident with a percentage i.e. 25%, 50%, 75%, or 100% for each item.

<table>
<thead>
<tr>
<th>Date</th>
<th>Please specify</th>
<th>% eaten</th>
<th>Date</th>
<th>Please specify</th>
<th>% eaten</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Breakfast</td>
<td></td>
<td></td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fruit stew/fresh</td>
<td></td>
<td></td>
<td>Fruit stew/fresh</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fruit juice</td>
<td></td>
<td></td>
<td>Fruit juice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cereal</td>
<td></td>
<td></td>
<td>Cereal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Toast</td>
<td></td>
<td></td>
<td>Toast</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hot beverage</td>
<td></td>
<td></td>
<td>Hot beverage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplement</td>
<td></td>
<td></td>
<td>Supplement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morning Tea</td>
<td></td>
<td></td>
<td>Morning Tea</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Drink</td>
<td></td>
<td></td>
<td>Drink</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplement</td>
<td></td>
<td></td>
<td>Supplement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Main Meal</td>
<td></td>
<td></td>
<td>Main Meal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soup</td>
<td></td>
<td></td>
<td>Soup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hot/cold meat</td>
<td></td>
<td></td>
<td>Hot/cold meat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starch</td>
<td></td>
<td></td>
<td>Starch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other veg</td>
<td></td>
<td></td>
<td>Other veg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bread</td>
<td></td>
<td></td>
<td>Bread</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dessert</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Supplement</td>
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<td></td>
<td>Supplement</td>
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</tr>
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<td></td>
<td>Afternoon Tea</td>
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<td>Afternoon Tea</td>
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<td></td>
<td>Food</td>
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<td>Drink</td>
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<td>Supplement</td>
<td></td>
<td></td>
<td>Supplement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evening Meal</td>
<td></td>
<td></td>
<td>Evening Meal</td>
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</tr>
<tr>
<td></td>
<td>Soup</td>
<td></td>
<td></td>
<td>Soup</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hot/cold meat</td>
<td></td>
<td></td>
<td>Hot/cold meat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starch</td>
<td></td>
<td></td>
<td>Starch</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other veg</td>
<td></td>
<td></td>
<td>Other veg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bread</td>
<td></td>
<td></td>
<td>Bread</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dessert</td>
<td></td>
<td></td>
<td>Dessert</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplement</td>
<td></td>
<td></td>
<td>Supplement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supper</td>
<td></td>
<td></td>
<td>Supper</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food</td>
<td></td>
<td></td>
<td>Food</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drink</td>
<td></td>
<td></td>
<td>Drink</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supplement</td>
<td></td>
<td></td>
<td>Supplement</td>
<td></td>
</tr>
</tbody>
</table>

Affix Resident sticker here
Surname: ............................................................................
First Name: .......................................................................

DAY 1
DAY 2
RESIDENT MEAL SATISFACTION SURVEY

We would appreciate your opinions about the food service. Use the scale below to complete this meal satisfaction survey.

1. How do you rate the courtesy of the food service staff?

   Comments: ...........................................................................................................................................................................................

2. How do you rate the times at which the meals are served? Desired Time

   Breakfast: ☐ Too early ☐ Too late ☐ OK

   Midday meal: ☐ Too early ☐ Too late ☐ OK

   Evening meal: ☐ Too early ☐ Too late ☐ OK

   Other: ☐ Too early ☐ Too late ☐ OK

3. Do you have enough time to eat your meals? ☐ Yes ☐ No If No, how long do you need

4. How do you rate the dining environment?

   Comments: ...........................................................................................................................................................................................

5. Are there enough menu choices at:

   Breakfast ☐ Yes ☐ No

   Lunch ☐ Yes ☐ No

   Dinner ☐ Yes ☐ No

   Mid-meals ☐ Yes ☐ No i.e. morning tea, afternoon tea & supper

   How do you rate the quantity of food? ☐ Too little ☐ Too much ☐ Just right

6. How do you rate the quality of the food?

   Comments e.g. taste, aroma, colour ..............................................................................................................................................

