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Central Coast Local Health District

Best Practice Food and Nutrition Manual for Aged Care

Edition 2.2

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Best Practice Food and Nutrition Manual for Aged Care Homes Edition 2.2

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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 mealtime atmosphere and mealtime 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

SECTION 1

Food, Nutrition and Hydration Requirements

SECTION 1

CHAPTER 1

Nutritional Requirements

SECTION 1

CHAPTER 1

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 from one resident to another and resident appetites can change from day to day or from meal to meal. It is important that meal sizes suit individual appetites. Residents who are small eaters or who have a small appetite may manage small serves with the option of additional serves. Serving a large meal to residents who have a small appetite and suggesting that they leave what they cannot eat is rarely successful. The large meal may be rejected completely. Frequent small meals may be the best option.

Even though staff have a general idea of resident appetites, it is important to establish with residents (at every meal) the size meal they would like. 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

Compromised food intake by residents who have chewing and swallowing problems may lead to poor nutrition and weight loss.

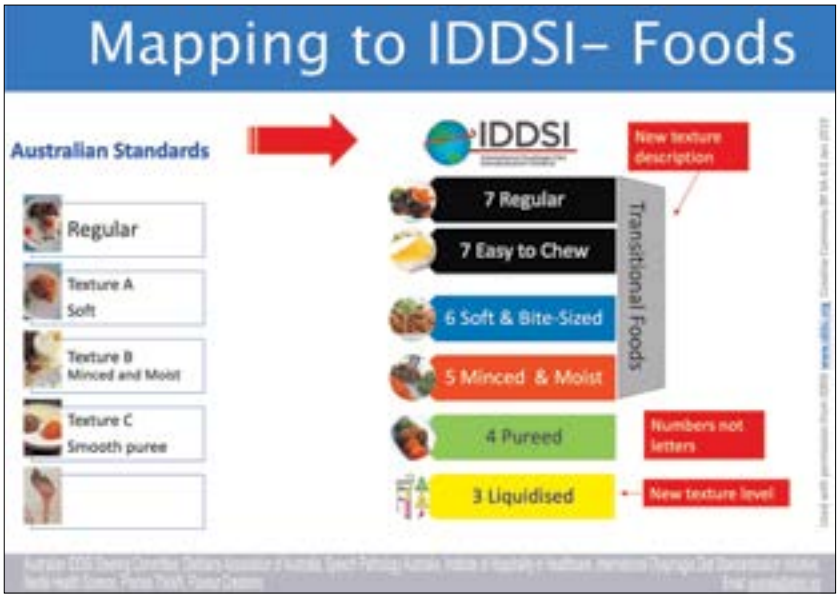
In relation to chewing and swallowing, documented resident profiles should include: whether they have dentures (and do they wear them when eating) or natural teeth or, a combination of both. Note if dentures are loose or 'clicking' as this can be an indication of weight loss. Note also the condition of gums. For further information on oral health refer to chapter 13, Oral Health.

If chewing and/or swallowing difficulties are suspected a speech pathologist should be consulted. A speech pathologist will identify problems and, if required, will recommend food texture and liquid consistency modification. This directive should be documented and readily available to all staff. A regular review by the speech pathologist is recommended.

APPROPRIATE FOOD TEXTURE

It is important that residents are provided with food and liquid of appropriate texture and consistency (as recommended by the speech pathologist).

The 'International Dysphagia Diet Standardisation Initiative (IDDSI) replaces the Australian standards. It provides clear and consistent guidelines in regard to food texture modification and liquid consistency.



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.
http://www.caresearch.com.au/caresearch/tabid/2732/Default.aspx

1. *Committee of Experts on Nutrition Food and Consumer Health, Council of Europe. Nutrition in care homes and home care report and recommendations: from recommendations to action. Strasbourg: Council of Europe Publishing; 2009.*

SECTION 1

CHAPTER 2

Vitamin D

SECTION 1

CHAPTER 2

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.'[1]

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]

1. *Working Group of the A, New Zealand B, Mineral S, Endocrine Society of A, Osteoporosis A. Vitamin D and adult bone health in Australia and New Zealand: a position statement. Medical Journal of Australia. 2005 Mar 21;182(6):281-5.*
2. *Shrapnel W, Truswell S. Vitamin D deficiency in Australia and New Zealand: What are the dietary options. Nutrition and Dietetics. 2006; 63(4):7.*
3. *Vic Health. Low vitamin D in Victoria. Key health messages for doctors, nurses and allied health 2010: Available from: https://www2.health.vic.gov.au/Api/downloadmedia/%7BB7FD55F3-0E01-4D80-8A37-0EDC6DF1894D%7D*
4. *Australian Commission on Safety and Quality in Health Care (ACSQHC). A short version of preventing falls and harm from falls in older people: Best practice guidelines for Australian residential aged care facilities. 2009. https://www.safetyandquality.gov.au/wp-content/uploads/2012/01/Guidelines-COMM.pdf*

SECTION 1

CHAPTER 3

Best Weight Range for Residents

SECTION 1

CHAPTER 3

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 [3]. 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.

1. *Winter J, Wattanapenpiaboon N, Nowson C. Body weight and mortality in older adults: a meta-analysis. Proceedings of the Nutrition Society of Australia. 2011;35:31.*
2. *Kaiser R, Winning K, Uter W, Volkert D, Lesser S, Stehle P, et al. Functionality and mortality in obese nursing home residents: an example of 'Risk Factor Paradox'? Journal of the American Medical Directors Association. 2010;11(6):428-35.*
3. *Miller SL, Wolfe RR. The danger of weight loss in the elderly. Journal of Nutrition, Health & Aging. [Review]. 2008 Aug-Sep; 12(7):487-91.*
4. *Villareal DT, Apovian CM, Kushner RF, Klein S. Obesity in older adults: technical review and position statement of the American Society for Nutrition and NAASO, The Obesity Society. Obesity Research. 2005 Nov; 13(11):1849-63.*

SECTION 1

CHAPTER 4

Hydration Needs

SECTION 1

CHAPTER 4

Hydration needs

Older people have similar fluid needs to young adults. Providing enough fluids is a fundamental aspect of nutritional care.[1]

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
- Illness e.g. gastroenteritis leading to vomiting and/or diarrhoea
- Fear of choking
- Fluids offered are not to the individual preferences of a resident
- Limited range of fluids offered
- Can't see, reach or identify fluids
- Poor control of diabetes
- Inability to manage a cup/glass
- Dislike of thickened fluids, hence refusing these fluids
- Limited access to assistive devices which would aid drinking e.g. 2-handled cup

SIGNS OF DEHYDRATION

- Dry mucous membranes in the mouth, dry tongue, cracked lips
- Dark urine, small output[3]
- 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)

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.

½ cup custard = 100ml fluid	Juice glass = 120ml fluid
½ cup canned fruit = 80ml fluid	¾ cup thick soup = 150ml fluid
Plastic feeder glass of fluid = 200ml fluid	2 scoops ice-cream = 70ml fluid
Coffee cup of fluid = 150ml fluid	200g carton yoghurt = 180ml fluid
Fruit juice Tetra Pak of fluid = 250ml fluid	½ cup jelly = 100ml fluid

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

1. *The Royal College of Nursing, National Patient Safety Agency, Water UK, The Hospital Caterers Association, NHS Supply Chain, The Patients Association and the Health Care Commission. Water for Health. Hydration best practice toolkit for hospitals and healthcare. August 2007:47*
2. *Joanna Briggs. Maintaining oral hydration in older people. Evidence based practice information sheets for health professionals. 2001 Volume 5 (Issue 1):6.*
3. *Woodward M. Guidelines to effective hydration in aged care facilities. Dec 2007:12.*
4. *Valtin H. 'Drink at least eight glasses of water a day.' Really? Is there scientific evidence for '8 x 8'? Am J Physiol Regul Integr Comp Physiol. [Review]. 2002 Nov; 283(5):R993-1004.*
5. *Ullrich S, McCutcheon H. Nursing practice and oral fluid intake of older people with dementia. Journal of Clinical Nursing. 2008; 17(21):2910-9.*

SECTION 1

CHAPTER 5

Nutrition Checklist for Menu Planning

SECTION 1

CHAPTER 5

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*[1] '(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.

1. *NH&MRC (2013) Australian Dietary Guidelines. Canberra: National Health and Medical Research Council.*
2. *Agency for Clinical Innovation. Nutrition Standards for Adult Inpatients in NSW Hospitals. 2011. Available from: http://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0004/160555/ACI_Adult_Nutrition_web.pdf*

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

SECTION 1

CHAPTER 6

Tips to maximise the nutrition content of foods offered on the menu

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CHAPTER 6

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.

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

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.

Main dishes where the predominant ingredient is meat Meat serve has a total cooked weight 65-100g	**Wet dish with high meat content** Total cooked weight of the entire dish at least 120g. Meat serve has a total cooked weight 65-100g	**Main dish with a fairly even mix of meat and vegetables** Total cooked weight of the entire dish at least 150g
CHICKEN/TURKEY		
Roast turkey	Apricot chicken	Chicken and vegetable pie
Chicken rissoles	Chicken asparagus mornay	Curry chicken pie
Roast chicken	Chicken and mushroom casserole	Macaroni chicken
Crumbed chicken	Chicken creole	Stir fry chicken with vegetables
Poached chicken	Chicken wellington	Chicken and corn mornay
Crumbed chicken breasts	Indian chicken curry	Chicken Chow Mein
Chicken in honey and soy	Chicken cacciatore	Chicken burger
Chicken Tikka	Curried chicken	Creamy chicken bake
Tandoori chicken	Chicken a la king	Chicken fried rice
Chicken in plum sauce	Satay chicken	Chicken and cheese pie
Chicken schnitzel	Chicken mornay	
BEEF		
Rissoles	Beef stew	Beef pie
Meat loaf	Beef casserole	Spaghetti bolognaise
Rissoles parmigiano	Savoury mince	Beef & vegetable stir fry
Roast beef	Shepherd's pie	Spaghetti and meatballs
Corned silverside	Beef stroganoff	Lasagne
Mixed grill	Sweet beef curry	Veal and ham pie
Steak dianne	Irish stew	Beef and noodle casserole
Veal schnitzel	Chilli con carne	Beef pasta bake
Satay beef	Veal marsala	Beef and vegetable risotto
Sausages	Steak and kidney pie	Pastitio
Crumbed veal medallions	Beef hotpot	Sausage and potato pie

Main dishes where the predominant ingredient is meat or fish Meat serve has a total cooked weight 65-100g	**Wet dish with high meat or fish content** Total cooked weight of the entire dish at least 120g. Meat serve has a total cooked weight 65-100g	**Main dish with a fairly even mix of meat or fish and vegetables** Total cooked weight of the entire dish at least 150g
SEAFOOD		
Fish cakes	Poached fish with cheese sauce	Seafood mornay
Crumbed fish	Fish casserole	Seafood crepes
Grilled fish	Seafood curry	Tuna and macaroni casserole
Smoked cod	Tuna bake	Fish mornay
Steamed fish in white sauce	Curried prawns	Salmon and onion puff pie
Fried fish	Sweet and sour fish	Seafood vol au vents
Cheese baked fish	Seafood casserole	Salmon and asparagus fettuccini
LAMB		
Roast lamb	Lamb casserole	Spring lamb and vegies
Cutlets	Lamb korma	Irish lamb and vegie stew
Stewed chops	Curried lamb	
Minted lamb	Sweet lamb and potato curry	
Lamb schnitzel	Savoury lamb mince	
Crumbed cutlets	Lamb Pasanda	
Braised chump chops	Hungarian paprika lamb	
Brains & bacon	Fricassee brains	
Fragrant lamb chops	Mongolian lamb with rice	
Lamb in minted orange and honey		
Crumbed brains		
Lamb's fry and bacon		
Savoury lamb chops		
PORK		
Ham steaks	Chinese pork in plum sauce	Pork & vegetable pie
Roast pork	Sweet & sour pork	Pork and vegetable stir fry
Baked ham	Pork and sweet potato casserole	Quiche
Pork fillets in peach sauce	Curried pork	Ham and cheese crepes
Pickled pork and white sauce		Chinese chop suey
Braised pork chops		Ham steaks and pineapple
Pork with garlic		Pea and ham frittata
Pork schnitzel		Fettuccine Alfredo
Pork with pear and ginger sauce		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 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
Vegetable curry	Vegetarian patties	Cauliflower & potato au gratin	Omelette (cheese)
Vegetable casserole	Egg & asparagus mornay	Asparagus mornay	Crepes
Vegetable sausages	Leek & mushroom pie	Vegetable pie	Macaroni pie
Nutloaf™ roll	Vegetable frittata	Mushroom pasta	Corn fritters
Ratatouille slice	Scrambled eggs	Potato bake	Savoury cheese
Vegetarian stew	Asparagus loaf	Scalloped potatoes	Egg & macaroni custard
Vegetable macaroni	Spinach pie	Spinach triangles	Zucchini slice
Vegetable layer	Vegetarian bake	Spinach & cheese slice	Vegetable quiche
Bubble & squeak	Vegetable omelette	Ravioli & cheese sauce	Egg & asparagus bake
Baked beans on toast	Spanish omelette	Asparagus vol-au-vents	Frittata
Sweet creamed corn on toast	Potato pancakes	Welsh rarebit	Vegetable au gratin
Sweet potato bake	Spinach roll	Vegetable lasagne	
Mild curried veg pasta	Curried egg on toast	Macaroni cheese	
Quorn™ products		Spinach & cheese risotto	

** 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

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

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

Protein rich salads	Moderate protein salads	Side salads
Roast beef salad	Egg salad	Side salad
Roast pork salad	Cheese salad	Greek salad
Roast lamb salad	Bean salad	Potato salad
Chicken salad	Devon or 'Fritz' salad	Rice salad
Ham salad		Pasta salad
Turkey meat salad		Coleslaw
Tuna salad		
Salmon salad		
Corned beef salad		

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

Sandwich fillings that have significant protein	Sandwich fillings that have minimal protein
Roast beef	Honey
Silverside/Corned beef	Jam
Ham	Golden syrup
Sausage	Vegemite
Rissole	Salad
Chicken	Tomato
Tuna	Beetroot
Salmon	Banana
Sardines	Marmalade
Roast Pork	Lemon butter
Egg	Nutella
Turkey	Hundreds and thousands
Cheese	
Peanut butter	

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

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

1. The Scottish Government. Food in Hospitals. National catering and nutrition specification for food and fluid provision in hospitals in Scotland. 2008; 116]. Available from: http://www.scotland.gov.uk/Publications/2008/06/24145312/21.

