Eating well for older people with dementia

A good practice guide for residential and nursing homes and others involved in caring for older people with dementia

REPORT OF AN EXPERT WORKING GROUP

VOICES

Voluntary Organisations Involved in Caring in the Elderly Sector

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Member organisations of VOICES

The following organisations are members of VOICES (Voluntary Organisations Involved in Caring in the Elderly Sector).

Abbeyfield Society
Active Elderly Housing Association
Anchor Housing with Care
BEN (Motor and Allied Trades Benevolent Fund)
Birmingham Care
Brendoncare Foundation
Bristol Age Care
Church of England Pensions Board
Civil Service Benevolent Fund
Cottage Homes
Crossways Trust
DGAA Homelife
Ex-Services Mental Welfare Society
Farnborough and Cove Memorial Hospital Trust
Friends of the Elderly and Gentlefolks' Help
Golden Sunset Homes Trust
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The Harrison Homes
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Methodist Homes for the Aged
Mutual Aid Homes (Methodist Local Preachers Mutual Aid Society)
National Advertising Benevolent Society
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Servite Houses
Southend-on-Sea Darby and Joan
Sussex Housing Association for the Aged
Teachers' Benevolent Fund
The Whiteley Homes Trust
Women's Pioneer Housing Limited

Contents

Foreword

The understanding of the importance of good nutrition for older people in long-term care homes was pioneered by The Caroline Walker Trust, with the publication in 1995 of *Eating Well for Older People*. This report was the first to provide clear practical and nutritional guidelines for those of us who have responsibility for caring for older people in residential and nursing homes.

In the course of writing *Eating Well for Older People*, the Expert Working Group responsible for the report became acutely aware of the need to look in detail at the nutritional needs of older people with dementia. Accordingly, they recommended that a further report should be produced dealing specifically with this group.

Until very recently, older people with dementia would have been cared for in long-stay psycho-geriatric wards of hospitals. As those wards have closed, older people with dementia have come into residential and nursing homes. The 46 member charities of VOICES (Voluntary Organisations Involved in Caring in the Elderly Sector) have a duty of care for over 13,000 older people in their residential and nursing homes. Of those patients and residents, probably one-third have dementia and only a small minority live in specialist units. Dementia therefore involves everyone who provides care for older people.

Several VOICES members are responding to this challenge by pioneering innovative systems of care. However, one area of dementia care in which very little work had been done, and which presents some of the most challenging behavioural as well as health problems, is nutrition and the eating environment. VOICES felt it appropriate to act on the recommendation identified in the Caroline Walker Trust report. It therefore established a further Expert Working Group to draw up guidelines for best practice in nutrition for older people with dementia.

VOICES is deeply grateful for the impressive, focused and energetic commitment of the Members of the Expert Working Group who gave their time so generously. We are indebted too for the excellent research and drafting work of Dr Helen Crawley, the expert editing of Rosie Leyden, and the careful administration of Caroline Beaton Brown. However, the report could not have been produced without the vision, tact and driving energy of Anne Dillon Roberts, Trustee of The Caroline Walker Trust, who chaired the Expert Working Group.

The encouragement and support we received from the Nutrition Unit of the Department of Health and from the Social Services Inspectorate were invaluable. We are also most grateful to Gardner Merchant Healthcare Services for funding this project.

The duty of care that we owe to older people with dementia cannot be overstated. This is one of the most vulnerable and often one of the most neglected groups in our society. They are the least able to demand good care for themselves. As dementia begins to touch all of our lives, we hope that this report will act as a catalyst for the better care of older people with dementia.

Peter Roberts
Chair of VOICES
(Voluntary Organisations Involved in Caring in the Elderly Sector)

Chapter 1

Summary and recommendations

Summary

Background

The care of older people with dementia, whether in residential or nursing homes or in specialist units, is becoming a major and urgent issue. There are currently approximately 670,000 people with dementia in the UK. By 2021 it is estimated that this figure will have reached 900,000. About 2% of 65-75 year olds and 20% of over-80 year olds have some form of dementia. While a proportion of these people will continue living in their own homes, many will be cared for in residential or nursing homes. It is estimated that at least 25% of residents in non-specialist registered care homes have dementia, and in some homes the proportion may be as high as 50%.

Causes and effects of dementia

The most common causes of dementia are Alzheimer's disease, vascular dementia, mixed dementia, and Lewy body disease. Dementia has a severe impact on daily life; people with dementia have difficulties with reasoning power and memory, neurological changes, and mood and behaviour changes. The stages of dementia are described in detail in Chapter 3. Dementia can also have a significant effect on people's ability to eat well.

Nutritional concerns among older people with dementia

The *National Diet and Nutrition Survey of People Aged 65 Years and Over*, carried out in 1994-95, found that 30% of people in residential homes or sheltered accommodation fell into the range associated with a deficiency of either minerals or vitamins. Their diets are particularly deficient in vitamin D, vitamin C, folate and iron. Additional areas of concern for older people with dementia include inadequate energy (calories), inadequate protein, and dehydration.

Adequate energy intake is a critical factor in ensuring good nutrition for older people with dementia. A varied diet is essential in order to achieve an adequate intake of vitamins and minerals.

How good nutrition can help older people with dementia

Undernutrition can contribute to a number of health problems in older people, including older people with dementia. These problems include constipation and other digestive disorders, anaemia, muscle and bone disorders, mouth problems and swallowing difficulties. Good nutrition can help to alleviate many of these health problems, and can greatly improve a person's quality of life.

Weight loss is not an inevitable consequence of dementia. The most likely cause is inadequate food intake (not eating enough), and there may be a number of reasons for this. For example, some older people with dementia may become less able to use utensils and to eat independently as their dementia progresses, and some may have swallowing difficulties. Medication can affect their appetite, food intake and body weight. Among those who have both dementia and depression, the depression may cause a change in appetite and consequent weight loss. Weight loss may also occur if a person has increased energy needs - for example if they are recovering from infection - but does not eat more to compensate for this. For some people, weight loss may be due to the increased energy requirements caused by constant pacing.

Practical strategies for improving diet

The report recommends that residential and nursing homes should provide food that meets the nutritional guidelines shown on page 30. It also suggests practical strategies for improving the diet of older people with dementia. For example: keeping to familiar foods, drinks and routines; allowing enough time for people to eat, and giving encouragement and help to eat; offering finger foods, pureed or textured soft diet where appropriate; attractive presentation of foods, especially pureed food and textured soft meals; providing nutritious snacks between meals and making sure that snacks and drinks are available at all times of day and night; and maintaining individuals' ability to eat independently for as long as possible. Staff need to find out as much as possible about each resident's or patient's food preferences and their cultural and religious requirements and record it in the person's care plan. This information can be obtained from the older people themselves and from their family and friends.