7. Is the temperature of the hot food? ☐ Too hot ☐ Too cold ☐ Just right

8. How do you rate the temperature of cold food? ☐ Too cold ☐ Not cold enough ☐ Just right

continued over page...
9. Do you get sufficient help to eat your meals?
   □ Yes  □ No  If No, how can we help ..................................................................................................................................................

10. Have we met your religious/cultural/spiritual food needs?
   □ Yes  □ No  If No, what else could we do? ..................................................................................................................................................

11. Can you have a snack whenever you want, day or night  □ Yes  □ No

12. What meals from the current menu do you like the least?
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................

13. What meals from the current menu do you like the most?
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................

14. Are there any other dishes/foods you would like to have included on the menu?
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................

15. Are there any other comments or suggestions you would like to make to improve the meals
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................
   ..................................................................................................................................................................................................................

Thank you for your time
## NUTRIENT REFERENCE VALUES FOR AUSTRALIA AND NEW

FOR ADULTS 70 YEARS AND OLDER (2005)

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>RDI or AI</th>
<th>Nutrient</th>
<th>RDI or AI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADULTS – VITAMINS</strong></td>
<td></td>
<td><strong>ADULTS – MINERALS</strong></td>
<td></td>
</tr>
<tr>
<td>Protein</td>
<td>57g/day women</td>
<td>Calcium</td>
<td>1300mg women</td>
</tr>
<tr>
<td></td>
<td>81g/day men</td>
<td></td>
<td>1300mg men</td>
</tr>
<tr>
<td>Fibre</td>
<td>25g/day women</td>
<td>Iodine</td>
<td>150µg women</td>
</tr>
<tr>
<td></td>
<td>30g/day men</td>
<td></td>
<td>150µg men</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>700µg RE women</td>
<td>Iron</td>
<td>8mg women</td>
</tr>
<tr>
<td></td>
<td>900µg RE men</td>
<td></td>
<td>and men</td>
</tr>
<tr>
<td>Thiamin (Vitamin B1)</td>
<td>1.1mg women 1.2mg men</td>
<td>Magnesium</td>
<td>320mg women 420mg men</td>
</tr>
<tr>
<td>Riboflavin (Vitamin B2)</td>
<td>1.3mg women 1.6mg men</td>
<td>Phosphorus</td>
<td>1000mg women and men</td>
</tr>
<tr>
<td>Niacin (Vitamin B3)</td>
<td>13mg NE women 16mg NE men</td>
<td>Potassium</td>
<td>2800mg women (AI) 3800mg men (AI)</td>
</tr>
<tr>
<td>Pyridoxine (Vitamin B6)</td>
<td>1.5mg women 1.7mg men</td>
<td>Selenium</td>
<td>60µg women 70µg men</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>2.4µg women and men</td>
<td>Sodium</td>
<td>460 - 920mg or 20 - 40mmol (AI)</td>
</tr>
<tr>
<td>Folic acid (Folate equivalents)</td>
<td>400µg women and men</td>
<td>Zinc</td>
<td>8mg women 14mg men</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>45mg women and men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin D</td>
<td>15µg women and men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin E</td>
<td>7mg women (AI) 10mg men (AI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin K</td>
<td>60µg women (AI) 70µg men (AI)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ABBREVIATIONS:**
- **RDI** = Recommended dietary intake
- **µg** = micrograms
- **AI** = Adequate intake
- **mg** = milligrams
- **RE** = Retinol equivalents
- **NE** = Niacin equivalents
- **AI** = Adequate intake

Reference source: Department of Health and Ageing, National Health and Medical Research Council, New Zealand Ministry of Health.