2. Williams. P. Nutrition standards for adult inpatients in NSW hospitals. 1 ed: Agency For Clinical Innovation; 2011.

SECTION 1

CHAPTER 7

Obtaining Expert Dietary Advice for Residents

SECTION 1

CHAPTER 7

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

SECTION 1

CHAPTER 8

Outsourcing Food Services

SECTION 1

CHAPTER 8

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.

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

FURTHER INFORMATION

Nutrition standards for menu items in Victorian Hospitals and Residential Aged Care Facilities
http://www.health.vic.gov.au/archive/archive2011/patientfood/nutrition_standards.pdf

SECTION 2

Maximising Food and Mealtime Enjoyment

2

SECTION 2

CHAPTER 9

Maximising Food Intake and Enjoyment

SECTION 2

CHAPTER 9

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.

1. *Bowman Carmen S. The Food and Dining Side of the Culture Change Movement: Identifying Barriers and Potential Solutions to furthering Innovation in Nursing Homes. Available from: https://www.pioneernetwork.net/wp-content/uploads/2016/10/The-Food-and-Dining-Side-of-the-Culture-Change-Movement-Symposium-Background-Paper.pdf*
2. *Nijs K, de Graaf C, van Staveren WA, de Groot L. Malnutrition and Mealtime Ambience in Nursing Homes. Journal of the American Medical Directors Association. 2009; 10(4):226-9.*
3. *Well For Life. Designing a Quality Dining Area. Section 2: Help sheet no 3. Available from: https://www2.health.vic.gov.au/about/publications/policiesandguidelines/designing-dining-area-help-sheet-3*

SECTION 2

CHAPTER 10

Dining Room Ambience

SECTION 2

CHAPTER 10

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'.[1]

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.

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.

1. *Nijs K, de Graaf C, van Staveren WA, de Groot L. Malnutrition and Mealtime Ambiance in Nursing Homes. Journal of the American Medical Directors Association. 2009; 10(4):226-9.*

SECTION 2

CHAPTER 11

Mealtime Independence and Assistive Devices

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CHAPTER 11

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

MEALTIME ASSISTIVE DEVICES

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

ACT
Tel: 02 6205 1900 or 1300 885 886 *(callers outside 62 area)*
Fax: 02 6205 1906
Email: ilcact@act.gov.au
Web: www.ilcaustralia.org.au/contact_us/australian_capital_territory

NSW
Tel: 02 9912 5800 1300 885 886
Fax: 02 8814 9656
Email: help@ilcnsw.asn.au
Web: www.ilcnsw.asn.au

QUEENSLAND – LIFETEC
Tel: 07 3552 9000 1300 885 886
Fax: 07 3552 9088
Email: mail@lifetec.org.au
Web: www.lifetec.org.au

SOUTH AUSTRALIA
Tel: 08 8266 5260 1300 885 886
Fax: 08 8266 5263
Email: ilcsa@dcsi.sa.gov.au
Web: www.ilcaustralia.org.au/contact_us/south_australia

TASMANIA
Tel: 03 6335 9200 1300 885 886
Fax: 03 6335 9224
Email: ilc@ilctas.asn.au
Web: www.ilctas.asn.au

VICTORIA – YOORALLA
Tel: 03 9362 6111 1300 885 886
Fax: 03 9687 1607
Email: ilc@yooralla.com.au
Web: www.yooralla.com.au

WESTERN AUSTRALIA
Tel: 08 9381 0600
Enq: 08 9381 0608 1300 885 886
Fax: 08 9381 0611
Email: help@ilc.com.au
Web: www.ilc.com.au

SECTION 2

CHAPTER 12

Religious, Spiritual, Cultural & Linguistic Background of Residents

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CHAPTER 12

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.

'***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***'[1]

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.

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

1. *Gallegos.D, Perry. E. A World of Food Volume 2. 1 ed: Commonwealth Department of Health and Family Services; 1997.*
2. *Centre for Cultural Diversity in Ageing. Food Services. 2011 [cited Dec 2011]; Available from: www.culturaldiversity.com.au*

SECTION 2

CHAPTER 13

Oral Health

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CHAPTER 13

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

Clearing mouth of food after eating is very important. Food caught in teeth, under dentures or between cheeks and gums ('squirreling'or 'pocketing') causes a number of problems including tooth decay, gum disease and bad breath.
There is also the potential for choking and aspiration, especially if resident is at high risk due to medical condition or deterioration of health status.

- **'Squirreling' may be minimized by giving small amounts of food at a time**
- **Each mouthful of food should be cleared before the next mouthful**
- **Clear food from mouth with a very soft toothbrush. Sponge swabs could also be used**
- **Once mouth is cleared of food and if possible, brush teeth then rinse mouth out with water or mouthwash**

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]

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)**

Comprehensive, useful and recommended resources addressing all aspects of oral hygiene and staff training are:

Better Oral Health in Residential Care, Facilitator Portfolio, Better Oral Health in Residential Care, Staff Portfolio: Education and Training Program

Better Oral Health in Residential Care, Professional Portfolio

Prepared by the SA Dental Service and Consortium Members and funded by the Australian Government Department of Health and Ageing, 2009

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.

Oral Health Assessment Tool

Resident: _____ Completed by: _____ Date: _____

Resident: ☐ is independent ☐ needs reminding ☐ needs supervision ☐ needs full assistance

☐ Will not open mouth ☐ Grinding or chewing ☐ Head faces down ☐ Refuses treatment
☐ Is aggressive ☐ Bites ☐ Excessive head movement ☐ Cannot swallow well
☐ Cannot rinse and spit ☐ Will not take dentures out at night

	Healthy	Changes	Unhealthy	Dental Referral
Lips	☐ Smooth, pink, moist	☐ Dry, chapped or red at corners	☐ Swelling or lump, red/white/ulcerated bleeding/ulcerated at corners *	☐ Yes ☐ No
Natural Teeth	☐ No decayed or broken teeth or roots	☐ 1- 3 decayed or broken teeth/roots, or teeth very worn down	☐ 4 or more decayed or broken teeth/roots or fewer than 4 teeth, or very worn down teeth *	☐ Yes ☐ No
Tongue	☐ Normal moist, roughness, pink	☐ Patchy, fissured, red, coated	☐ Patch that is red and/or white/ulcerated, swollen *	☐ Yes ☐ No
Dentures	☐ No broken areas or teeth, worn regularly, and named	☐ 1 broken area or tooth, or worn 1-2 hours per day only or not named	☐ 1 or more broken areas or teeth, denture missing /not worn, need adhesive, or not named *	☐ Yes ☐ No
Gums and Oral Tissue	☐ Moist, pink, smooth, no bleeding	☐ Dry, shiny, rough, red, swollen, sore, one ulcer/sore spot, sore under dentures	☐ Swollen, bleeding, ulcers, white/red patches, generalised redness under dentures *	☐ Yes ☐ No
Oral Cleanliness	☐ Clean and no food particles or tartar in mouth or on dentures	☐ Food, tartar, plaque 1-2 areas of mouth, or on small area of dentures	☐ Food particles, tartar, plaque most areas of mouth, or on most of dentures *	☐ Yes ☐ No
Saliva	☐ Moist tissues watery and free flowing	☐ Dry, sticky tissues, little saliva present, resident thinks they have a dry mouth	☐ Tissues parched and red, very little/no saliva present, saliva is thick, resident thinks they have a dry mouth *	☐ Yes ☐ No
Dental Pain	☐ No behavioural, verbal or physical signs of dental pain	☐ Verbal &/or behavioural signs of pain such as pulling at face, chewing lips, not eating, changed behaviour.	☐ Physical pain signs (swelling of cheek or gum, broken teeth, ulcers), as well as verbal &/or behavioural signs (pulling at face, not eating, changed behaviour) *	☐ Yes ☐ No

* Unhealthy signs usually indicate referral to a dentist is necessary

Assessor Comments

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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
https://www.sahealth.sa.gov.au/wps/wcm/connect/09fa99004358886a979df72835153af6/BOHRC_Staff_Portfolio_Full_Version%5B1%5D.pdf?MOD=AJPERES&CACHEID=09fa99004358886a979df72835153af6

1. *Joanna Briggs Institute. Oral hygiene care for adults with dementia in residential aged care facilities. Evidence Based Practice Information Sheets for Health Professionals. 2004(4):6.*
2. *SA Dental Service and Consortium Members. Better oral health in residential care. Facilitator portfolio. Education and training program: Commonwealth Department of Health and Ageing; 2010.*
3. *Committee of Experts on Nutrition Food and Consumer Health, Council of Europe. Nutrition in care homes and home care report and recommendations: from recommendations to action. Strasbourg: Council of Europe Publishing; 2009.*

SECTION 3

Malnutrition Prevention and Treatment

SECTION 3

CHAPTER 14

Malnutrition

SECTION 3

CHAPTER 14

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 hospitisation
- 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.[8] 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.[1]

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.

1. *Committee of Experts on Nutrition Food and Consumer Health, Council of Europe. Nutrition in care homes and home care report and recommendations: from recommendations to action. Strasbourg: Council of Europe Publishing; 2009.*
2. *Anderson MD, Collins G, Davis G, Bivins B. Malnutrition and length of stay. A relationship? Henry Ford Hosp Med J. 1985; 59:477-83.*
3. *Woo J, Chi I, Hui E, Chan F, Sham A. Low staffing level is associated with malnutrition in long-term residential care homes.*
   Eur J Clin Nutr. [Research Support, Non-U.S. Gov't]. 2005 Apr; 59(4):474-9.
4. *Carrier N, Ouelett D, West G. Nursing home food services linked with risk of malnutrition. Canadian Journal Dietetic Practice and Research. 2007; 68(1):6.*
5. *Nieuwenhuizen WF, Weenen H, Rigby P, Hetherington MM. Older adults and patients in need of nutritional support: review of current treatment options and factors influencing nutritional intake. Clinical Nutrition. [Research Support, Non-U.S. Gov't Review]. 2010 Apr; 29(2):160-9.*
6. *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.*
7. *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. 2009 Dec; 22(6):545-50.*
8. *Milne AC, Potter J, Vivanti A, Avenell A. Protein and energy supplementation in elderly people at risk from malnutrition (Review). Cochrane Database of Systematic Reviews. The Cochrane Collaboration: John Wiley & Sons, Ltd; 2009.*

SECTION 3

CHAPTER 15

Measuring each Resident's Weight and Height

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CHAPTER 15

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.[1]

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.[2] 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)

Measured ulna length (cm)	Men 65 years or less	Men over 65 years	Women 65 years or less	Women over 65 years
18.5	1.46	1.45	1.47	1.40
19.0	1.48	1.46	1.48	1.42
19.5	1.49	1.48	1.50	1.44
20.0	1.51	1.49	1.51	1.45
20.5	1.53	1.51	1.52	1.47
21.0	1.55	1.52	1.54	1.48
21.5	1.57	1.54	1.55	1.50
22.0	1.58	1.56	1.56	1.52
22.5	1.60	1.57	1.58	1.53
23.0	1.62	1.59	1.59	1.55
23.5	1.64	1.60	1.61	1.56
24.0	1.66	1.62	1.62	1.58
24.5	1.67	1.63	1.63	1.60
25.0	1.69	1.65	1.65	1.61
25.5	1.71	1.67	1.66	1.63
26.0	1.73	1.68	1.68	1.65
26.5	1.75	1.70	1.69	1.66
27.0	1.76	1.71	1.70	1.68
27.5	1.78	1.73	1.72	1.70
28.0	1.80	1.75	1.73	1.71
28.5	1.82	1.76	1.75	1.73
29.0	1.84	1.78	1.76	1.75
29.5	1.85	1.79	1.77	1.76
30.0	1.87	1.81	1.79	1.78
30.5	1.89	1.82	1.80	1.79
31.0	1.91	1.84	1.81	1.81
31.5	1.93	1.86	1.83	1.83
32.0	1.94	1.87	1.84	1.84

Source: Malnutrition Advisory Group. The 'MUST' explanatory booklet. British Association for Parenteral and Enteral Nutrition. http://www.bapen.org.uk/pdfs/must/must_explan.pdf

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 wheel chair 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.

1. *Priority Research Centre for Gender Health and Ageing, University of Newcastle. Taste fatigue. Encouraging best practice in residential aged care: Nutrition and hydration 2009.*
2. *Malnutrition Advisory Group A Standing Committee of BAPEN. The 'MUST' explanatory booklet. A guide to the 'Malnutrition Universal Screening Tool' for adults 2003. Available from: http://www.bapen.org.uk/pdfs/must/must_explan.pdf*
3. *Priority Research Centre for Gender Health and Ageing, University of Newcastle. How to measure weight accurately.*
   Encouraging best practice in residential aged care: Nutrition and hydration 2009.

SECTION 3

CHAPTER 16

Malnutrition Risk Screening

SECTION 3

CHAPTER 16

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.

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.

A. Resident's appetite is

Very poor	= 1
Poor	= 2
Average	= 3
Good	= 4
Very good	= 5

B. When they eat, they

Feel full after eating only a few mouthfuls	= 1
Feel full after eating about a third of a meal	= 2
Feel full after eating over half a meal	= 3
Feel full after eating most of the meal	= 4
Hardly ever feel full	= 5

C. Food tastes

Very bad	= 1
Bad	= 2
Average	= 3
Good	= 4
Very good	= 5

D. Normally the resident will eat

Less than one meal a day	= 1
One meal a day	= 2
Two meals a day	= 3
Three meals a day	= 4
More than three meals a day	= 5

SNAQ score **of 14 or less** predicts significant risk of at least 5% weight loss within six months. Refer to dietitian for nutrition management plan.