Chapter 6 offers some examples of menus which meet the nutritional guidelines for food prepared for older people with dementia. These include a finger food menu, and a textured soft diet menu.

There is no evidence that providing the raw materials for meals and snacks for older people with dementia, or the process of cooking that food, involves any significant additional cost when compared with the cost of catering for older people who do not have dementia.

Staff organisation and training

Managers and staff at all levels need to demonstrate their commitment to good nutrition so that it becomes part of the organisational culture of the home.

Training for all staff - including managers - is a crucial factor in encouraging people with dementia to eat well. Staff who work with people with dementia need to know about dementia and its effects and its likely progress. Training should also include how to help people maintain their independence for as long as possible, and how to help those who cannot eat by themselves.

Adequate numbers of staff are essential to produce varied, palatable and nutritious food and to encourage those who can entirely or mainly eat without specific staff intervention. Adequate numbers are also needed to help people who cannot eat independently. Consistency of care staff, with the same people working with the same residents or patients, is crucial.

The eating environment

A congenial, homely atmosphere, and a quiet, relaxed setting can help people with dementia to eat well. Any sensory cues to eating, which can help people with dementia to orientate themselves, can also be helpful. For example the sounds of preparing or cooking food, or food aromas.

There are a number of design features which can help encourage older people with dementia to maintain good nutritional status. Architects planning new homes for older people who have, or who may develop dementia, should incorporate these features in their design.

The way forward

The current nutritional status of older people with dementia gives serious cause for concern, yet much can be done to improve their nutritional status and their quality of life. The recommendations on the next pages set out some practical ways of achieving those improvements.

Recommendations

Nutritional guidelines

1 Nutritional guidelines for food prepared for older people in residential or nursing homes are given on page 30 of this report. They apply equally to older people with dementia. These guidelines should be adopted by residential and nursing homes and should become benchmark standards for care in residential and nursing homes.

2 Local authorities, health authorities and health trusts should adopt these nutritional guidelines and use them as benchmark standards in the residential and nursing homes with which they contract for long-term care.

3 Residential and nursing homes which apply for registration should be required, as part of the registration process, to demonstrate that they provide food which meets these guidelines.

4 Registration and inspection officers should monitor the nutritional standards of the food served in the homes they visit, particularly during the unannounced visits. The inspector's report should include comments on food and nutrition. Homes which do not meet the guidelines should receive appropriate advice and help.

5 Home owners, managers, caterers and care staff should seek appropriate information and training on how to meet the guidelines.

6 The nutritional guidelines in this report should be used as benchmark standards by others involved in the care of older people with dementia. This includes care agencies, organisations providing food for residential and nursing homes and sheltered accommodation, and those providing community meals.

Assessing the food needs of older people with dementia and monitoring their weight

7 Within the first week after admission to a residential or nursing home, each older person with dementia should be weighed and have his or her food and fluid needs assessed. These needs should be monitored and regularly reviewed. A specific review after one month would be useful since by then the person will be better known to staff.

8 Particular attention should be paid to the energy needs (ie the calorie requirements) of older people with dementia. These needs should be assessed on an individual basis.

9 Efforts should be made to find out about each person's special dietary needs, food preferences and religious or cultural requirements. This information should be sought from family and friends as well as from individuals themselves, preferably before they move into the home. The information should be recorded and form part of each person's individual care plan, and should be regularly updated.

10 Attention must be paid to the way the food looks and how it is presented. Families or friends - particularly those of ethnic minorities - should be encouraged to be actively involved in helping staff get this right. This information should form part of the care plan and all staff should be made aware of individual requirements.

11 All residential and nursing homes should have weighing scales, preferably sitting scales, for monthly weight checks. These scales should be checked regularly.

12 The weight of each resident or patient should be recorded in the person's care plan at least once a month. Anyone with a recent unintended weight loss or gain of 3kg (7lbs) or more should be referred for assessment by a health care professional. Any action recommended

following such a referral should be recorded in the care plan and monitored regularly.

Choice and availability of food and drink

13 Older people with dementia need a healthy, balanced diet, in common with the general population and other older people. Food and nutrition must therefore be seen as an essential, integral part of the care plan. Individuals should be given an opportunity to comment on the food served.

14 All foods served should be attractive, appetising and appropriate to the needs of the residents and patients. Where appropriate, these might include finger foods and textured soft foods as well as more conventional meals. If pureed foods are served, particular care should be taken to ensure that they look and taste appetising.

15 A variety of foods should be offered which enable some choice. This is important for older people with dementia, despite the common misconception that choice can create confusion. Help from supportive, trained care staff may be beneficial.

16 Care staff should be able to offer food and drinks for residents and patients whenever required. Snacks and drinks - such as sandwiches, fresh fruit, biscuits, tea, milky drinks, fruit juices and water - should be available all day and during the night.

17 Food supplement products (which are sometimes used to replace meals) should be used appropriately. Over-use of these supplements in the medium to long term may delay the return to normal eating patterns.

18 Managers and care staff in residential and nursing homes should be aware that an adequate fluid intake is essential to prevent dehydration and to aid regular bowel movements. To ensure an adequate liquid intake, older people with dementia should be encouraged to drink 1.5 litres (8-10 cups) of fluid each day.

19 Managers and care staff should also be aware that restricting fluid intake does not reduce problems associated with incontinence. Drinks should be offered regularly throughout the day.

20 Cost considerations should not be allowed to override the need for adequate nutritional content in the planning and preparation of food for older people with dementia.

Dental health and oral hygiene

21 Homes responsible for the care of older people with dementia should be proactive in ensuring good dental health. Oral hygiene should be checked regularly. Help should be given with brushing teeth and gums.

22 Homes should provide facilities for regular dental check-ups for older people with dementia and particular care should be taken to ensure that false teeth fit comfortably.

Physical activity

23 Older people with dementia should be encouraged to remain physically active, since walking strengthens and builds up muscle and bone, and increases calorie requirements, which in turn increases appetite. For example, where possible, individuals should be helped to walk around both indoors and outdoors rather than using a wheelchair. Chairbound people should be encouraged to do regular leg and arm movements.

Staff training and organisation

24 There is a constant flow of new information about dementia and the care of older people with dementia. Managers and staff therefore need regular training to keep up-to-date with new developments.

25 In all residential and nursing homes, managers and staff need to be trained to understand dementia and its effects and know how to manage dementia. They should also be familiar with other conditions, particularly depression, paranoia, anxiety and the side-effects of some medications.

26 Adequate numbers of staff should be available at mealtimes to ensure that older people with dementia have enough time and help to eat well.