Nutrient Reference Values for Australia and New Zealand including Recommended Dietary intakes. Commonwealth Department of Health, 2006
### TUBE FEEDING CHECKLIST

<table>
<thead>
<tr>
<th>Resident’s name</th>
<th>Reason for tube feeding: □ NBM as unsafe to eat or □ not eating enough</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date tube feeding commenced</td>
<td>Name of formula: ........................................ Manufacturer: ........................................</td>
</tr>
<tr>
<td>Volume of formula needed per day</td>
<td>Calories/kJ provided per day: ........................................</td>
</tr>
<tr>
<td>Grams protein provided per day</td>
<td>Volume of extra water/fluids needed per day (min): .........................</td>
</tr>
<tr>
<td>Volume of water to flush tube</td>
<td>Type of feeding tube: □ Gastrostomy □ Nasogastric □ Jejunostomy □ Nasoduodenal □ Nasojejunal</td>
</tr>
<tr>
<td>Administration Method: □ Bolus □ Continuous □ Gravity □ Intermittent □ Pump</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feeding schedule</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (hours)</td>
<td>Rate (ml)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feeding times</th>
<th></th>
</tr>
</thead>
</table>

| Initial weight | Suggested goal weight range |  |
|----------------|--------------------------------|
|  | Yes | |

<table>
<thead>
<tr>
<th>Equipment checklist: CONTINUOUS</th>
<th>BOLUS</th>
<th>OTHER GENERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Formula bag</td>
<td>□ 60ml syringe</td>
<td>□ Formula</td>
</tr>
<tr>
<td>□ Giving set*</td>
<td>□ Jug</td>
<td>□ Hygienic preparation area</td>
</tr>
<tr>
<td>□ Pump</td>
<td></td>
<td>□ Hand washing facilities</td>
</tr>
<tr>
<td>□ IV pole</td>
<td></td>
<td>□ Can opener</td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Disposable gloves</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other information</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of supplier/chemist where formula and/or equipment can be obtained</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phone number</th>
<th>Fax</th>
<th>Email</th>
<th>Name of dietitian</th>
<th>Dietitian phone number</th>
<th>Last review date by dietitian</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Apparatus between the tube and the feeding bag</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## MID-MEAL IDEAS

<table>
<thead>
<tr>
<th>CAKES</th>
<th>UNCOOKED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple tea cake</td>
<td>Biscuits and cheese</td>
</tr>
<tr>
<td>Banana cake</td>
<td>Biscuits with hard boiled egg</td>
</tr>
<tr>
<td>Butterfly cakes</td>
<td>Biscuits and tomato</td>
</tr>
<tr>
<td>Carrot cake</td>
<td>Sweet biscuits</td>
</tr>
<tr>
<td>Chocolate cake</td>
<td>Fruche™</td>
</tr>
<tr>
<td>Cinnamon tea cake</td>
<td>Ice-cream</td>
</tr>
<tr>
<td>Fruit cake</td>
<td>Junket</td>
</tr>
<tr>
<td>Jam sponge</td>
<td>Sandwiches</td>
</tr>
<tr>
<td>Orange cake</td>
<td>Yoghurt</td>
</tr>
<tr>
<td>Patty cakes</td>
<td>Fruit, fruit platters</td>
</tr>
<tr>
<td>Plain tea cake</td>
<td></td>
</tr>
<tr>
<td>Rainbow cake</td>
<td></td>
</tr>
<tr>
<td>Rock cakes</td>
<td></td>
</tr>
<tr>
<td>Ginger cake</td>
<td></td>
</tr>
<tr>
<td>Sultana cake</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BISCUITS</th>
<th>SLICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anzac biscuits</td>
<td>Apricot slice</td>
</tr>
<tr>
<td>Fruity Cornflake™ biscuits</td>
<td>Caramel walnut slice</td>
</tr>
<tr>
<td>Honey oat bars</td>
<td>Chocolate slice</td>
</tr>
<tr>
<td>Jam drops</td>
<td>Coconut jam slice</td>
</tr>
<tr>
<td>Ginger biscuits</td>
<td>Sultana slice</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MUFFINS</th>
<th>SCONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple and bran muffins</td>
<td>Cheese scones</td>
</tr>
<tr>
<td>Banana muffins</td>
<td>Date scones</td>
</tr>
<tr>
<td>Blueberry muffins</td>
<td>Fruit scones</td>
</tr>
<tr>
<td>Bran and banana muffins</td>
<td>Pumpkin scones</td>
</tr>
<tr>
<td>Choc chip muffins</td>
<td>Raisin scones</td>
</tr>
<tr>
<td></td>
<td>Scones, jam and cream</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOAVES</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banana and walnut loaf</td>
<td>Custard</td>
</tr>
<tr>
<td>Date loaf</td>
<td>Pikelets</td>
</tr>
<tr>
<td>Sultana loaf</td>
<td>Milkshakes</td>
</tr>
<tr>
<td></td>
<td>Smoothies</td>
</tr>
<tr>
<td></td>
<td>Raisin toast</td>
</tr>
<tr>
<td></td>
<td>Cinnamon toast</td>
</tr>
</tbody>
</table>
The light meal ‘dish list’ ideas do not necessarily make a complete meal. Accompanying rice, pasta, bread, vegetables or salad may be required.