MALNUTRITION SCREENING TOOL (MST)

The MST is a tool developed by Australian researchers which care staff should find quick and simple (less than 5 minutes) to use. It has been shown to be a valid tool for use in aged care homes. Minimal calculations are required; it can be used by all aged care home staff. It asks about appetite and recent weight loss. A score 2 or more indicates moderate risk of malnutrition. A score 3-5 or more indicates a high risk of malnutrition.

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

Total .....

Low risk:	**MST = 0-1**
Moderate risk:	**MST = 2**
High risk:	**MST = 3-5**

MINI NUTRITIONAL ASSESSMENT – SHORT FORM (MNA-SF)

The MNA-SF focusses 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

Last name: First name:

Sex: Age: Weight, kg: Height, cm: Date:

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 ☐☐

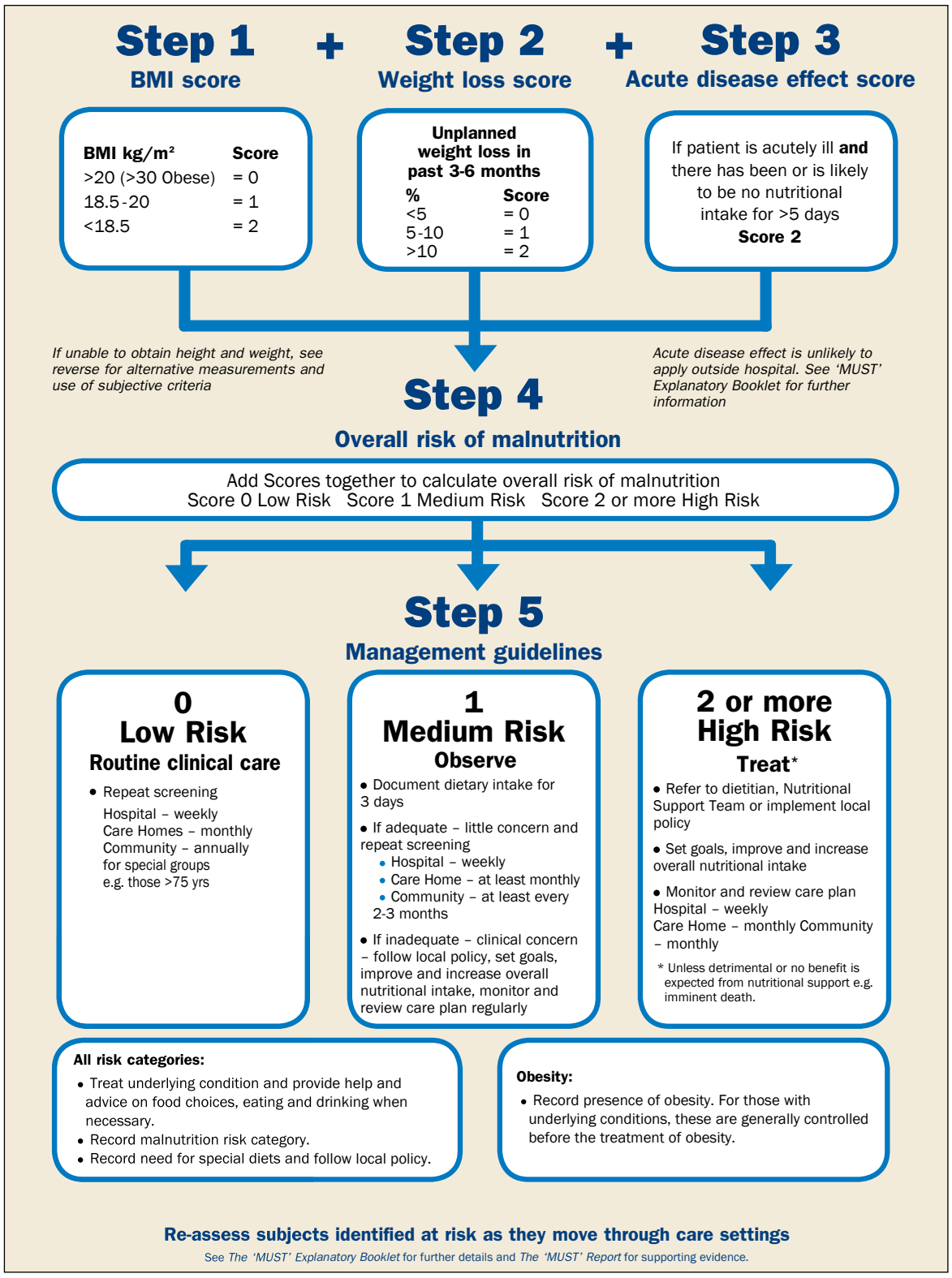
References
1. Vellas B, Villars H, Abellan G, *et al.* Overview of the MNA® - Its History and Challenges. *J Nutr Health Aging.* 2006;**10**:456-465.
2. Rubenstein LZ, Harker JO, Salva A, Guigoz Y, Vellas B. Screening for Undernutrition in Geriatric Practice: Developing the Short-Form Mini Nutritional Assessment (MNA-SF). *J. Geront.* 2001; **56A**: M366-377
3. Guigoz Y. The Mini-Nutritional Assessment (MNA®) Review of the Literature - What does it tell us? *J Nutr Health Aging.* 2006; **10**:466-487.
4. Kaiser MJ, Bauer JM, Ramsch C, et al. Validation of the Mini Nutritional Assessment Short-Form (MNA®-SF): A practical tool for identification of nutritional status. *J Nutr Health Aging.* 2009; **13**:782-788.

For more information: 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.



The 'Malnutrition Universal Screening Tool' (MUST) is reproduced here with the kind premission of BAPEN (British Association for Parental and Enteral Nutrition). For further information on'MUST' see www.bapen.org.uk

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.

New or current resident at **High Risk of Malnutrition** SNAQ Score: 15 or more MST Score: 3 - 5 MNA-SF Score: 0 - 7 MUST Score: 2 or more	New or current resident at **Moderate risk of Malnutrition** MST Score: 2 MNA-SF Score: 8 - 11 MUST Score: 1	New or current resident at **Low risk of Malnutrition** SNAQ Score: 14 or less MST Score: 0 - 1 MNA-SF Score: 12 - 14 MUST Score: 0
Weigh on admission then weekly	Weigh on admission then weekly	Weigh on admission then monthly
Height from ulna length or direct measurement on admission	Height from ulna length or direct measurement on admission	Height from ulna length or direct measurement on admission
BMI calculated monthly	BMI calculated monthly	BMI calculated monthly
Rescreen monthly	Rescreen monthly	Rescreen monthly
Assumption: Basic menu is fortified. Refer to chapter 17: 'Eating to Prevent Weight Loss'		
Refer to dietitian for nutrition assessment	Refer to dietitian for nutrition assessment if indicated	
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	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 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):545-50.*
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.*
3. *Wilson M-MG, Thomas DR, Rubenstein LZ, Chibnall JT, Anderson S, Baxi A, et al. Appetite assessment: simple appetite questionnaire predicts weight loss in community-dwelling adults and nursing home residents. American Journal of Clinical Nutrition. 2005 Nov; 82(5):1074-81.*

SECTION 3

CHAPTER 17

Eating to Prevent Weight Loss

SECTION 3

CHAPTER 17

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.[1] 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.[2] 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[3] 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.

Older people will generally eat a similar volume of food at mealtimes, however the calorie content can vary depending on the type of food eaten.[4] This means if a resident will only eat [say] five mouthfuls, we may not be able to increase this amount. However if each mouthful of food is fortified food, then the protein, calories and other nutrients will be greater.

Example: Fortifying rolled oats:

		Recipe	Weight (g)	Protein (g)	Calories Kilojoules
Example 1	Traditionally made rolled oats made on water with added milk and sugar	0.4 cup rolled oats (38g) 220ml water 50 ml full cream milk 20 g brown sugar	322	6	250 cal 1035 kJ
Example 2	Rolled Oats made with high protein milk, cream and sugar	0.4 cup rolled oats (38g) 220ml full cream milk 2 tablespoons full cream milk powder 50 ml cream 20 g brown sugar	344	16	630 cal 2653 kJ

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.

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.

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**

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

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

1. *Kaiser R, Winning K, Uter W, Volkert D, Lesser S, Stehle P, et al. Functionality and mortality in obese nursing home residents: An example of 'Risk Factor Paradox'? Journal of the American Medical Directors Association. 2010; 11(6):428-35.*
2. *Zizza CA, Tayie FA, Lino M. Benefits of snacking in older Americans. Journal of the American Dietetic Association. 2007 May; 107(5):800-6.*
3. *Simmons.S, Zhuo. X, Keeler. E. Cost-effectiveness of nutrition interventions in nursing home residents: A pilot intervention. Journal of Nutrition, Health & Aging 2010; 14(5):6.*
4. *Nieuwenhuizen WF, Weenen H, Rigby P, Hetherington MM. Older adults and patients in need of nutritional support: review of current treatment options and factors influencing nutritional intake. Clinical Nutrition. 2010 Apr; 29(2):160-9.*
5. *Baldwin C, Weekes CE. Dietary advice with or without oral nutritional supplements for disease-related malnutrition in adults. Cochrane Database of Systematic Reviews 2011. 2011 (Issue 9. Art. No: CD002008).*

SECTION 3

CHAPTER 18

Practical Suggestions to Maintain Weight or Regain Lost Weight

SECTION 3

CHAPTER 18

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[1] have shown that residents receiving mealtime 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

RECIPES

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
⅓ 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

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)

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

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

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
227mg 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
240mg 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.*
Eur J Clin Nutr. 2005 Apr; 59(4):474-9.

SECTION 3

CHAPTER 19

Food, Nutrition and Dementia

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CHAPTER 19

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.[3]

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.

- 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

FURTHER INFORMATION

National Dementia Helpline – 1800 100 500
www.fightdementia.org.au

Eating Well: supporting older people and older people with dementia. Practical Guide

The Caroline Walker Trust
http://www.cwt.org.uk/publication/eating-well-for-older-people-with-dementia/

1. *Bowman Carmen S. The food and dining side of the culture change movement: Identifying barriers and potential solutions to furthering innovation in nursing homes. January 28, 2010. p 1-61. https://www.pioneernetwork.net/wp-content/uploads/2016/10/The-Food-and-Dining-Side-of-the-Culture-Change-Movement-Symposium-Background-Paper.pdf*
2. *Priority Research Centre for Gender Health and Ageing, University of Newcastle. Nutrition and hydration for residents with 'behaviours of concern'. Encouraging best practice in residential aged care: Nutrition and hydration 2009.*
3. *Australian, New Zealand Society for Geriatric M. Australian and New Zealand Society for Geriatric Medicine – Position Statement No. 6 – Under-nutrition and the older person. Australasian Journal on Ageing. [Practice Guideline]. 2009 Jun; 28(2):99-105.*
4. *Palecek EJ, Teno JM, Casarett DJ, Hanson LC, Rhodes RL, Mitchell SL. Comfort feeding only: A proposal to bring clarity to decision-making regarding difficulty with eating for persons with advanced dementia. Journal of the American Geriatrics Society. 2010; 58(3):580-4.*
5. *Quality dementia Care Standards. A guide for managers in RACFs: Alzheimers Australia; February 2007. Available from: www.alzheimers.org.au*

SECTION 3

CHAPTER 20

Finger Foods

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CHAPTER 20

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.

It is important to

- Ensure food looks good, smells good and is easily managed. Finger food should be a size that is easy to pick up, hold or grip and should not fall apart while eating
- Serve one food at a time
- Serve familiar foods that resident can recognise
- Make sure food can be reached and that there is no wrapping or covering on food
- Use a plain tablecloth and choose crockery that allows food to be seen easily
- Remove cutlery from the table as it may confuse residents

Residents may need

- Prompting to start eating and encouragement to continue eating
- To be shown how to manage finger food
- Someone to copy
- Plenty and frequent eating time

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

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.

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

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

FURTHER INFORMATION

Finger Foods: A Three Week Menu and Recipes
Yvonne Coleman, Nutrition Consultants Australia, PO Box 353 Fairfield Vic 3078
Ph: (03) 9482 7424. Email: enquiries@nutritionconsultantsaustralia.com.au

SECTION 4

Special Dietary Considerations

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CHAPTER 21

Swallowing and Food Textures

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CHAPTER 21

Swallowing and food texture

A texture modified diet (food and fluid) is prescribed for residents with swallowing difficulties (dysphagia). When muscles of the mouth and throat do not work efficiently there is a risk of food and fluid entering the air-ways. Dysphagia has many causes including dementia, Parkinson's disease, cancer, stroke, motor neurone disease, reduced or excess saliva production, chewing difficulties and the side effect of some medications.

When swallowing problems are suspected or occur, a Speech Pathologist (SP) should assess swallowing function. They will recommend the appropriate level of food texture and fluid consistency to make chewing and swallowing easier and safer. The SP will advise on feeding and swallowing strategies including the correct positioning of resident before, during and after eating or drinking. To help ensure safety supervision and assistance will be needed.

Swallowing ability should be reassessed as recommended by the SP. If changes are noticed by a member of staff, the registered nurse or the care manager should be notified. They will then contact the SP for reassessment.

A Dietitian should be consulted to help ensure residents on a texture modified diet are being offered a nutritionally adequate diet.

The information in this chapter is an overview only. It does not negate the need to consult a speech pathologist.

SIGNS OF DYSPHAGIA INCLUDE

- Drooling – loss of food and 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 mouth (cheeks)
- Regurgitation of food or fluid
- Fear of eating or swallowing
- Gradual weight loss (this could also be caused by other issues)
- Frequent chest infections

All staff should be aware of the signs of dysphagia.