27 Staff should make sure they relate to their residents and patients at mealtimes. Direct contact with older people with dementia is important, particularly when staff are helping individuals to eat.

28 Staff should be trained in how to help older people with dementia to eat. This training should include helping individuals to retain their ability to eat independently for as long as possible, and assisting those who can no longer eat independently.

29 Where staff are helping older people with dementia to eat, it is important that they are treated with dignity and respect. It is useful for staff to have experienced the process of being helped to eat themselves, in order to understand how best to help people in their care.

30 When older people with dementia are being helped to eat, the same member of staff should be present throughout the meal. As far as possible the same members of staff should be involved with the same residents or patients, as such contact brings benefits to both parties.

31 Residential and nursing homes should consider the benefits of staff eating their meals with residents and patients with dementia, both to support them in eating and to encourage social interaction. Consideration might also be given to involving relatives and friends at mealtimes and perhaps suitably trained volunteers.

32 Each residential or nursing home should develop a policy on standards of care for eating (see page 44).

33 Registration and inspection officers should look for management commitment to training of staff caring for older people with dementia. This is particularly important where a residential or nursing home applies for a variation in registration to enable them to provide accommodation for older people with dementia as staff may not have any experience of dealing with people with this condition.

34 NVQs and SVQs are important training opportunities. The information in this report should become an integral part of the course material within the relevant units. Other courses for those caring for older people with dementia should contain an appropriate section on nutrition and the relationship between staff, residents and patients at mealtimes.

Speech and language therapists, occupational therapists and dietitians

35 Speech and language therapists and occupational therapists should be consulted to ensure that appropriate assistance is offered in helping people to eat and drink.

36 In residential and nursing homes, residents, patients and staff need to have access to the expertise of speech and language therapists, occupational therapists and dietitians. This is not always widely available.

Layout and atmosphere of the eating environment

37 Particular attention should be paid to the layout and atmosphere of the eating environment of older people with dementia, to ensure that it is homely and congenial.

38 The eating environment for older people with dementia should be quiet and calm, with noise and other distractions kept to a minimum.

39 Some residents and patients with dementia may benefit from specially designed cutlery and other eating utensils. Care staff should ensure that residents are able to use the cutlery and utensils and that they are culturally appropriate. Care staff should ask for advice from a speech and language therapist or occupational therapist.

40 Some older people with dementia who cannot eat independently may prefer to have their meals in a different room or at a different time to others. Providing separate eating environments for those who can eat independently may improve the ability of this group to concentrate on their meals. However, each person's needs should be assessed on an individual basis and their preferences and those of others within the living group should be accommodated. For example, the more able will sometimes help those who have eating difficulties.

41 Eating environments should be designed to allow as many 'sensory cues' as possible. For example, the smells and sounds of cooking, and seeing food being prepared and cooked, can all help to stimulate the appetite. Food aromas can be particularly important.

42 Dining tables should be set up no more than 30 minutes before a meal, to avoid creating confusion among residents and patients with dementia.

43 Within or adjacent to the dining room, there should be a 'counter kitchen' - for example with a work surface and kettle - for residents or patients and their visitors to use. This should be separate from the main kitchen.

Design of new homes

44 Architects designing accommodation for older people with dementia should take account of their need for regular exposure to sunlight to maintain their vitamin D status. Safe gardens and sheltered seating areas are very important.

45 Architects should also incorporate design features which enable older people with dementia to move around safely indoors and to move easily to and around the dining room.

46 Design should encourage physical independence, for example, handrails to help with walking. Design should also enable easy access to lavatories.

47 Ideally older people with dementia should be cared for in small units of, for example, eight people. Where this is not possible, larger units should be divided into living groups with their own identified staff and space, including their own dining room. Each unit should have a counter kitchen (kitchen facilities separate from the main kitchen) which residents, patients and their visitors can use.

Chapter 2

Introduction

Background

It is estimated that there are 670,000 people with dementia in the UK.[1] Dementia can begin as early as age 40, although this is unusual. There are an estimated 17,000 people aged 40-65 with dementia.[1] The incidence of dementia increases significantly after the age of 65. About 2% of people in the UK between the ages of 65 and 75 have some form of dementia, and this is thought to rise to about 20% in the over-80s. Around 5,000 people over the age of 60 from ethnic minority communities are thought to have dementia.[2]

The next 20 years will see an unprecedented and continuous rise in the number of people in the UK in the over-65 age group: from 9.3 million in 1995 to 11.4 million in 2015. A proportional increase in the number of older people with dementia is expected, and it is estimated that by 2021 the number will have reached 900,000.[2] The care of older people with dementia, whether in residential or nursing homes or in specialist units, is becoming a major and urgent issue.

The care of older people with dementia, whether in residential or nursing homes or in specialist units, is becoming a major and urgent issue.

The nature of residential and nursing care has changed substantially since the implementation of the Community Care Act in 1993. Residents and patients entering care are now much older and frailer than they were before 1993. As the number of older people grows, and the more able are being encouraged to stay in their own homes, a higher proportion of those in residential and nursing homes and in sheltered accommodation are very frail and have dementia. It is estimated that at least 25% of residents in non-specialist registered care homes have dementia,[3, 4] and in some homes the proportion may be as high as 50%.

Hence, the majority of older people with dementia in long-term care are cared for in non-specialist residential and nursing homes. There is therefore an urgent need for staff training in **all** care homes so that staff can recognise, understand and serve the needs of this increasing population.

As the number of older people with dementia increases, more is being written about the diseases causing it, their progression, and the implications for older people with dementia, their carers and relatives. The issue of dementia remains, however, a subject where public and political awareness is low.

This report has been written mainly for those involved in caring for older people with dementia in residential or nursing homes. However, it is recognised that about 154,000 older people with dementia live on their own in their own homes, a figure which is set to rise to 245,000 by the year 2011.[5] Many of these people have community meals (meals delivered to their home or served in lunch clubs). Some of the practical suggestions in this report could be used by the people providing those meals.

Nutritional guidelines for older people

The rate at which people age and become frail or disabled is influenced in part by their genetic make-up. Factors such as nutrition, stress, alcohol use, smoking and physical activity also influence the rate of ageing. In addition, outside factors - for example, involvement in the local community or special interest group, hobbies, the family and social circle - all play an important part in maintaining physical and mental resilience and enjoyment of life.

In 1995, in response to the recognition that increasing numbers

of older people would be cared for in residential and nursing homes, The Caroline Walker Trust brought together an Expert Working Group to produce nutritional guidelines for the care of older people in residential and nursing homes (see page 30). The report, *Eating Well for Older People*, focused on the daily influence of diet and physical activity on the health of older people.[6] It recognised that food and eating bring a pattern to the day and facilitate social interaction, as well as providing essential energy (calories) and nutrients.