<table>
<thead>
<tr>
<th>EGG DISHES</th>
<th>SEAFOOD DISHES</th>
<th>CHICKEN DISHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiche – Tuna &amp; vegetable, cheese &amp; asparagus, vegetable, cheese, salmon</td>
<td>Mornay – Salmon, tuna Fish cakes (patties) Casserole – canned, fresh or frozen fish</td>
<td>Chicken and vegetable casserole Chicken fricassee Curried chicken</td>
</tr>
<tr>
<td>Omelettes</td>
<td>Fish &amp; chips</td>
<td>Chicken stir-fry</td>
</tr>
<tr>
<td>Ham and egg pie</td>
<td>Tuna or salmon quiche</td>
<td>Chicken mornay</td>
</tr>
<tr>
<td>Curried egg</td>
<td>Fish kedgeree</td>
<td>Honey soy chicken</td>
</tr>
<tr>
<td>Scrambled, poached, fried eggs Baked cheese custard</td>
<td>Seafood crepes</td>
<td>Marinated chicken drumsticks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BEEF/LAMB/PORK VEGETABLE DISHES COMMERCIAL PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rissoles, savoury meat loaf Meat balls Hamburger</td>
</tr>
<tr>
<td>Tacos Savoury mince Steak and kidney Meat pie</td>
</tr>
<tr>
<td>Braised steak Sausage rolls Sausages Shepherd’s pie</td>
</tr>
<tr>
<td>Lamb casserole Ham steak Hawaiian ham (ham, pineapple, cheese on toast)</td>
</tr>
<tr>
<td>Tripe and onions Lamb’s fry and bacon Lasagne</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PASTA/RICE DISHES BAKED PRODUCTS SANDWICHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macaroni cheese Spaghetti on toast Savoury pilaf Spaghetti Bolognaise</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUPS SALADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearty. Serve with toast, bread rolls, scones, damper etc.</td>
</tr>
</tbody>
</table>
## Oral Health Assessment Tool

<table>
<thead>
<tr>
<th>Resident:</th>
<th>Completed by:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Lips

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth, pink, moist</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Dry, chapped or red at corners</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Tongue

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal moist, roughness, pink</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Patchy, fissured, red, coated</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Gums and Oral Tissue

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moist, pink, smooth, no bleeding</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Dry, shiny, rough, swollen, sore, one ulcer/sore spot, sore under dentures</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Saliva

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moist tissues watery and free flowing</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Dry, sticky tissues, little saliva present, resident thinks they have a dry mouth</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Natural Teeth

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>No decayed or broken teeth or roots</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>1-3 decayed or broken teeth/roots, or teeth very worn down</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Dentures

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>No broken areas or teeth, worn regularly, and named</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>1 broken area or tooth, or worn 1-2 hours per day only or not named</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Oral Cleanliness

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean and no food particles or tartar in mouth or on dentures</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Food, tartar, plaque 1-2 areas of mouth, or on small area of dentures</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Dental Pain

<table>
<thead>
<tr>
<th>Healthy</th>
<th>Changes</th>
<th>Unhealthy</th>
<th>Dental Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>No behavioural, verbal or physical signs of dental pain</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Verbal &amp;/or behavioural signs of pain such as pulling at face, chewing lips, not eating, changed behaviour</td>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

### Dental Referral

* Unhealthy signs usually indicate referral to a dentist is necessary

Assessor Comments

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