POSSIBLE CONSEQUENCES OF DYSPHAGIA

1. Aspiration: the result of food, fluid, medicine, stomach content or saliva entering airways. Aspiration may be silent or cause audible coughing. If oral hygiene is poor aspiration of saliva containing bacteria, can cause potentially fatal pneumonia
2. Frightening, painful and tiring coughing
3. Choking that blocks the airways. This is potentially fatal as it makes breathing, coughing and speaking impossible
4. Gradual weight loss and malnutrition resulting in loss of muscle, reduced energy, poor wound healing and greater risk of infection
5. Reduced quality and length of life

Oral hygiene practices need to be safe for residents with dysphagia. Once swallowing has been assessed, an oral care plan should be developed with input from the speech pathologist and a dentist or a registered nurse trained in oral and dental health. Practices such as rinsing mouth with water may not be safe. A non-foaming toothpaste may be safer than foaming toothpaste.

Residents on a texture modified diet may feel 'left out' because their meal is 'different'. To help reduce this feeling

- The menu should be planned so that most food can be texture modified
- If food is served in bite sized pieces, cut carefully so, if possible, food shape is retained
- Use the same crockery and cutlery that is used for other residents
- Wherever possible, encourage independent eating as this improves the biofeedback and swallowing function
- To support mealtime independence, special cutlery and crockery should be available (see chapter 'Mealtime Independence and Assistive Devices')
- When assisting resident to eat, describe food on the plate. Ask what they would like to eat next. Make sure their mouth is empty before the next mouthful is offered. The meal should not be hurried
- If possible, when assisting, sit down and face the resident. Standing may be intimidating. Standing can also cause resident to tilt their head back. This opens airways thus increasing the risk of 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]

A detailed texture modified menu should be documented and updated as appropriate. Likes and dislikes should be catered for (if possible) and meal satisfaction regularly evaluated.

Once swallowing has been assessed, recommendations for food texture and liquid consistency must be adhered to.

Texture modified diets

The 'International Dysphagia Diet Standardisation Initiative (IDDSI) specifications provide clear and consistent guidelines in regard to texture modification. IDDSI describes the levels of texture modified food and thickened fluid to be used across all care settings (both nationally and internationally). Commercially prepared products will need to comply with IDDSI.

IDDSI terminology relating to food texture and fluid consistency is used throughout this chapter.

As well as the information in this chapter, for more detail, refer to the IDDSI website: www.iddsi.org

IDDSI has replaced the Australian Standard for Texture Modified Foods.

IDDSI TEXTURE LEVEL GUIDELINES

LEVEL 7 – REGULAR

- Everyday foods of various textures are suitable
- Biting and chewing ability is required
- 'Regular' foods are suitable if person has no chewing, swallowing or choking problems
- There is no restriction on size of food pieces

LEVEL 7 – EASY TO CHEW

- Serve foods with a soft/tender texture making them easy to bite and chew
- Food pieces can be larger or smaller than 1.5 cm
- Do not serve foods that are hard, chewy, fibrous, stringy or have seeds, bones or gristle
- Food should be soft and moist when chewing

This texture level is not suitable for people identified as being at risk of choking

LEVEL 6 – SOFT AND BITE SIZED

This level includes foods that are

- Naturally soft
- Easily mashed or broken with pressure from a fork (fork test)
- Easy to chew without having to bite
- Moist
- Cut to a size no larger than 1.5 x1.5 centimetres (1.5 is about the width of a standard fork)

Gravies and sauces can accompany food as long as consistency is appropriate for residents requiring thickened fluid.

Avoid foods that

- Are tough, fibrous, crunchy, chewy, sticky, crumbly or stringy
- Have seeds, bone, gristle, husks or hard outer skin e.g. corn and peas
- Have skin or crust including 'crust' that develops with cooking or reheating
- Are floppy e.g. lettuce or baby spinach leaves
- Have a mixture of textures e.g. juicy fruit (juice separates from the fruit pieces), soup with 'bits', cereal with milk that is not completely absorbed.

Note: Regular sandwiches, toast or dry bread are **NOT** permitted on this diet unless otherwise specified by the SP (in their report).

Meat - Beef, lamb, veal, kangaroo and pork

Before cooking, soften tough meat by marinating, mincing or pounding. Cook by slow moist methods such as stewing, casseroling, pressure cooking or with a slow cooker.

When cooking by dry heat methods such as roasting or baking, leave the fat on as this will help to keep meat moist.

When serving make sure there is no skin (including sausage skin), bone, gristle or chewy fat.

When making mince dishes such as rissoles or meat loaf, premium mince can produce a hard, dry result so, try

- Using ¾ mince with ¼ sausage mince
- Using mince that contains about 15% fat
- Using about ¼ mashed legumes e.g. butter beans, to ¾ meat.

Fish

- Fresh or smoked fish fillets (no skin or bones). Steam or poach. Bake in foil or a covered container. The result should be moist, soft and easily flaked or broken up. If overcooked fish can be dry
- Serve with white sauce, cheese sauce or Tartare sauce remembering consistency must be compliant with fluid consistency required by resident
- Canned fish is suitable. Bones of canned fish may be removed or mashed well and eaten.

Chicken

- If baking, leave skin on as melting fat helps to keep meat moist. Before serving remove skin and gristle then cut into bite size pieces. Serve with gravy or sauce of appropriate consistency
- Gentle moist cooking should produce a tender result if not overcooked. If skin is not removed before cooking make sure it is all removed before serving. Skin is a choking hazard
- Chicken tenderloins and breast can be gently stir fried taking care not to overcook. Prepare by cutting into pieces of recommended size.
- Cut across the meat grain. Serve with gravy or sauce of appropriate consistency.

Eggs

Eggs are an excellent source of protein and when cooked carefully, are well suited to this level diet (Level 6).

Suitable egg dishes include

- Baked custard - both sweet and savoury. This includes bread and butter custard. There should be plenty of custard. The bread should be totally moist. Use bread that has no seeds, bran or crusts
- Scrambled egg. plain, no additional ingredients such as bacon bits or cheese
- Quiche – plain with no base or additional 'bits'. Basically, it is a savoury custard.

Cook eggs and egg dishes by low or moderately low heat. Once cooked, eggs and egg dishes should be served as soon as possible. If overcooked or kept hot for any length of time the protein toughens and shrinks causing syneresis. This is when liquid is forced from the egg structure spoiling the appearance, mouth feel and creating a choking hazard.

Note: As eggs are considered a high risk food (especially for vulnerable people) it is advisable to seek advice from the Food Authority in your state in regard to safe egg choice and preparation.

Cheese

- Cheese that becomes sticky or 'gluey' when chewing is not suitable
- Grated cheese sprinkled on the top of dishes to be cooked (such as mornays) is not suitable as it can become stringy, tough or hard
- A small amount of matured, full fat cheddar cheese in a white sauce should produce a smooth, non- stringy result
- Cottage and ricotta cheese are both suitable for the Level 6 'Soft and Bite size' diet.

Vegetables

- Cook vegetables until soft. Cut into bite sized or mash. Vegetables can be moistened with cream, butter, margarine or smooth, plain yoghurt
- Cooked, mashed legumes can be offered. If outer skin is not soft, remove. Broad beans can be mashed once the skin is removed
- Roast vegetable salad is suitable provided there is no skin or seeds and the surface of the vegetable has not become dry, tough or hard. Vegetables must be soft and cut into bite sized pieces 1.5 x 1.5cm
- Grated raw or crisp salad vegetables are not suitable nor are 'floppy' salad vegetables
- Thick and hearty vegetable soups can be an important menu item, especially if they contain meat or fish. As residents with dysphagia may find it difficult to manage different textures, soups are best blended for a smooth even texture. Stringy and fibrous vegetables are not suitable for soups e.g. celery, spinach stalks, cabbage, beans and asparagus stalks (asparagus tips are usually soft and OK)
- Consistency of soup needs to be compliant with resident requirements.

Fruit

- Canned fruit is suitable as long as the flesh and skins are soft and there are no seeds. Juice will need to be drained off and fruit cut to required size. The degree of canned fruit softness can vary from brand to brand. Canned pineapple is not suitable. Canned fruit salad may not be suitable
- Dried fruit e.g. peaches and apricots can be stewed or poached until flesh and skin is soft. Drain well and cut into bite size pieces. There should be no separate liquid
- Suitable fresh fruit includes soft bananas, soft ripe plums and soft, ripe peaches (without skin), mango, paw paw and avocado. Ensure fruit is cut to bite size pieces of correct size (1.5mm x 1.5mm) and avoid fruits where juice separates when eating e.g. watermelon and other melons, oranges and mandarins
- Unsuitable fruits include hard crunchy and fibrous fruits, grated apple, grapes and cherries.

Breads and cereals

- Dry bread is not compliant with this level diet due to the high risk of choking
- Breakfast cereals that absorb milk e.g. Weetbix™ and Vitabrits™ are suitable. Their texture becomes soft and smooth (especially if warm milk is used).Baby rice cereal is suitable if mixed to a smooth consistency with no separated liquid
- Cereals that retain their shape and do not absorb milk are not suitable e.g. cornflakes
- Semolina, polenta and rolled oats are suitable if cooked to have a smooth even texture. Added milk should be stirred to a uniform texture
- Cooked cereal should not be 'gluggy'. Follow manufacturer instructions, add more milk if necessary
- Medium grain rice and risotto rice is suitable if cooked until soft and mushy, moist. Not sticky or gluggy. Long grain rice is not suitable
- Well cooked, bite size pasta (no larger than 1.5 x 1.5cm) e.g. shell pasta and small macaroni

Desserts

Most milk and soft fruit based desserts will be suitable including

- Bite sized pieces of soft fresh fruit, drained stewed or canned fruit and cut to correct size
- Creamed sago and creamed tapioca are suitable as long as not gluey or gluggy. To achieve a palatable and appropriate result it is essential to have the correct ratio of cereal to milk
- Ground rice makes a creamy dessert when cooked correctly (no separated liquid)
- Custard powder custard of consistency recommended by the SP
- Bread and butter custard. No crusts or 'bits' and bread must be completely moist. Important not to overcook egg custard (reasons in previous information in this section under heading 'Eggs')
- Blancmange and instant pudding
- Yoghurt and Fruche™ are suitable as long as there are no lumps or food 'bits'
- Trifle (no coconut). Ensure the cake is plain (no bits) and is completely soaked and there is no 'skin' on the surface of custard.

Mid-meals

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

- Any of the foods already listed in this section (level 6) are suitable especially the desserts
- Soft, moist plain cake. Must not be dry or crumbly. Cake could be moistened with custard or cream as long as there is no free liquid.

LEVEL 5 – MINCED AND MOIST

Minced and moist foods should be soft, easy to chew, require minimal chewing and should not be sticky.

Any food lumps need to be small (4mm x 4mm) and easy to squash with the tongue or easily mashed with just a little pressure from a fork.

Include naturally soft foods such as ripe bananas, mangoes and avocados cut up to correct size.

A thick puree containing small soft lumps could be offered.

Meat (beef, veal, pork, kangaroo) fish and poultry

- Minced or finely cut up (4mm x 4mm) tender meat, chicken or fish. No skin, gristle, bones, sinew or chewy fat
- To moisten serve with mildly, moderately or extremely thick sauce or gravy
- If making a casserole do not add tough, fibrous or stringy vegetables such as celery, peas, corn or chick peas. If tomato is added it should be skin free. Thicken casseroles and stews if necessary to be compliant with thickened fluid requirement.

Eggs

- Include soft scrambled egg. Cook using low heat in order to obtain a soft result. To help prevent syneresis see information under 'Eggs' in 'Soft and Bite Sized' Level 6 section
- Savoury baked custard or soft quiche without a base can be offered. No lumps or bits of food such as bacon pieces
- In regard to food safety, refer to information under 'Eggs' in 'Soft and Bite sized' Level 6 section.

Cheese

- Soft cheese such as cottage cheese and ricotta can be offered
- Pieces of cheddar cheese are not to be given. If grated, small amounts of full fat cheddar cheese can be added to white sauce.

Vegetables

- Well drained, softly cooked vegetables finely diced or easily mashed with a fork
- Butter, margarine, sour cream, moderately or extra thick white sauce may be added as long as the result is the correct consistency
- Vegetables that require chewing such as corn, peas and cabbage are not suitable
- Well-cooked legumes that are soft and mash easily e.g. haricot beans (baked beans) and butter beans can be included. The outer skin must be soft or removed before mashing
- If serving (or including) tomato, the skin will need to be removed and the flesh soft enough to mash. If tomato is very watery thickening may be required.

Fruit

- Soft fresh fruit is suitable if finely diced, minced or mashed with a fork. Suitable soft ripe fruits include banana, pear, mango and avocado
- Canned and stewed fruit cut into small (4mm x 4mm) pieces or mashed can be offered. Skin will need to be soft and easily mashed. Juice must be completely drained from fruit. Liquid should not separate from food.
  Fruit may be served in a thickened sauce, yoghurt or custard.

Bread and cereals

Suitable foods include:

- Soft moist baked products such as plain cake and sponge can be suitable if moistened with such as custard or cream. Make sure there is no sticky, chewy upper surface on cake as this can be difficult to soften. There should be no separation of liquid
- Biscuits that soften easily can be prepared as per plain cake
- **Regular dry bread is not suitable**
- Breakfast cereals should be smooth with no large lumps or 'bits' such as sultanas. Suitable cereals include soft rolled oats (or instant porridge) semolina, fine rice cereal (including baby cereal). Completely softened breakfast biscuits such as Weetbix™ and Vitabrits™ are suitable. No liquid should separate from the food
- Well-cooked small pasta shapes(as long as size is 4mm x 4mm or less)
- Well-cooked medium grain rice or risotto rice. Rice grains should hold together, not separate into individual grains. Once cooked drain well. Product should not be sticky or gluggy. Rice can be served with mild, moderate or extra thick sauce.

Desserts

Desserts should make an important contribution to both nutrition and meal enjoyment.

- Include smooth milky desserts e g. blancmange, custard, milk pudding, smooth lump free yoghurt. Ice-cream can be offered as long as resident is not requiring thickened fluids
- Cake type desserts may be suitable if compliant with diet requirements (See above information on 'Breads and Cereals')
- Soft fresh or canned fruit as long as there is no separation of liquid and fruit is mashed or cut to size (4mm x 4mm) See previous information on 'Fruit".