The nutritional guidelines in *Eating Well for Older People* were based on the report *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*[7] of the Committee on the Medical Aspects of Food Policy (COMA). *Eating Well for Older People* also drew on the findings of two other COMA reports: *The Nutrition of Elderly People*[8] and *The Nutritional Aspects of Cardiovascular Disease*.[9]

Why nutritional guidelines are needed for older people with dementia

While compiling the *Eating Well for Older People* report, the members of the Expert Working Group were acutely aware that they had not looked at the specific needs of older people with dementia who, it was felt, merited special consideration because of the link between weight loss and dementia and because of their poor nutritional status.

It was therefore agreed that a further Expert Working Group should be set up to examine the evidence on the influence of nutrition on older people with dementia, and to establish good practice for residential and nursing homes. The Working Group was set up, with the support of The Caroline Walker Trust and the Department of Health, under the aegis of VOICES, the umbrella group of voluntary organisations involved in care of older people. A full list of VOICES members is given on page 4. A list of the members of the Working Group is given on page 3.

The aims of this report

The aims of this report are:

- To improve the health and well-being of older people with dementia by improving their nutrition.
- To offer practical guidelines to enable caterers, matron/managers, cooks/chefs, residential and nursing home managers, and those who prepare community meals to provide good food.
- To provide examples of good practice in catering and in the presentation of foods.
- To discuss the design of eating facilities.
- To make recommendations about the staff training and staff support needed to encourage older people with dementia to eat well.
- To provide clear, referenced, background information on nutrition and dementia.
- To act as a resource document for all those working for better standards of nutrition for older people with dementia.
- To raise public and political awareness of dementia and the importance of good nutrition in the care of older people with dementia.

Who the report is for

This report is aimed at three main audiences:

- Owners, managers, catering staff, nursing staff and care staff in residential and nursing homes. The report is also appropriate for staff working in sheltered housing and day centres, and for those organisations which provide meals or staff for care accommodation.
- Policy makers, health and social services, registration and inspection units, health and safety authorities, journalists, writers and researchers who may wish to know more about aspects of the care of older people with dementia.
- Carers and relatives of older people with dementia to help them to ask for and achieve good standards of nutrition in homes where they may have relatives or friends.

We also hope that colleagues within the National Health Service, and those providing domiciliary care services and community meals will find the report useful.

Chapter 3

About dementia

What is dementia?

Dementia is a syndrome or umbrella term used to describe a characteristic pattern of symptoms and signs which occur together and are caused by a number of disease processes. The most straightforward and comprehensive definition is:

> "Evidence of a decline in memory and thinking which is of a degree sufficient to impair functioning in daily living, *present for six months or more*. Accompanied by a decline in: emotional control, social behaviour, motivation, higher cortical functions, and incorporating a chronic personality change."

This definition is taken from the International Classification of Diseases 9th revision.[1] Diagnosis of dementia is only made after careful consideration, as it is important to make sure that symptoms are not caused by other illnesses, such as depression.

A decline in memory and thinking means that there is a loss of ability to learn new information, and to recall information already learnt. There is a decrease in both the quantity and quality of thought and in the capacity for abstract reasoning. The person's world 'shrinks' and they become more self-centred. There is often a disturbance of communication, with difficulties in understanding spoken and written language, and difficulty in finding correct words or phrases. Another feature of the syndrome is a reduced capacity to carry out everyday activities such as washing, dressing, doing up buttons, tying shoe laces and doing routine household tasks. People also fail to recognise common objects, such as cutlery, kettles, cups and clothes. These features become more severe as the disease progresses.[2, 3] (See *Stages of dementia* below.)

One of the most marked features of any dementing illness is the change in emotional responsiveness. Indeed the person may undergo a personality change. There is also a disturbance in the person's ability to plan tasks and

Stages of dementia

Early	Mild decline
Complaints of memory loss and awareness of the early impairment of skills (The impairment of skills may not be seen at interview, but can be detected by neuropsychological testing and from the person's history.)	Problems finding words and names Anxiety, depression, irritability, early personality change Mild forgetfulness Abstract thinking and reasoning impaired; decline in planning skills Narrowing of interests and social withdrawal Some disorientation in time, or a feeling of being lost in what should be familiar surroundings Paranoid ideas may emerge Less knowledge of and interest in current events Judgement impaired

organise the structure of their day. People have difficulty in sequencing their behaviour. Most dementing illnesses start gradually, and there is then a progressive decline.

In addition, there are neurological changes which can significantly hamper the person's ability to function.[3, 4] These include increasing rigidity and tremor, slowness of movement and thought, visuo-spatial problems (for example, difficulty in judging distance or planning body movements, and general lack of coordination). Because of damage to specific areas of the brain, people's ability to chew and swallow may be affected, and some people develop choking and drooling, which can be particularly distressing both to themselves and their carers.

Causes of dementia

The most common causes of dementia are:

- Alzheimer's disease
- vascular dementia
- mixed dementia, and
- Lewy body disease.

Alzheimer's disease

Alzheimer's disease[5] is probably the most common cause of dementia in the western world. About half of those diagnosed with a dementing illness have this disease. Alzheimer's disease characteristically has a gradual onset with a progressive course and general deterioration. It is a specific condition and is not an inevitable consequence of the ageing process.

Vascular dementia

Vascular dementia[6] (sometimes called multi-infarct dementia) is caused by small or large bleeds in the brain. This is more common in men, mainly due to their higher risk of cardiovascular disease. The most common form of vascular dementia is characterised by sudden onset, stepwise deterioration, and periods of relative stability in between strokes. There is normally a past history of heart disease.

Vascular dementia differs from Alzheimer's disease in that people normally have a patchy loss of abilities, and may have relative preservation of their personality with marked short-term memory loss. Approximately 20% of people diagnosed with dementia have this condition.

Mixed dementia (Alzheimer's and vascular dementia)

Some people have a combination of Alzheimer's disease and vascular dementia. See above for an explanation of each.

Lewy body disease

Lewy body disease[7, 8] (also known as dementia with Lewy Bodies) may be a variant of Alzheimer's disease, and is often associated with Parkinson's disease. People with

Moderate

Moderate recent memory loss affecting daily functioning

Repetitive conversation and behaviour

Impairment of skills more widely evident, with or without awareness of the impairment

Emotionally changeable, or blunted emotional responses

Complex tasks poorly performed: for example getting dressed or using tools

Delusional beliefs become more common, eg paranoia

Moderately severe

Disorientation in time and place

Severe recent memory loss

Apathy or agitation may be prominent

Lack of self-care and ability to dress

Visuo-spatial problems (ie difficulty in judging distance, and general lack of coordination), and difficulty in performing simple tasks

Cannot function independently

Major gaps in knowledge of past and present life circumstances

Severe

Severe memory loss; largely unaware of current or personal events, experiences or surroundings

Fragmentary mental activity; cannot finish train of thought; speech becomes disordered

Unable to care for self

Often incontinent

Very severe

Major problems with language and understanding

Needs maximum assistance with all activities of daily living

Severe weight loss is frequently observed.

Generalised and focal neurological signs present (ie tremor, muscle wasting, lack of coordination and immobility), and the person often has seizures

Lewy body disease have hallucinations and delusions, and rapid mood swings. They may have periods of confusion and clarity. There is often a rapid deterioration, and early hospitalisation is common.

Other causes of dementia

Other causes of dementia are listed below.[9]

Dementia caused by infection
For example:
AIDS dementia complex
Encephalitis
Prion dementias
Syphilis

Frontal dementias
Including Pick's disease

Focal lobar atrophies

Head injury
Subarachnoid haemorrhage
Subdural haemorrhage

Other degenerative causes
Huntington's disease
Multiple sclerosis
Parkinson's disease

Normal pressure hydrocephalus

Alcohol-related dementia
Wernicke-Korsakoff syndrome

Exploding the myths

Our society has many myths about mental illness, especially the more serious mental illnesses.[2, 3] It used to be thought that dementia was simply a part of normal ageing, and that Alzheimer's disease was a cause of dementia under the age of 65, with a different disease somehow causing the same condition in people over the age of 65.

It is very important to recognise that dementia is not a normal part of ageing. It is caused by a number of diseases which occur in the brain. The progress of the condition and its manifestations are not under the control of the person with dementia, and behavioural problems often need careful explanation.

One of the many myths about dementia is that 'Nothing can be done.' A great deal **can** be achieved by early detection and diagnosis. It is important to make the correct diagnosis of the particular disease causing dementia, as the way the disease develops will be dictated to a large extent by this, and also by the personality characteristics of the person concerned. Counselling and explanation of the illness, both with the person and with their family or carers, can make an enormous difference to the amount of stress experienced, and can help people to understand the nature of changes taking place.

Common behavioural problems such as restlessness, agitation, insomnia and anxiety can usually be treated, either by behavioural therapy or with medication. Depression is very common among those with dementia, particularly in the early stages of the disease, but it can be successfully treated with antidepressants. Paranoid ideas and delusions are also common in dementia, particularly in the early stages. Once again, these symptoms can respond well to medical treatment. This treatment should be regularly reviewed.

Depression and dementia

It is often extremely difficult to differentiate depression from early dementia.[10, 11] The symptoms are often similar - poor concentration, feelings of anxiety, poor recent memory (often as a result of poor concentration), a lowering of mood and lack of emotional responsiveness. In both depression and dementia, motivation and initiative are impaired, self-care often declines as does appetite and range of interests. Both illnesses start in a gradual and subtle way. People are generally aware that 'something is wrong'. However, as there are no outward signs of illness, people are often bewildered about what is the matter with them. This is especially so for someone who has never had a depressive illness before. All the core features of dementia mentioned above can occur in depression and, if depression goes unrecognised, the symptoms can continue for several months, presenting as a dementia-like illness.

Some people have both depression and dementia.[11] However, it is extremely important to differentiate between the two, since treating depression allows cognitive function (reasoning power) to return to normal. If someone has dementia and depression, their cognitive functioning can be improved by treating their depression.

The impact of dementia on daily life

Dementing illnesses affect all aspects of daily life,[3] family relationships, and the ability to care for oneself and one's home, to interact with others, and to lead an independent life.

The **cognitive deficits**, such as forgetfulness, can cause people to miss important appointments, forget to eat or forget that food is being cooked, and can cause poor concentration and repetitive conversation. Misplacing items often leads to paranoid ideas and eventually to paranoid delusions.

The **neurological changes** such as slowing of movements, often accompanied by a general decrease in muscle tone, poor balance and sometimes a tremor, can make everyday tasks such as washing, dressing and cooking very difficult. Going outside the home can become hazardous and frightening. Frequent falls and lack of confidence outside can lead to further social withdrawal. Difficulty in judging distance and performing complex tasks such as tying laces or doing up buttons, peeling potatoes or preparing and eating food, cause

considerable practical difficulties in caring for oneself. Repeated falls and poor mobility are often a reason for admission to hospital, and a common cause of broken bones.

Mood and behavioural changes often cause severe stress to carers, and considerable distress to the person with dementia. People can become almost inconsolably anxious, restless and agitated, and may sometimes follow their carer around constantly, continually seeking reassurance. This is one of the most stressful behaviours for carers to cope with. The person with dementia finds it very difficult to cope with too.

On the other hand, some people can become very apathetic, with almost complete lack of motivation, and this can cause its own severe difficulties for those helping to care for them. Changes in emotional responsiveness, sometimes with irritability, depression, or a blunting of emotional responses, are all very difficult to understand and deal with.

Drugs which are commonly given to older people with dementia - sometimes to treat other medical conditions, or to treat anxiety, depression or paranoid ideas - can also have significant effects on the quality of life of the person with dementia and their carers.[12]

Many drugs which may be given for behavioural problems can cause drowsiness, and people are often very sleepy during the day, causing them to miss meals. Daytime sleepiness often leads to wakefulness at night, with insomnia for their partner. Sedation can also cause unsteadiness and falls, and often a fractured leg is a life-threatening event for someone with dementia who is already frail.

Some drugs also cause a dry mouth and difficulty in swallowing, or problems with urination and constipation. These can lead to increased agitation, anxiety and extreme discomfort.

Social activities

Activities of a socially appropriate therapeutic nature can lessen the impact of dementia on daily life, both for the daily routine of the person with dementia and their carers.[3] Appropriate social stimulation can help orientate someone to their surroundings and to time, and can improve self-care. Mental stimulation can help improve memory and social functioning. Loss of conversation, of companionship and of interest in food are some of the most difficult aspects of a dementing illness for a carer or spouse to cope with.[13]

The effects of dementia on eating habits

The effects of dementia, as described above, have a serious impact on people's eating habits. The box on the right lists some of the common behavioural and physical changes which are associated with dementia and how these may influence food choice and food intake.