Mid Meals

Mid meals can make a significant contribution to daily food intake and nutrition. They are as important as main meals.

- Foods that could be offered include soft fruit, soft plain cake, soft biscuits, soft breakfast cereals, milk based desserts. See previous information regarding the preparation and presenting of these foods for residents requiring a 'Level 5' texture modified diet
- Milk shakes and smoothies as long as thickness is appropriate to consistency required by resident.

LEVEL 4 – PUREED

Pureed food may be recommended for people who have difficulty biting, chewing and swallowing

Correctly pureed food

- Should be smooth, moist and lump free
- Should not need to be chewed
- Is usually eaten with a spoon
- Cannot be drunk from a cup or sucked through a straw
- Falls completely off a spoon if the spoon is tilted but, still holds its shape on a plate
- Should pass the fork drip test. Food sits on a fork. A small amount may drip through leaving a tail below the fork prongs. It should not flow or continuously drip
- Forms a peak (like whipped cream) and, if pressed with a fork, a clear pattern is left
- Should not be dry, sticky or gluggy
- Should not be sloppy, runny or watery. There should be not separation of liquid from the solid component of the puree
- Should not liquefy or melt in the mouth e.g. Jelly, ice-cream, other foods thickened with gelatine

Note: that not all foods need to be pureed. Some come ready to eat while others are easily mashed to puree consistency. Ready to eat food that may be suitable include smooth yoghurt (no 'bits' or chunks), smooth mousse, thick stirred custard, blancmange, smooth rice cereal. Instant mashed potato is suitable as long as it is a soft, non- gluggy consistency. Foods that can mash easily to a puree consistency include well cooked, skin free potato, sweet potato and butternut pumpkin. Soft ripe fruit such as banana and avocado can be mashed to a puree consistency.

Important considerations:

- A pureed diet can be monotonous leading to lack of interest in food. It is important that food be varied, palatable and visually appealing
- As far as possible the main menu should be planned so that most (if not all) of the food can be pureed. This may help to maintain resident interest in eating and reduce the feeling of 'missing out'
- Residents should not be kept on a puree diet longer than is necessary. A SP should regularly reassess and, if necessary, recommend texture changes
- Residents should not be placed on a puree diet just because they are slow eaters
- When assisting resident to eat, pureed foods should not be stirred together
- If facilities serve pureed food that has been 'molded' into a food shape, it is important to note that the process can make food drier than recommended. Provide sufficient gravy to stir into food to achieve a consistency that readily 'blobs' from a spoon.

Meat, fish and poultry

- Puree to a smooth, moist pate' consistency. Extra liquid may be needed. Water could be used, but it is better to use liquid such as milk or gravy using casserole liquid
- Pureed meat should not be sticky or gluggy
- There should be no skin, bones, gristle or lumps of fat.

Vegetables

- Vegetables that are able to comply with the requirements of a puree (see previous information under the heading 'Correctly Pureed Food')
- Avoid fibrous vegetables such as corn, peas and celery etc.
- Take care when blending or mashing potato as it can become 'gluey' if overdone. Instant potato may be suitable if prepared properly
- If pureed vegetable is too thin or there is a risk of liquid separating out, add instant mashed potato or fine rice cereal to stabilise and obtain correct consistency.

Fruit

- Once well drained, most stewed or canned fruit can be pureed. If result needs to be thickened, fine and soft plain cake crumbs (not pieces) or fine rice cereal are usually suitable
- Fresh ripe fruit that mashes well can be offered e.g. banana, avocado, mango and paw paw
- Commercially pureed fruit is available. Thicken if necessary
- Pulp free fruit juice can be offered. Thicken as recommended by speech therapist

Breads and cereals

- Smooth, lump free breakfast cereal may be offered e.g. semolina, smooth rice cereal, porridge. There should be no separation of liquid
- Creamed rice may be pureed
- Pasta may be pureed. When pureeing combine with the sauce that is part of the dish e.g. macaroni cheese
- Regular bread is not suitable.

Dessert

- Offer smooth and lump free milk pudding, custard and yoghurt of appropriate thickness
- Soft plain cake and very soft 'cake style' pastry may be suitable. It will need to be moistened by soaking in such as custard or thick cream then mashed. The result will need to be lump free and smooth and compliant with the 'fork drip' and 'spoon tilt' test
- Jelly and ice-cream are not suitable as both liquefy in the mouth.

Mid meals

It is important to ensure that residents who require a pureed diet are offered substantial mid meals to help ensure adequate food intake and nutrition. Any of the acceptable food items suggested in this section are suitable to offer throughout the day.

Providing extra fibre for residents on a level 4, puree diet

The fibre content of a puree diet may need 'boosting'. The following suggestions may help

- Serve smooth lump free high fibre cereal such as pureed rolled oats, completely softened and smooth breakfast biscuits such as Weetbix™, Vitabrits™ (or similar). Breakfast drinks such as 'Up and Go' would add extra fibre and nutrients if used to soften breakfast biscuits. There should be no separation of liquid
- Add fine textured wheat bran, oat bran or rice bran to breakfast cereal such a rolled oats. Do not add more than one to two tablespoon per serve. Always consult SP to make sure the resulting texture will be safe for individual residents (on a pureed diet)
- Fine textured brans could also be added to meat, fish, chicken, vegetables and fruit before pureeing
- To provide extra fibre, red lentils could be added to soups, stews and casseroles. Red lentils soften and disintegrate readily. They are mild in flavour and will help to thicken liquid. Add no more than one tablespoon per serve. Further thickening may be required to obtain desired result.

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

IMPORTANT

If planning to increase the fibre content of food, talk to the Speech Pathologist first to make sure the result will be both safe and consistent with texture recommendations.

Supplements

A puree diet can be low in calories and other nutrients particularly if resident has a small appetite (as is often the case). Pureed food should be routinely fortified. Ways to accomplish this include

- making porridge on milk (not water)
- adding extra margarine, butter or cream to vegetables
- enriching custard or milk drinks by adding extra milk powder (2 – 3 tablespoons to 250mls of milk)
- making milk based sauces (savoury or sweet)

At least one high calorie, high protein drink of appropriate consistency, should be provided each day. Offered at a time least likely to interfere with appetite for main meals e.g. supper time. Liquid consistency will need to be appropriate.

A doctor or dietitian will advise in regard to supplements.

THICKENED FLUIDS

Regular fluids require intact muscle control and accurate timing between the swallowing and breathing system. Thickened fluids slow down the act of swallowing making it safer. Most liquids can be thickened.

It is important to note that thickened fluids may assist some (but not all) residents whose swallow is delayed or poorly coordinated. Thickened fluid may reduce (but not eliminate) the risk of aspiration. Thickened fluid is not a universal strategy for all residents with swallowing problems and should be given only when prescribed by a Speech Pathologist (SP).

Residents should be assessed by a SP who will advise in regard to the need for, and level of thickened fluid.

IMPORTANT

- In order to prevent dehydration it is very important to closely monitor fluid intake and hydration level of residents on thickened fluid. Dehydration is a major medical issue
- Care plans should be developed to ensure resident receives only fluid of recommended consistency
- Thickened fluid is only as nutritious as the fluid being thickened
- Some liquid based foods e.g. ice-cream and gelatine containing foods, melt in the mouth and thus may pose a swallowing problem
- Always consult a SP.

LEVEL 0 – THIN

No modification of consistency at this level. Liquids that flow easily are provided at this level

LEVEL 1 – SLIGHTLY THICK

Liquid at this level

- Is thicker than water
- Requires a little more effort to drink than thin liquids
- Is able to flow through a straw

LEVEL 2 – MILDLY THICK

Liquid at this level

- Will flow off a spoon but slower than thin liquid
- Falls readily through fork prongs
- Is able to be sipped, pours from a spoon but more slowly than thin drinks
- Effort is required to suck through a standard straw bore

LEVEL 3 – MODERATELY THICK

Liquid at this level

- Can be drunk from a cup
- Effort is required to suck through both a standard and wide bore
- Drips slowly in strands, through prongs of a fork
- Liquids at this level include thick soup, sauces, gravy and thick milk drinks such as smoothies

LEVEL – 4 EXTREMELY THICK

Liquid at this level

- Cannot be drunk from a cup
- Cannot be sucked through a straw or a spout cup
- Will not fall through the prongs of a fork. Rather it sits on top of a fork with a slight 'tail' forming through the prongs
- Usually consumed using a spoon

Testing methods for the various fluid consistency levels can be found on the following site

http://iddsi.org/ framework/drink-testing-methods/

All staff should be aware of the importance of correct fluid consistency. Staff education by SP would be best practice.

Important:

- Residents on thickened fluids need to be given fluid frequently in order to maintain adequate hydration
- Residents requiring thickened fluid or a pureed diet may lack the tongue function to clear their mouth of food. This places them at high risk of dental caries and gum disease. Oral hygiene is important
- There is also an increased risk of developing aspiration pneumonia if oral hygiene is poor.

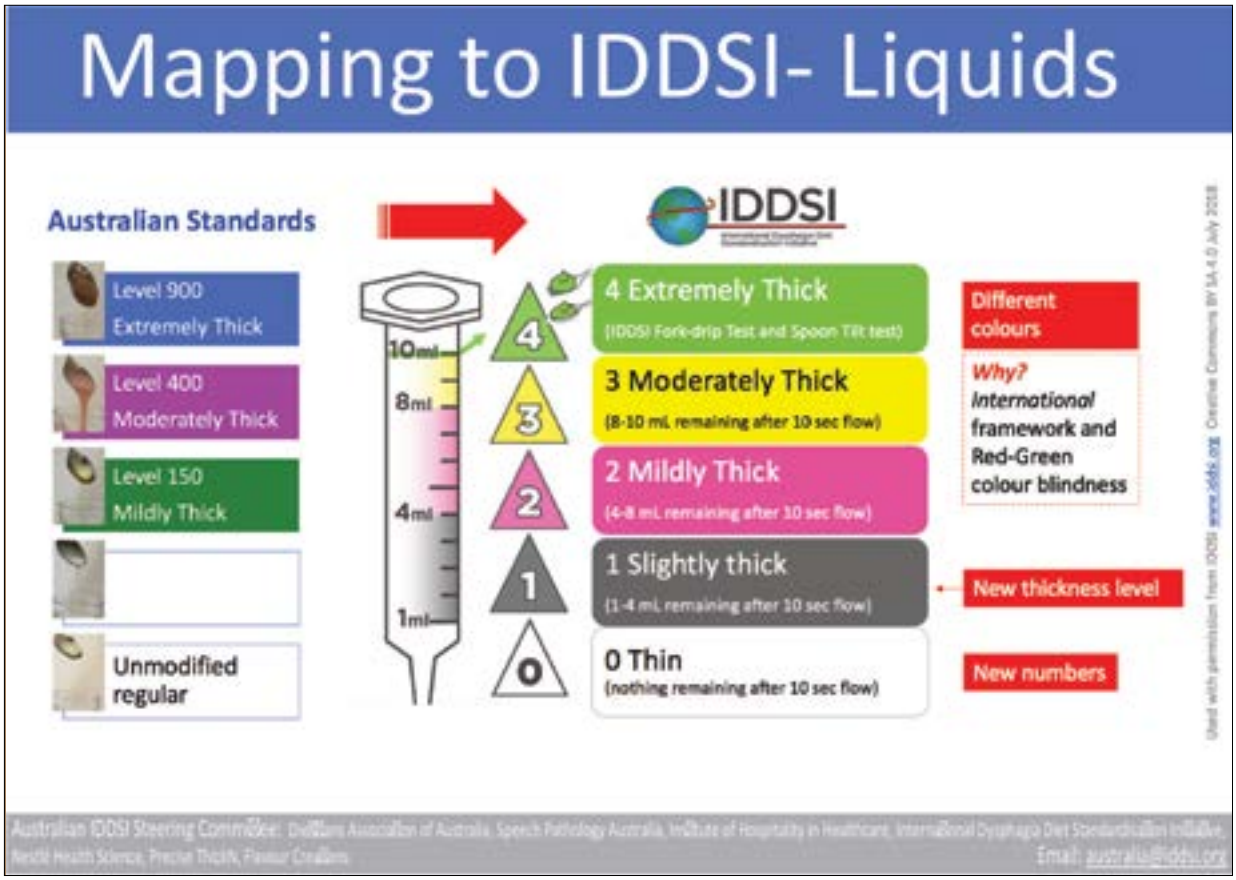
IMPORTANT

THIS CHAPTER IS AN OVERVIEW ONLY FOR FURTHER INFORMATION

- Consult a Speech Pathologist
- www.iddsi.org

IDDSI FLUID CONSISTENCY GUIDELINES

Comparing drinks in Australian standards to IDDSI



2. *Wright L, Cotter D, Hickson M, Frost G. Comparison of energy and protein intakes of older people consuming a texture modified diet with a normal hospital diet. Journal of Human Nutrition & Dietetics. 2005 Jun;18(3):213-9.*

SECTION 4

CHAPTER 22

Diabetes and Glycaemic Index

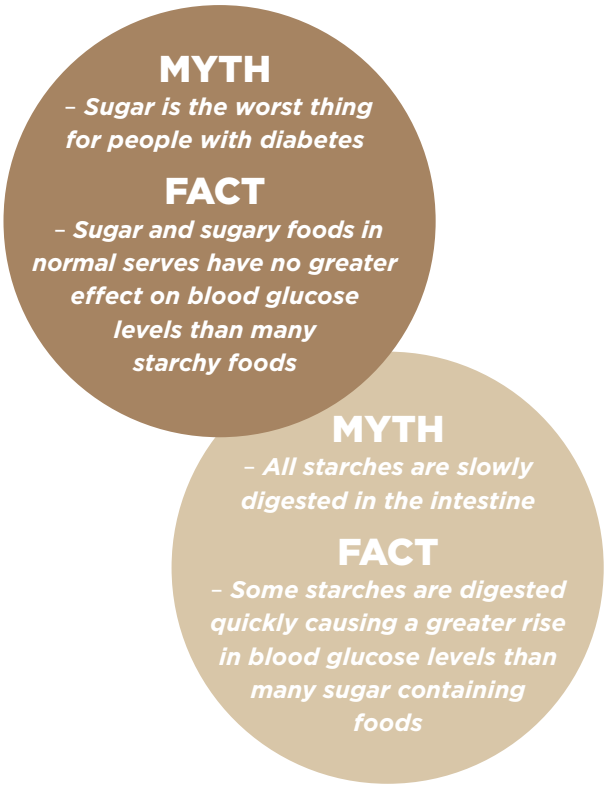
SECTION 4

CHAPTER 22

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]

'The imposition of dietary restrictions on elderly patients with diabetes in long-term care facilities is not warranted. Residents with diabetes should be served a regular menu, with consistency in the amount and timing of carbohydrate.