A number of other factors associated with dementing illness may also affect eating habits. For example, medications may add to difficulties with swallowing or chewing or simply make the person too drowsy to eat.[14]

Some behaviour patterns reported among older people with dementia may also affect eating habits, although these behaviours may be less common. They include: insisting on having the same food at every meal;[15] refusing food because they do not believe they can pay for it;[16] hoarding food in the mouth but not swallowing it; not chewing food before swallowing; eating pieces of food which are too large; spitting food out; eating non-food items and expressing unusual food choices;[17, 18] and using condiments incorrectly.[19]

Chapters 6 and 7 give some practical suggestions to help people overcome some of these dementia-associated eating problems and achieve an adequate diet.

Older people with dementia are all individuals and will experience the progress of the disease in different ways. Therefore helping people with dementia to eat well means knowing about each individual's food preferences and eating abilities and regularly monitoring them. Continuous assessment of eating behaviour is important. An example of a mealtime behaviour assessment chart, which also offers practical suggestions for intervention, is given on page 45.

Characteristics associated with dementia which may affect eating habits

Practical/physical changes

The person may:
- be unable to use cutlery
- have problems with tremor or lack of coordination in getting food to their mouth
- be unable to unwrap or unpeel items
- be unable to sit for meals
- be extremely slow in eating.

Physiological changes

The person may:
- lose their sense of smell and taste
- lose their appetite
- have difficulty swallowing
- be unable to chew
- have mouth or tooth pain
- show a preference for sweet foods.

Emotional/cognitive changes

The person may:
- be distracted from eating
- forget to eat or forget having eaten
- have difficulty making choices
- eat food with their hands
- be unable to communicate hunger or thirst.

Changes associated with depression/paranoia

The person may:
- lose interest in eating, or eat constantly
- be suspicious about food
- refuse to eat.

Adapted from Hall[15]

Chapter 4

Nutrition and dementia

How the body changes with ageing

Many people remain well as they get older, but they undergo:

- changes in organ systems, and
- changes in body composition and in metabolism.[1, 2]

These changes happen at very different rates in different people. Older people may also have more frequent episodes of ill health and take longer to recover from illness. A good diet and physical activity are essential to help minimise potential health problems.

Changes in organ systems

Disorders affecting the digestive system, heart and circulation, endocrine system, kidneys, brain and nervous system become more common. The senses of sight, hearing, taste and smell may also deteriorate.

Changes in body composition and metabolism

As people get older, they are usually less active and therefore use up fewer calories.[1, 3-5] Muscle fibres may get weaker, and bone loss accelerates.[6] Older people tend to lose muscle and their proportion of body fat increases.[7] Energy expenditure decreases progressively with age, even if the person does not have any illness.[1] However, the energy (calories) needed to carry out any activity increases as people get older.[8]

It is quite normal for people - of any age - to eat less food if their calorie requirements fall. However, at low levels of calorie intake, as less food is eaten, there is a greater possibility that the intake level of some nutrients in the diet will become dangerously low, and this is a particular problem for older people with dementia. In addition, low levels of physical activity lead to muscle loss, weakness and bone loss. Weak muscle power can make some older people feel unsteady on their feet, and fear of falling may put them off trying to be more active. Or they may indeed fall and have a fracture.

As less food is eaten, there is a greater possibility that the intake level of some nutrients in the diet will become dangerously low. This is a particular problem for older people with dementia.

Nutritional concerns in older people

Many of the problems associated with poor nutrition among older people apply equally to older people with dementia. This report looks first at the nutritional concerns for older people generally, and then examines some specific areas of concern for older people with dementia.

Despite the lower energy expenditures and subsequent lower energy requirements of older people, the main concern in the UK is that many older people are not eating enough to maintain good nutrition.

Studies have shown that many older people are getting less than the required amount of some vitamins and minerals, particularly vitamin C, B vitamins and vitamin D,[9] and recent evidence suggests that folate intakes are commonly low.[10]

Undernutrition is common in certain groups of older people - especially those living in residential and nursing homes - and among those with dementia.[11] The *National Diet and Nutrition Survey of People Aged 65 Years and Over* found nutrient deficiencies in a proportion of elderly people in residential homes or sheltered accommodation, particularly in vitamin D, vitamin C, folate and iron. (For more on vitamin D, see next page.) More than 30% of people in residential homes or sheltered accommodation fell

Effects of undernutrition

Physical effects

Increased risk of infection
Poor wound healing
Prolonged complications after an operation
Skin problems and sores
Breathing difficulties
Musculo-skeletal difficulties including weakness, poor mobility and poor coordination
Cardiac difficulties
Increased illness and disease, and mortality

Social and psychological effects

Apathy
Confusion
Memory loss

Adapted from Henderson[14]

Nutritional concerns in older people with dementia

Older people may suffer from undernutrition whether they have dementia or not. However, there are some specific areas of concern for older people with dementia. These include:

- inadequate energy intake
- inadequate protein intake
- inadequate intake of some vitamins and minerals, particularly vitamin C, the B vitamins and folate, and
- dehydration.

(For information on the importance of energy and other nutrients, ie vitamins and minerals, for good health, see Appendix 1.)

Inadequate energy intake

Inadequate energy intake (not getting enough calories) has been found in as many as 50% of people with dementia in nursing or residential homes or in hospital.[20, 21] Signs of inadequate energy intake have also been reported as very common among nursing home patients with dementia.[22, 23] Insufficient total food intake is likely to lead to deficiencies of both energy and protein.

Inadequate protein intake

It has been suggested that the protein requirements of chronically

into the range associated with a deficiency of either minerals or vitamins.[12] The same survey indicated that significant numbers of older people in institutions are anaemic.[12] Although there are many causes of anaemia, one of the most important is iron deficiency.

For older people, being underweight and poorly nourished poses a far greater risk to health than being overweight.[13] The health risks associated with undernutrition include: muscle wasting and loss of muscle strength; impaired functioning of the nervous system; slow wound healing and a lowered immune system associated with frequent infections; apathy; confusion; and a poor quality of life.[14] (See *Effects of undernutrition*, above.) Studies have also shown that older people who are underweight have a shorter life expectancy.[15, 16]

For information about common health problems that can be improved by diet, see chapter 5.

Vitamin D

Vitamin D is essential for calcium absorption, and for healthy bones and muscle strength. Lack of vitamin D contributes to bone disorders leading to bone fractures, including hip fractures, and bone pains.

It is very difficult for people of any age to get enough vitamin D from diet alone. For younger people who go out more, the action of summer light on skin can produce enough vitamin D for most adults' needs. With age, the skin becomes less efficient at making this vitamin. Also, older people are less likely to spend time outside, and when they are outside they tend to wear thicker clothing or sunblock.

Older people who do not have regular exposure to direct sunlight on their skin during the summer months are at risk of osteomalacia (the adult form of rickets). Blood levels of vitamin D can be restored to normal either by exposure to the sun or by taking vitamin D supplements.[17] However, vitamin D in high doses is dangerous so it is important to keep to the recommended amount of 10 micrograms a day (see page 56).

Is there a link between vitamins and minerals and cognitive function (reasoning power)?

Further research is needed about whether low intakes of vitamin B12 and folate can contribute to decreases in cognitive function.

A Canadian study of people with dementia showed a relationship between vitamin B12 status and severity of cognitive impairment.[18] However, it has been suggested that this is not due to low intakes of the vitamin but possibly due to cellular changes, caused by the dementia, which make it harder for the body to absorb B12. Some studies have found a significant relationship between folate status and cognitive function in older people.[19] Both these findings suggest that particular care should be taken that intakes of these vitamins are adequate.

ill older people - in terms of protein per kilogram of body weight - are closer to the higher requirements of a school age child than to those of an adult.[24] Protein intake is an important factor as protein is required for body building and repair.

Inadequate intake of vitamins and minerals

Older people with dementia are more likely to be deficient in certain vitamins and minerals than other older people.[25] Some studies have found that, compared to other older people, those with dementia are more likely to have low levels of folate and lower blood levels of zinc, vitamin B12 and iron.[25-27] Poor folate and vitamin C status among people with dementia can be particularly attributed to a lower consumption of fruit and vegetables.[28]

Dehydration

People who cannot communicate that they are thirsty, or who forget or refuse to drink, may have such a low intake of fluid that they become dehydrated. Dehydration may cause headaches, confusion, irritability, constipation, loss of appetite and urinary tract infections. Loss of body water influences several body functions, including swallowing, which may affect food and fluid intake.[11]

Thirst is thought to be caused by the concentration of sodium in the blood rather than by dryness in the mouth and throat. It is very difficult to assess thirst among people with severe dementia, although this is an important aspect of the person's quality of life.[29]

It is suggested that older people should drink a minimum of 1.5 litres of fluid each day (equivalent to about 8-10 teacups).[9]

Many older people with dementia, and their carers, believe that restricting fluids will help to relieve urinary incontinence but in fact the opposite is true.[30] Fluid restriction can lead to constipation as well as dehydration.

Other age-related factors which can affect food intake

As discussed in chapter 3, there are many factors - social, pyschological, physical and economic - which may affect the eating habits of older people with dementia. Some of these are also associated with age, and may have a significant impact on food and fluid intake.

Older people with dementia may gradually become undernourished. For example, a bout of depression may lead to a decline in appetite and food intake, a fall in body weight, physical weakness and inactivity and a higher level of dependency. Lack of movement increases the risk of pressure sores which in turn compromise nutritional status. However, despite the many factors which may affect nutrition, poor nutritional intake may often be due to people not being given enough time to eat, lack of staff available to help people to eat, or to poor, unappetising food.[31]

Many people believe that restricting fluids will help to relieve urinary incontinence but in fact the opposite is true.

Practical nutritional guidelines

Practical nutritional guidelines for the provision of food for older people in residential and nursing homes and for those receiving community meals were published in *Eating Well for Older People*.[9] These nutritional guidelines, which apply equally to older people with dementia, are given on page 30.

Dementia and weight loss

Is weight loss among people with dementia inevitable?

People with dementia are often very thin. The dementia itself may cause unexplained weight loss but it is more likely to be due to not eating enough (inadequate food intake), for which there are many causes. For some people, weight loss may be due to the increased energy (calorie) requirements caused by pacing constantly. Illnesses due to infections are commonly associated with reduced food intake and a vicious cycle may develop between undernutrition and infection, with patients increasingly unable to 'bounce back' between infections.

Medication can also influence appetite and food intake. In many people weight loss is particularly associated with being unable to eat unaided. Difficulty in swallowing is a major cause of low food intake among those in the advanced stages of dementia. The evidence for the role of all the above factors in dementia-associated weight loss is reviewed below.

It has been suggested that weight loss among older people with dementia could be avoided if appropriate help is given with eating,[32] and that an increase in energy and protein intakes can lead to weight gain.[33] This suggests that, regardless of the causes of weight loss in dementia, the trend towards weight loss can be reversed by increasing food intake.

Weight loss due to inadequate food intake

Not eating enough is the most likely cause of weight loss among the majority of older people with dementia.

Factors which may affect food intake have been discussed in chapter 3. For example, older people with dementia may become less able to shop for and prepare food in the earlier stages of the disease, and they may become less able to use utensils and to eat

independently as their dementia progresses. The specific food and eating related problems of people with dementia make it particularly hard to keep accurate records of food intake.

Some studies of older people with dementia have suggested that low body weight cannot be explained by low energy intake[34-36] but it has also been reported that energy intakes failed to meet requirements by 200kcal/day among non-agitated patients and by 600kcal/day in agitated patients with dementia.[37] One study reported that the significant indicator for weight loss among people with dementia was a gradual loss of ability to eat independently.[38] Another also found a significant link between ability to eat independently and weight loss.[39]

> Not eating enough is the most likely cause of weight loss among the majority of older people with dementia.

Weight loss due to increased energy requirements

It seems plausible that those older people with dementia who continuously wander or rock themselves may need more energy (calories). However, this has not been confirmed in all studies.

Some studies have investigated whether older people with dementia need more energy but their findings are not consistent. One UK study, which used a very reliable method of measuring energy expenditure among older women with dementia or depression, found that across the whole group severe thinness was not caused by an excessive energy requirement. However, individuals in this study did have high levels of energy expenditure.[40]

It is likely that, for a proportion of older people with dementia, increased physical activity significantly increases energy requirements, although this may not be evident among a larger population of people at differing stages of the disease. One study suggested that the small number of residents classified as 'wanderers' used on average 600kcal a day more than they consumed,[37] while another estimated that constant pacing increased energy demands by 1,600kcal a day.[41]

Infection and weight loss

It has been estimated that, at any one time, 15-20% of nursing home patients have an infection, usually of the urinary tract, respiratory tract, skin or eye. These infections are often linked to malnutrition.[11]

People who are recovering from an infection require increased intakes of energy and nutrients to repair tissue. Under normal circumstances increased food intake repletes energy and tissue stores. Those with dementia may not be able to eat enough food voluntarily to replete stores, and this can lead to a loss of body mass. Each new infection leaves the person in a progressively poorer state nutritionally and this, in turn, makes the individual more susceptible to infection.[21]

It has been suggested that when an individual continues to lose weight despite what appears to be an adequate energy and protein intake, it may be that the person's energy needs are increased to meet the body's response to the infection.[40] One study of a group of people with Alzheimer's disease found that the degree of malnutrition was linked to the number of infectious illnesses over the previous six months.[22] Similar results were found in a study of older people with dementia.[42]

Pressure sores which may develop due to immobility are significantly associated with malnutrition.[43] They also increase requirements of nutrients such as protein, zinc and vitamin C for tissue repair, making this a particular problem in an undernourished person.