Older residents with diabetes in nursing homes tend to be underweight rather than overweight. Low body weight has been associated with greater morbidity and mortality in this population. Experience has shown that residents eat better when they are given less restrictive diets. Specialised diabetic diets do not appear to be superior to standard diets in such settings. Meal plans such as no concentrated sweets, no sugar added,
low sugar, are no longer appropriate. These diets do not reflect current
diabetes nutrition recommendations and unnecessarily restrict sucrose'.[1]



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?

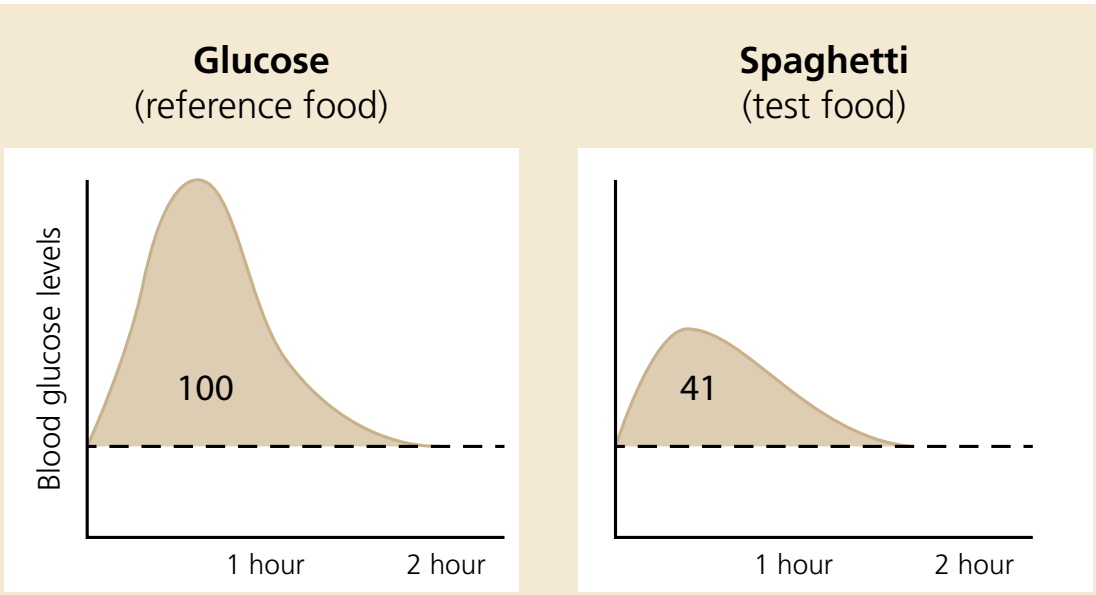
Food portions that contain 50 grams of carbohydrate are eaten. Blood glucose level is then tested at half hourly intervals for the next two to three hours. The results are plotted on a graph and compared to a graph showing what blood glucose response is when 50 grams of pure glucose is given. Glucose 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.[3]



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.

FOOD	LOW GI (slow acting) 55 or less	MEDIUM GI (moderate acting) 56-69	HIGH GI (fast acting) 70 or more
BREADS	• Burgen™ breads • Fruit loaf/raisin bread • Tip Top 9-grains™ • Pumpernickel • Sourdough	• Pita bread • Hamburger bun • Crumpets • Croissants • Pancakes	• 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	• Just Right™ • Vita Brits™ • Sultana Bran™ • Basmati rice (Mahatma™) • Couscous • Taco shells • SunRice™ medium grain brown • Weetbix™	• Bran Flakes™ • Coco Pops™ • Corn Flakes™ • Puffed Wheat™ • Rice Bubbles™ • Quick oats • White rice • Calrose medium grain white rice • Calrose medium grain brown 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™	• 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	• New potatoes (canned only) • Sweet potato (orange) • 'Nicola' potatoes	• Broad beans • Instant potato • Potato (most varieties) • Sweet potato (purple)

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

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 Bolognaise 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

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

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

- Healthy eating & diabetes: A guide for aged care facilities, available on the Country Health South Australia Local Health Network website http://www.chsa-diabetes.org.au/education/Aged%20Care%20Manual_Jan2012.pdf to download for free.
- www.glycemicindex.com
- Diabetes NSW 1300 136 588 www.diabetesnsw.com.au
- In NSW : Australian Diabetes Council 1300 342 238
- Low GI Diet Shopper's Guide. Jennie Brand - Miller, Kay Foster-Powell, Fiona Atkinson. Hachette Australia; 2015

1. *American Diabetes Association. Nutrition recommendations and interventions for diabetes. A position statement of the American Diabetes Association Diabetes Care January 2008;31 (Supplement 1 S61-S78).*
2. *Thomas D, Elliott EJ. Low glycaemic index, or low glycaemic load, diets for diabetes mellitus. Cochrane Database of Systematic Reviews. [Meta-Analysis Review]. 2009(1):CD006296.*
3. *Jennie Brand-Miller, Kay Foster-Powell, Fiona Atkinson. Low GI diet shopper's guide: Hachette Australia; 2011.*
4. *Richardson T, Schneyder A. Healthy Eating & Diabetes. A guide for aged care facilities. 1 ed: Diabetes Centre The Queen Elizabeth Hospital 2011.*
5. *American Diabetes Association. Translation of the diabetes nutrition recommendations for health care institutions. Diabetes Care. January 2003; Volume 26, Supplement 1, :S70-S2*

SECTION 4

CHAPTER 23

Fibre, Fluid and Constipation

SECTION 4

CHAPTER 23

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.[1] Normal stool frequency could be from three times a day to three times a week.[2]

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.[1]

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

	Breakfast	Midday Meal	Evening Meal	Mid-meals
	Rice Bubbles™ (0) milk (0)	Crème of chicken soup (0)	White bread sandwich (2) with cheese, ham and tomato (1)	Tea/coffee (0) and biscuits (0)
	1 slice white toast (1)	Meat (0)		
	Glass juice (0)	3 average serves (½ cup) vegies e.g. potato, beans, pumpkin (5)	Custard and cheesecake (0)	
	Scrambled egg (0)	Jelly and ice-cream (0)		
TOTAL	= 1g fibre	= 5g fibre	= 3g fibre	= 0g fibre
			DAILY FIBRE	**= 9g**

Table 2 – Daily menu indicating GOOD fibre intake

	Breakfast	Midday Meal	Evening Meal	Mid-meals
	2 Weetbix™ (4) milk (0)	Crème of chicken and barley soup (2)	Wholemeal or high fibre white sandwich (4) with cheese and salad (3)	Fruit platter or cake with dried fruit (4) tea/coffee (0)
	1 slice wholemeal bread or high fibre white bread (2)	Meat (0) 4 smaller serves (⅓ cup) of vegetables e.g. potato, beans, pumpkin, broccoli (7)	Custard, sponge cake & canned plums (2)	
	Baked beans (7) Egg (0)	Canned pears and ice-cream (2)		
	6 stewed prunes (2)			
TOTAL	= 15g fibre	= 11g fibre	= 9g fibre	= 4g fibre
			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.[3] 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

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

Prune Apple Bran Mix Recipe

Combine 1/4 cup unprocessed bran with 1/2 cup stewed prunes and 1/2 cup of apple puree.
Makes 10 x 2 tablespoon serves.

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 [4]
- 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.

Ensuring residents with dementia consume enough fluids can be a challenge. 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.[5]

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.

Food	Quantity	Fibre (g)
BREAD		
White	1 slice	0.7
White toast	1 slice	0.7
English muffin	½ muffin	1.0
White roll	1 roll	1.1
High fibre white	1 slice	1.3
Multi-grain	1 slice	1.3
Fruit loaf with light fruit	1 slice	1.3
Wholemeal	1 slice	1.5
Wholemeal roll	1 roll	1.8
Fruit loaf with heavy fruit*	1 slice	2.5
Light rye	1 slice	2.5
CRACKERS AND CRISPBREADS		
Wholemeal cracker	1 cracker	0.4
Water cracker	1 cracker	0.4
Sao's™	1 cracker	0.5
Rye crisp bread	1 crisp bread	1.4
RICE, PASTAS AND BARLEY		
Rice (white)	½ cup	0.5
Rice (brown)	½ cup	1.3
Pasta (white)	½ cup	1.3
Barley (cooked)	100g	3.5
BISCUITS/CAKES		

Food	Quantity	Fibre (g)
VEGETABLES		
Asparagus	3 spears	1.5
Beans (green)	½ cup	1.8
Beans (kidney, baked)	½ cup	6.6
Beetroot	1 medium	2.3
Broccoli	½ cup	4.0
Brussels sprouts	4 sprouts	2.9
Cabbage	½ cup	0.5
Lettuce	2 leaves	0.2
Celery	1 piece	0.3
Sweet potato	¼ small	0.4
Choko	¼ medium	0.7
Mushrooms	½ cup	0.9
Cauliflower	½ cup	1.2
Pumpkin	100g	1.4
Tomato	1 small	1.4
Potato (without skin)	1 small	1.7
Zucchini	1 medium	1.7
Silver beet	½ cup	1.9
Parsnip	½ large	2.0
Carrots	½ cup	2.3
Potato (with skin)	small	2.5
Corn kernels	½ cup	2.7
Mixed vegetables	½ cup	3.0
Turnip	1 medium	3.6
Corn (creamed)	½ cup	4.4
Peas	½ cup	4.6
Side salad	1 average	0.9
Bean salad	½ cup	2.9
FRUIT		
Grapes	22 medium	0.6
Pineapple	1 slice	0.6
Grapefruit	½ average	0.8
Watermelon	1 cup	1.0
Prunes	6 stewed	1.2
Rock melon	¼ whole	1.3
Fruit salad (canned)	½ cup	1.7
Mandarin	1 medium	1.7
Banana (peeled)	1 small	1.8
Dates (dried)	4 medium	1.9
Raisins or sultanas	¼ cup	1.9
Peach	1 average	2.0
Apricot	2 small	2.3
Orange	1 medium	2.5
Kiwi fruit	1 medium	2.6
Strawberries	10 medium	2.6
Apple (with skin)	1 medium	2.8
Plums	2 average	2.8
Mango	1 medium	3.1
FRUIT continued		

Food	Quantity	Fibre (g)	Food	Quantity	Fibre (g)
Cream	2 biscuits	0.2	Rhubarb (cooked)	¾ cup	3.2
Plain, sweet	2 biscuits	0.3	Pear	1 average	3.7
Choc chip	2 biscuits	0.4	Nectarine	2 small	4.2
Fruit filled	2 biscuits	0.5	Passion fruit	2 average	5.0
Oatmeal	2 biscuits	0.5	Figs (dried)	2 medium	5.4
Nut	2 biscuits	0.7			
Scone	1 scone (40g)	0.9			
Anzac	2 biscuits	1.7			
Bran	2 biscuits	2.5			
Fruit bun	70g slice	3.1			
BREAKFAST CEREALS			OTHERS		
Nutri-Grain™	¾ cup	0.5	Wheat germ	1 tbsp	1.1
Rice Bubbles™	¾ cup	0.5	Unprocessed bran	1 tbsp	2.2
Corn Flakes™	¾ cup	0.7	Prune/Apple/Bran mix	1 tbsp	2.3
Special K™	¾ cup	1.0			
Porridge	¾ cup	1.8			
Weetbix™	2 biscuits	3.2			
Muesli	½ cup	3.8			
Sultana Bran™	⅔ cup	4.0			
Bran Flakes™	¾ cup	4.9			
Just Right™	⅔ cup	5.3			
All Bran™	⅓ cup	6.6			

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
http://www.bladderbowel.gov.au/assets/doc/LookingAfterYourBowel.pdf

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

1. *Joanna Briggs Institute. Management of constipation in older adults. Evidence based practice information sheets for health professionals. 2008; Issue 7 (Best Practice Volume 12):4*
2. *Continence Foundation of Australia. About your bowel: Available from: https://www.continence.org.au/pages/about-your-bowel.html*
3. *Position of the American Dietetic Association: Health implications of dietary fiber. Journal of the American Dietetic Association. 2008;108(10):1716-31.*
4. *Valtin H. 'Drink at least eight glasses of water a day.' Really? Is there scientific evidence for '8 x 8'? Am J Physiol Regul Integr Comp Physiol. [Review]. 2002 Nov; 283(5):R993-1004.*
5. *Bolin T, Hansky J, Korman M, Stanton R. Diverticular disease. Diagnosis and management: The Gut Foundation; 2005.*
   Available from: http://www.gutfoundation.com.au/publications

SECTION 4

CHAPTER 24

Tube Feeding

SECTION 4

CHAPTER 24

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.

TUBE FEEDING TROUBLE-SHOOTING GUIDE

If the problem is	The cause is usually	Try the following ideas to fix the problem
Stomach discomfort e.g. nausea, vomiting, belching or bloating	Formula administration Delayed emptying of the stomach Positioning Bowel obstruction	• 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 • 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 • Position resident at an angle of at least 30º and keep in this position for the ½ hour before and after the bolus feed. Keep at this position during continuous feeding • Cease formula and discuss with a doctor
Constipation	Low fibre content Insufficient fluid intake Decreased activity Medicines	• 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 • Increase water flushes; spread the extra water out evenly over the total number of feeds. Give a water flush before the first feed • If possible, increase daily activity (even walking 20m may make a difference) • Review with a doctor; a stool softener or aperient may be recommended
Aspiration	Resident lying flat Delayed gastric emptying (delayed emptying of the stomach or reflux) Too large a volume of bolus feed	• Position resident at an angle of at least 30º and keep this position for the ½ hour before and after the bolus feed • Discuss medicines that will improve gastric motility with the doctor • Consider continuous feeding or changing to a more concentrated formula (thus enabling volume to be reduced)
Blocked feeding tube	Irregular flushing of tube Administration of medicines Feeding tube deterioration Supplementary oral food intake	• Flush the tube with warm water before and after the feed • Flush with water before and after every feed and medicine. Do not add medicine to formula • Use liquid medicines where possible. Crush tablets thoroughly, dissolve in warm water and flush with water. Discuss with pharmacist • Replace feeding tube • Flush feeding tube regularly to prevent blockages

If the problem is	The cause is usually	Try the following ideas to fix the problem
Diarrhoea	Medicines	• Check with the doctor that medicines are not aggravating the diarrhoea. If unable to change, consider anti-diarrhoea medicine
	Antibiotics	• Antibiotics can affect the gut and cause diarrhoea. Discuss with GP/Pharmacist • Provide prebiotics and probiotics to help normalise gut flora post antibiotics
	Formula administration	• 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
	Decreased fibre	• Use a fibre formula e.g. Jevity™, Nutrison Multi Fibre™, etc.
	Constipation	• Check diarrhoea is not overflow from constipation
Dehydration	Persistent vomiting or diarrhoea Inadequate fluid volume	• Provide an extra 500-1000ml of water per day; spread it evenly through flushes, e.g. 6 x 150ml
Refeeding syndrome	Rapid commencement of feeding in a resident who is malnourished	• Give Thiamin (Vit B1). Monitor electrolytes and supplement if low • 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 • Utilise a dietitian's expertise in identifying who may be at risk of refeeding syndrome and the recommended feeding regime for at risk residents

FURTHER INFORMATION

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

http://daa.asn.au/wp-content/uploads/2011/11/Enteral-nutrition-manual-Oct-2011.pdf

SECTION 4

CHAPTER 25

Pressure Injuries

SECTION 4

CHAPTER 25

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.[2, 3] 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.[1]

Note: L-Arginine may cause diarrhoea. Gradual introduction may help.

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

FURTHER INFORMATION

http://www.woundsaustralia.com.au/publications/2009_vic_expert_guide_nutrition_wound_healing.pdf

1. *Australian Wound Management Association, New Zealand Wound Care Society, Nursing Service Ministry of Health Nursing Singapore, Hong Kong Enterostomal Therapists Association. Draft Pan Pacific clinical practice guideline for the prevention and management of pressure Injury. 2011 2011:116.*
2. *Woodward M, Sussman G, Rice J, Ellis T, Fazio V. Nutrition and wound healing – Expert guide for healthcare professionals.*
   Nestle Nutrition; October 2011. p.23.
3. *Trans Tasman Dietetic Wound Care Group. Evidence based practice guidelines for the dietetic management of adults with pressure injuries 2011. Available from: http://daa.asn.au/wp-content/uploads/2011/09/Trans-Tasman-Dietetic-Wound-Care-Group-Pressure-Injury-Guidelines-2011.pdf*

SECTION 4

CHAPTER 26

Exercise

SECTION 4

CHAPTER 26

Exercise

Exercise helps an older person improve muscle strength, balance and mobility and enables them to continue performing daily tasks.[1] 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

6		
7	Very very light	
8		
9	Very light	
10		
11	Fairly light	AEROBIC ZONE
12		
13	Somewhat hard	
14		
15	Hard	STRENGTH TRAINING ZONE
16		
17	Very hard	
18		
19	Very very hard	

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

- Preventing Falls and Harm from Falls in Older People. Best Practice Guidelines for Australian Residential Aged Care Facilities. Commonwealth of Australia http://www.safetyandquality.gov.au/wp-content/uploads/2012/01/Guidelines-RACF.pdf
- 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

1. *Australian Commission on Safety and Quality in Health Care. Preventing falls and harm from falls in older people. Best practice guidelines for Australian residential aged care facilities; 2009.*

SECTION 5

Appendices

5

SECTION 5

RESIDENT FOOD AND NUTRITION COMMUNICATION CARD*

Resident's name ..... DOB ..... Age .....

Medical history .....

Medicines .....

.....

Initial Nutrition Screen

Date ...../...../.....

Height (m) .....Weight (kg) .....

BMI .....

Ideal weight range (BMI 22-27) .....

Screening Score .....

Screening Risk: ☐ High ☐ Moderate ☐ Low

Screening Tool (choose one)				
	MUST	MNA-SF	SNAQ	MST
Score				
Risk				

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

Allergy Alert! (Write in red)

☐ 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.*

RESIDENT MALNUTRITION SCREENING RECORD

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.

	SNAQ Simplified Nutritional Appetite Questionnaire	**MST** Malnutrition Screening Tool	**MNA-SF** Mini Nutritional Assessment Short Form	**MUST** Malnutrition Universal Screening Tool
Low risk	15 or more	0 -1	12 -14	0
Medium risk		2	8 -11	1
High risk	14 or less	3 - 5	0 - 7	2 or more
Example		**4 High**		
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
January				

RESIDENT MONTHLY WEIGHT CHART

Affix Resident Sticker here

Wt

120 119 118 117 116 115 114 113 112 111 110 109 108 107 106 105 104 103 102 101 100 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36

Ulna length*

..... (cm)

Height

..... (m)

Date.....

- Admission weight ..... (Kg)
- Height..... (m)
- BMI .....
- Ideal weight range (BMI 22-27)

.....

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.

Calculate BMI

Wt (Kg) / Ht (m^2)

Record ideal weight range

Draw Lines to show BMI cut off of 22

BMI under 20 is underweight for this resident

..... kg

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

Date		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Weight	kg													

(Refer opposite for Body Mass Index Chart)

BODY MASS INDEX CHART

HEIGHT*		WEIGHT	
		Ideal Weight Range (BMI: 22-27)	Underweight BMI 18.5 - 20 (see MUST Screening Tool)
Feet	Metres	Kilograms	Kilograms
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

Height m	1.44	1.46	1.48	1.50	1.52	1.54	1.56	1.58	1.60	1.62	1.64	1.66	1.68	1.70	1.72	1.74	1.76	1.78	1.80	1.82	1.84	1.86	1.88	1.90	1.92	1.94	Height m
Weight																											Weight
31	15	15	14	14	13	13	13	12	12	12	12	11	11	10	10	10	10	10	10	9	9	9	9	9	8	8	31 kg
32	15	15	15	14	14	13	13	13	13	12	12	11	11	11	11	11	10	10	10	10	9	9	9	9	9	9	32 kg
33	16	15	15	15	14	14	14	13	13	13	12	12	11	11	11	11	11	10	10	10	10	10	9	9	9	9	33 kg
34	16	16	16	15	15	14	14	14	13	13	13	12	12	11	11	11	11	11	10	10	10	10	10	9	9	9	34 kg
35	17	16	16	16	15	15	14	14	14	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10	9	9	35 kg
36	17	17	16	16	16	15	15	14	14	14	13	13	12	12	12	12	12	11	11	11	11	10	10	10	10	10	36 kg
37	18	17	17	16	16	16	15	15	14	14	14	13	13	13	13	12	12	12	11	11	11	11	10	10	10	10	37 kg
38	18	18	17	17	16	16	16	15	15	14	14	13	13	13	13	13	12	12	12	11	11	11	11	11	10	10	38 kg
39	19	18	18	17	17	16	16	16	15	15	15	14	13	13	13	13	13	12	12	12	12	11	11	11	11	10	39 kg
40	19	19	18	18	17	17	16	16	16	15	15	14	14	14	14	13	13	13	12	12	12	12	11	11	11	11	40 kg
41	20	19	19	18	18	17	17	16	16	16	15	15	14	14	14	14	13	13	13	12	12	12	12	11	11	11	41 kg
42	20	20	19	19	18	18	17	17	16	16	16	15	15	14	14	14	14	13	13	13	12	12	12	12	11	11	42 kg
43	21	20	20	19	19	18	18	17	17	16	16	15	15	15	15	14	14	14	13	13	13	12	12	12	12	11	43 kg
44	21	21	20	20	19	19	18	18	17	17	16	16	15	15	15	15	14	14	14	13	13	13	12	12	12	12	44 kg
45	22	21	21	20	19	19	18	18	18	17	17	16	16	15	15	15	15	14	14	14	13	13	13	12	12	12	45 kg
46	22	22	21	20	20	19	19	18	18	18	17	16	16	16	16	15	15	15	14	14	14	13	13	13	12	12	46 kg
47	23	22	21	21	20	20	19	19	18	18	17	17	16	16	16	16	15	15	15	14	14	14	13	13	13	12	47 kg
48	23	23	22	21	21	20	20	19	19	18	18	17	17	16	16	16	15	15	15	14	14	14	14	13	13	13	48 kg
49	24	23	22	22	21	21	20	20	19	19	18	17	17	17	17	16	16	15	15	15	14	14	14	14	13	13	49 kg
50	24	23	23	22	22	21	21	20	20	19	19	18	17	17	17	17	16	16	15	15	15	14	14	14	14	13	50 kg
51	25	24	23	23	22	22	21	20	20	19	19	18	18	17	17	17	16	16	16	15	15	15	14	14	14	14	51 kg
52	25	24	24	23	23	22	21	21	20	20	19	18	18	18	18	17	17	16	16	16	15	15	15	14	14	14	52 kg
53	26	25	24	24	23	22	22	21	21	20	20	19	18	18	18	18	17	17	16	16	16	15	15	15	14	14	53 kg
54	26	25	25	24	23	23	22	22	21	21	20	19	19	18	18	18	17	17	17	16	16	16	15	15	15	14	54 kg
55	27	26	25	24	24	23	23	22	21	21	20	19	19	19	19	18	18	17	17	17	16	16	16	15	15	15	55 kg
56	27	26	26	25	24	24	23	22	22	21	21	20	19	19	19	18	18	18	17	17	17	16	16	16	15	15	56 kg
57	27	27	26	25	25	24	23	23	22	22	21	20	20	19	19	19	18	18	18	17	17	16	16	16	15	15	57 kg
58	28	27	26	26	25	24	24	23	23	22	22	21	20	20	20	19	19	18	18	18	17	17	16	16	16	15	58 kg
59	28	28	27	26	26	25	24	24	23	22	22	21	20	20	20	19	19	19	18	18	17	17	17	16	16	16	59 kg
60	29	28	27	27	26	25	25	24	23	23	22	21	21	20	20	20	19	19	19	18	18	17	17	17	16	16	60 kg
61	29	29	28	27	26	26	25	24	24	23	23	22	21	21	21	20	20	19	19	18	18	18	17	17	17	16	61 kg
62	30	29	28	28	27	26	25	25	24	24	23	22	21	21	21	20	20	20	19	19	18	18	18	17	17	16	62 kg
63	30	30	29	28	27	27	26	25	25	24	23	22	22	21	21	21	20	20	19	19	19	18	18	17	17	17	63 kg
64	31	30	29	28	28	27	26	26	25	24	24	23	22	22	22	21	21	20	20	19	19	18	18	18	17	17	64 kg
65	31	30	30	29	28	27	27	26	25	25	24	23	22	22	22	21	21	21	20	20	19	19	18	18	18	17	65 kg
66	32	31	30	29	29	28	27	26	26	25	25	23	23	22	22	22	21	21	20	20	19	19	19	18	18	18	66 kg
67	32	31	31	30	29	28	28	27	26	26	25	24	23	23	23	22	22	21	21	20	20	19	19	19	18	18	67 kg
68	33	32	31	30	29	29	28	27	27	26	25	24	24	23	23	22	22	21	21	21	20	20	19	19	18	18	68 kg
69	33	32	32	31	30	29	28	28	27	26	26	24	24	23	23	23	22	22	21	21	20	20	20	19	19	18	69 kg
70	34	33	32	31	30	30	29	28	27	27	26	25	24	24	24	23	23	22	22	21	21	20	20	19	19	19	70 kg
71	34	33	32	32	31	30	29	28	28	27	26	25	25	24	24	23	23	22	22	21	21	21	20	20	19	19	71 kg
72	35	34	33	32	31	30	30	29	28	27	27	26	25	24	24	24	23	23	22	22	21	21	20	20	20	19	72 kg
73	35	34	33	32	32	31	30	29	29	28	27	26	25	25	25	24	24	23	23	22	22	21	21	20	20	19	73 kg
74	36	35	34	33	32	31	30	30	29	28	28	26	26	25	25	24	24	23	23	22	22	21	21	20	20	20	74 kg
75	36	35	34	33	32	32	31	30	29	29	28	27	26	25	25	25	24	24	23	23	22	22	21	21	20	20	75 kg
76	37	36	35	34	33	32	31	30	30	29	28	27	26	26	26	25	25	24	23	23	22	22	22	21	21	20	76 kg
77	37	36	35	34	33	32	32	31	30	29	29	27	27	26	26	25	25	24	24	23	23	22	22	21	21	20	77 kg
78	38	37	36	35	34	33	32	31	30	30	29	28	27	26	26	26	25	25	24	24	23	23	22	22	21	21	78 kg
79	38	37	36	35	34	33	32	32	31	30	29	28	27	27	27	26	26	25	24	24	23	23	22	22	21	21	79 kg
80	39	38	37	36	35	34	33	32	31	30	30	28	28	27	27	26	26	25	25	24	24	23	23	22	22	21	80 kg
81	39	38	37	36	35	34	33	32	32	31	30	29	28	27	27	27	26	26	25	24	24	23	23	22	22	22	81 kg
82	40	38	37	36	35	35	34	33	32	31	30	30	29	28	28	27	26	26	25	25	24	24	23	23	22	22	82 kg
83	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	23	23	23	22	83 kg
84	41	39	38	37	36	35	35	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	23	22	84 kg
85	41	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	23	23	85 kg
86	41	40	39	38	37	36	35	34	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	23	86 kg
87	42	41	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	23	87 kg
88	42	41	40	39	38	37	36	35	34	34	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	23	88 kg
89	43	42	41	40	39	38	37	36	35	34	33	32	32	31	30	29	29	28	27	27	26	26	25	25	24	24	89 kg
90	43	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	24	24	90 kg
91	44	43	42	40	39	38	37	36	36	35	34	33	32	31	31	30	29	29	28	27	27	26	26	25	25	24	91 kg
92	44	43	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	24	92 kg
93	45	44	42	41	40	39	38	37	36	35	35	34	33	32	31	31	30	29	29	28	27	27	26	26	25	25	93 kg
94	45	44	43	42	41	40	39	38	37	36	35	34	33	33	32	31	30	30	29	28	28	27	27	26	25	25	94 kg
95	46	45	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	27	27	26	26	25	95 kg
96	46	45	44	43	42	40	39	38	38	37	36	35	34	33	32	32	31	30	30	29	28	28	27	27	26	26	96 kg
97	47	46	44	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	27	27	26	26	97 kg
98	47	46	45	44	42	41	40	39	38	37	36	36	35	34	33	32	32	31	30	30	29	28	28	27	27	26	98 kg
99	48	46	45	44	43	42	41	40	39	38	37	36	35	34	33	33	32	31	31	30	29	29	28	27	27	26	99 kg
100	48	47	46	44	43	42	41	40	39	38	37	36	35	35	34	33	32	32	31	30	30	29	28	28	27	27	100 kg
101	49	47	46	45	44	43	42	40	39	38	38	37	36	35	34	33	33	32	31	30	30	29	29	28	27	27	101 kg
102	49	48	47	45	44	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	28	27	102 kg
103	50	48	47	46	45	43	42	41	40	39	38	37	36	36	35	34	33	33	32	31	30	30	29	29	28	27	103 kg
104	50	49	47	46	45	44	43	42	41	40	39	38	37	36	35	34	34	33	32	31	31	30	29	29	28	28	104 kg

NUTRITION NOTES FOR RESIDENTS EATING POORLY AND AT RISK OF MALNUTRITION

Affix Resident sticker here

Surname.....

First Name .....

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.

Date		Please specify	% eaten	Date		Please specify	% eaten
DAY 1	**Breakfast**			DAY 2	**Breakfast**		
	Fruit stew/fresh				Fruit stew/fresh		
	Fruit juice				Fruit juice		
	Cereal				Cereal		
	Toast				Toast		
	Hot beverage				Hot beverage		
	Supplement				Supplement		
	Morning Tea				**Morning Tea**		
	Food				Food		
	Drink				Drink		
	Supplement				Supplement		
	Main Meal				**Main Meal**		
	Soup				Soup		
	Hot/cold meat				Hot/cold meat		
	Starch				Starch		
	Other veg				Other veg		
	Bread				Bread		
	Dessert				Dessert		
	Supplement				Supplement		
	Afternoon Tea				**Afternoon Tea**		
	Food				Food		
	Drink				Drink		
	Supplement				Supplement		
	Evening Meal				**Evening Meal**		
	Soup				Soup		
	Hot/cold meat				Hot/cold meat		
	Starch				Starch		
	Other veg				Other veg		
	Bread				Bread		
	Dessert				Dessert		
	Supplement				Supplement		
	Supper				**Supper**		
	Food				Food		
	Drink				Drink		
	Supplement				Supplement		

RESIDENT MEAL SATISFACTION SURVEY

We would appreciate your opinions about the food service.
Use the scale below to complete this meal satisfaction survey.

	Poor	Unsatisfactory	Satisfactory	Good	Excellent
	1	2	3	4	5

1. How do you rate the courtesy of the food service staff? 1 2 3 4 5

   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? 1 2 3 4 5

   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? 1 2 3 4 5

   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...

RESIDENT MEAL SATISFACTION SURVEY continued...

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

.....

.....

.....

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.....

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.....

.....

Thank you for your time

NUTRIENT REFERENCE VALUES FOR AUSTRALIA AND NEW

FOR ADULTS 70 YEARS AND OLDER (2005)

ADULTS – VITAMINS		ADULTS – MINERALS	
Nutrient	**RDI or AI**	**Nutrient**	**RDI or AI**
Protein	57g/day women 81g/day men	Calcium	1300mg women 1300mg men
Fibre	25g/day women 30g/day men	Iodine	150µg women 150µg men
Vitamin A	700µg RE women 900µg RE men	Iron	8mg women and men
Thiamin (Vitamin B1)	1.1mg women 1.2mg men	Magnesium	320mg women 420mg men
Riboflavin (Vitamin B2)	1.3mg women 1.6mg men	Phosphorus	1000mg women and men
Niacin (Vitamin B3)	13mg NE women 16mg NE men	Potassium	2800mg women (AI) 3800mg men (AI)
Pyridoxine (Vitamin B6)	1.5mg women 1.7mg men	Selenium	60µg women 70µg men
Vitamin B12	2.4µg women and men	Sodium	460 - 920mg or 20 - 40mmol (AI)
Folic acid (Folate equivalents)	400µg women and men	Zinc	8mg women 14mg men
Vitamin C	45mg women and men		
Vitamin D	15µg women and men		
Vitamin E	7mg women (AI) 10mg men (AI)		
Vitamin K	60µg women (AI) 70µg men (AI)		

ABBREVIATIONS:

RDI = Recommended dietary intake
AI = Adequate intake
RE = Retinol equivalents
µg = micrograms
mg = milligrams
NE = Niacin equivalents

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

Affix Resident sticker here

Surname.....

First Name.....

Resident's name.....

Reason for tube feeding ☐ NBM as unsafe to eat or ☐ not eating enough

Date tube feeding commenced.....

Name of formula..... Manufacturer.....

Volume of formula needed per day.....

Calories/kJ provided per day.....

Grams protein provided per day.....

Volume of extra water/fluids needed per day (min).....

Volume of water to flush tube.....

Type of feeding tube
☐ Gastrostomy ☐ Nasogastric
☐ Jejunostomy ☐ Nasoduodenal
☐ Nasojejunal

Administration Method
☐ Bolus
☐ Continuous ☐ Gravity
☐ Intermittent ☐ Pump

Feeding schedule Time (hours) ..... Rate (ml).....

Volume (ml) ..... Number of feeds.....

Feeding times.....

Initial weight ..... Suggested goal weight range.....

Weight checked weekly and recorded: ☐ Yes

Equipment checklist:

CONTINUOUS
- ☐ Formula bag
- ☐ Giving set*
- ☐ Pump
- ☐ IV pole

BOLUS
- ☐ 60ml syringe
- ☐ Jug

OTHER GENERAL
- ☐ Formula
- ☐ Hygienic preparation area
- ☐ Hand washing facilities
- ☐ Can opener
- ☐ Disposable gloves

Other information.....

.....

Name of supplier/chemist where formula and/or equipment can be obtained .....

.....

Phone number..... Fax .....

Email .....

Name of dietitian ..... Dietitian phone number .....

Last review date by dietitian .....

*Apparatus between the tube and the feeding bag

MID-MEAL IDEAS

CAKES	UNCOOKED
Apple tea cake Banana cake Butterfly cakes Carrot cake Chocolate cake Cinnamon tea cake Fruit cake Jam sponge Orange cake Patty cakes Plain tea cake Rainbow cake Rock cakes Ginger cake Sultana cake	Biscuits and cheese Biscuits with hard boiled egg Biscuits and tomato Sweet biscuits Fruche™ Ice-cream Junket Sandwiches Yoghurt Fruit, fruit platters
BISCUITS	**SLICES**
Anzac biscuits Fruity Cornflake™ biscuits Honey oat bars Jam drops Ginger biscuits	Apricot slice Caramel walnut slice Chocolate slice Coconut jam slice Sultana slice
MUFFINS	**SCONES**
Apple and bran muffins Banana muffins Blueberry muffins Bran and banana muffins Choc chip muffins	Cheese scones Date scones Fruit scones Pumpkin scones Raisin scones Scones, jam and cream
LOAVES	**OTHER**
Banana and walnut loaf Date loaf Sultana loaf	Custard Pikelets Milkshakes Smoothies Raisin toast Cinnamon toast

LIGHT MEAL IDEAS

The light meal 'dish list' ideas do not necessarily make a complete meal. Accompanying rice, pasta, bread, vegetables or salad may be required

EGG DISHES	SEAFOOD DISHES	CHICKEN DISHES
Quiche – Tuna & vegetable, cheese & asparagus, vegetable, cheese, salmon Omelettes Ham and egg pie Curried egg Scrambled, poached, fried eggs Baked cheese custard	Mornay – Salmon, tuna Fish cakes (patties) Casserole – canned, fresh or frozen fish Fish & chips Tuna or salmon quiche Fish kedgeree Seafood crepes	Chicken and vegetable casserole Chicken fricassee Curried chicken Chicken stir-fry Chicken mornay Honey soy chicken Marinated chicken drumsticks
BEEF/LAMB/PORK	**VEGETABLE DISHES**	**COMMERCIAL PRODUCTS**
Rissoles, savoury meat loaf Meat balls Hamburgers Tacos Savoury mince Steak and kidney Meat pie Braised steak Sausage rolls Sausages Shepherd's pie Lamb casserole Ham steak Hawaiian ham (ham, pineapple, cheese on toast) Tripe and onions Lamb's fry and bacon Lasagne	Asparagus Mornay Vegetable bake Corn fritters Vegetable pasties Baked beans on toast Creamed corn on toast Asparagus and melted cheese on toast Welsh rarebit Potato wedges and sour cream Curried vegetables and rice Spinach and cheese slice Vegetable quiche Vegetable frittata Mushrooms on toast Potato pancakes Vegetable slice (zucchini, mixed vegetables) Tomato and onion on toast	These should not be stand alone items and should appear infrequently on menu. Serve with something else such as vegetables, salad, bread, toast etc. Chicken patties Chicken nuggets Spring rolls Fish cocktails Chicken sticks Chicken schnitzel Meat pie/party pies Sea shanties Fish fingers Sausage rolls Spinach triangles Frankfurts Mini quiches Pasties
PASTA/RICE DISHES	**BAKED PRODUCTS**	**SANDWICHES**
Macaroni cheese Spaghetti on toast Savoury pilaf Spaghetti Bolognaise	Ham and cheese muffins Vegetable slices Vol au vents e.g. chicken and mushroom or veal and mushroom	Mixed sandwiches include cheese, egg, meat, chicken or fish Toasted sandwiches Croissants – cheese and ham, chicken and avocado etc.
SOUPS	**SALADS**	
Hearty. Serve with toast, bread rolls, scones, damper etc.	Include cheese, egg, meat, chicken or fish	

ORAL HEALTH ASSESSMENT TOOL

Resident: _____ Completed by: _____ Date: _____

Resident: ☐ is independent ☐ needs reminding ☐ needs supervision ☐ needs full assistance

☐ Will not open mouth ☐ Grinding or chewing ☐ Head faces down ☐ Refuses treatment

☐ Is aggressive ☐ Bites ☐ Excessive head movement ☐ Cannot swallow well

☐ Cannot rinse and spit ☐ Will not take dentures out at night

Lips

Healthy	Changes	Unhealthy	Dental Referral
☐ Smooth, pink, moist	☐ Dry, chapped or red at corners	☐ Swelling or lump, red/ white/ulcerated bleeding/ ulcerated at corners *	☐ Yes ☐ No

Natural Teeth

Healthy	Changes	Unhealthy	Dental Referral
☐ No decayed or broken teeth or roots	☐ 1- 3 decayed or broken teeth/ roots, or teeth very worn down	☐ 4 or more decayed or broken teeth/ roots or fewer than 4 teeth, or very worn down teeth *	☐ Yes ☐ No

Tongue

Healthy	Changes	Unhealthy	Dental Referral
☐ Normal moist, roughness, pink	☐ Patchy, fissured, red, coated	☐ Patch that is red and/or white/ulcerated, swollen *	☐ Yes ☐ No

Dentures

Healthy	Changes	Unhealthy	Dental Referral
☐ No broken areas or teeth, worn regularly, and named	☐ 1 broken area or tooth, or worn 1-2 hours per day only or not named	☐ 1 or more broken areas or teeth, denture missing /not worn, need adhesive, or not named *	☐ Yes ☐ No

Gums and Oral Tissue

Healthy	Changes	Unhealthy	Dental Referral
☐ Moist, pink, smooth, no bleeding	☐ Dry, shiny, rough, red, swollen, sore, one ulcer/ sore spot, sore under dentures	☐ Swollen, bleeding, ulcers, white/ red patches, generalised redness under dentures *	☐ Yes ☐ No

Oral Cleanliness

Healthy	Changes	Unhealthy	Dental Referral
☐ Clean and no food particles or tartar in mouth or on dentures	☐ Food, tartar, plaque 1-2 areas of mouth, or on small area of dentures	☐ Food particles, tartar, plaque most areas of mouth, or on most of dentures *	☐ Yes ☐ No

Saliva

Healthy	Changes	Unhealthy	Dental Referral
☐ Moist tissues watery and free flowing	☐ Dry, sticky tissues, little saliva present, resident thinks they have a dry mouth	☐ Tissues parched and red, very little/no saliva present, saliva is thick, resident thinks they have a dry mouth *	☐ Yes ☐ No

Dental Pain

Healthy	Changes	Unhealthy	Dental Referral
☐ No behavioural, verbal or physical signs of dental pain	☐ Verbal &/or behavioural signs of pain such as pulling at face, chewing lips, not eating, changed behaviour.	☐ Physical pain signs (swelling of cheek or gum, broken teeth, ulcers), as well as verbal &/or behavioural signs (pulling at face, not eating, changed behaviour) *	☐ Yes ☐ No

*** Unhealthy signs usually indicate referral to a dentist is necessary**

Assessor Comments

www.cclhd.health.nsw.gov.au

bidfood.com.au/Bidcare

JUL20/V4

CATALOGUE NUMBER: CC11085