Weight loss as a symptom of dementia

It has been suggested that weight loss may be a symptom of dementia, which may be caused for example by a brain lesion affecting appetite, functional changes at a cellular level, or changes in body composition.[44] There is some evidence that changes in brain function may affect eating behaviour in people with dementia.[45, 46] However, it has not been possible to prove that people lose more weight the longer they have dementia, or the more severe their dementia becomes, suggesting that these factors may be relatively unimportant. A question mark remains over the role of metabolic changes in weight loss in dementia.

There is evidence that people with Alzheimer's disease are more likely to be thinner than those with vascular dementia.[22, 36] In one study of hospital patients, those with Alzheimer's disease were 14% lighter than those with multi-infarct dementia.[36] It has been suggested that people with Alzheimer's disease lose on average 5kg a year once institutionalised compared to an average loss of 1kg a year among those with multi-infarct dementia.[22]

Weight loss due to depression

The effects of depression on appetite have been discussed on page 16 and it has been noted that changes in appetite and consequent weight loss are commonly found in people with depression. It is therefore worth examining studies where older people with dementia and depressive symptoms are separated from those with dementia alone.

One study of elderly outpatients with and without dementia reported that dementia was associated with a lower body mass index (BMI) which was not related to depression.[38] Another study, which examined several factors that may account for weight loss in 'free-living' people with Alzheimer's disease (ie people living at home rather than in hospitals or residential or nursing homes), also found that weight loss was associated with dementia regardless of depressive state.[39]

Medication and weight loss

Prescription and over-the-counter drug use among older people is high and drug use may influence appetite, food intake and body weight. Some drugs can cause loss of appetite and some cause an adverse response to food such as nausea (see box below).

Commonly used drugs and how they may affect appetite and food intake

Drug	Possible side-effect
Antipsychotics and sedatives	Dry mouth, loss of taste, less sense of smell, unpleasant taste in mouth, constipation, restlessness, disinterest in food, sleepiness, akathisia (physical and mental restlessness), stiffness, increased appetite
Some drugs used to control high blood pressure (eg Captopril)	Dry mouth, loss of taste, constipation
L-Dopa (used to treat Parkinson's disease)	Anorexia
Lithium	Dry mouth, metallic taste, nausea, increased thirst, apathy
Tricyclic anti-depressants	Dry mouth, sedation, restlessness, constipation, increased appetite
SSRIs (selective serotonin reuptake inhibitors) (antidepressants)	Nausea, heartburn, altered bowel habit (constipation or diarrhoea), loss of appetite, drowsiness, restlessness

Other factors which may contribute to weight loss

Forgetting to eat has been suggested as a cause of weight loss among older people with dementia.[47] However, one study found that this was an unlikely cause of significant weight loss in people with dementia in care settings since equivalent changes in weight are not observed in people with memory loss due to other causes such as head injury.[48]

Swallowing difficulties may also contribute to poor food intake (see page 26).

Monitoring weight loss

All older people with dementia entering a residential or nursing home should have their food and fluid needs assessed in the first week after admission and should be monitored regularly thereafter.

It is important to monitor nutritional status among older people with dementia by means of an accurate weight record, and to follow up changes in weight promptly.

Significant weight loss in older people is considered to be 5% of body weight in one month, 7% in three months, or 10% in six months.[49] It is suggested that a 5% weight change over a one-month period should be a trigger for follow-up.[50] A current weight of 75-84% of usual weight can suggest that there is a moderately poor intake of protein and energy; less than 75% indicates a severe problem.[51]

It is recommended that all residential care establishments should have weighing scales - preferably sitting scales - for carrying out monthly weight checks. The scales should be checked regularly.

The weight of each resident or patient should be recorded in his or her care plan at least once a month. However, constant monitoring of older people with dementia by care staff is essential. Unintentional weight loss or gain of 3kg (7lbs) or more should be referred immediately to a doctor and/or a dietitian. Action proposed following such a referral should be recorded in the care plan and monitored regularly.

Weight gain among older people with dementia

Overeating, or hyperphagia, is a marked phenomenon among some older people with dementia.[53] In many of them, this behavioural consequence of the disease will lead to weight gain. It is thought that the tendency to overeat is due to a specific brain abnormality. There is evidence that the foods chosen by people who overeat are often high in carbohydrate. While overeating may be a temporary change in behaviour, in some cases it can lead to rapid weight gain. This is undesirable on health grounds as well as leading to practical difficulties in looking after very heavy patients.

When is a medical screening recommended?

The chart below shows the minimum weights below which a medical screening is recommended. However, it is also essential to look out for unintended weight loss or gain of 3kg (7lbs) or more (see *Monitoring weight loss*, on this page).

	AGE	WEIGHT
WOMEN	65-74 years	50kg (7st 12lb)
	75 years or more	45kg (7st 1lb)
MEN	65-74 years	57kg (9st)
	75 years or above	53kg (8st 5lb)

If a person is unduly tall, a few kilograms should be added to these values.

Source: Lehmann[52]

Nutrition and physical activity among older people with dementia

A number of studies have shown an improvement in mental and physical capabilities and well-being with regular exercise.[54-56] Physical activity also appears to enhance appetite, improve the quality of sleep, alleviate depression, reduce disruptive behaviour and provide a feeling of accomplishment.

One study recommends regular physical activity each day, where appropriate, to include stretching, strengthening and balancing exercises as well as aerobic activity.[54] Activities should be kept simple and be familiar. Repetitive activities may be particularly suitable.

Can good nutrition help older people with dementia?

Good nutrition can benefit older people with dementia in a number of ways. Being underweight is linked with a shorter lifespan among elderly people[15] and those with dementia.[22] Therefore any impact on the downward spiral of malnutrition is of obvious benefit. Many of the problems associated with inadequate protein and energy can be prevented if adequate nutritional intake can be achieved, and this may be particularly important in improving a person's quality of life.

Although the use of vitamin supplements among older people with dementia has been shown to increase biochemical values,[27] it is not clear whether these are actually beneficial in every case. It has been suggested that malnutrition aggravates the mental deterioration that characterises dementia.[57] Folate and vitamin B12 in particular may be of potential benefit in the treatment of very early dementia since these vitamins are important in a number of metabolic pathways in the central nervous system. Deficiencies of folate and vitamin B12 may result in a variety of mental symptoms, especially changes in mood and cognition. Studies in which supplements of energy, protein and multi-vitamins were given have shown some relationship between use of supplements and improved well-being. However, it is currently unclear whether cognitive defects can be reversed with B12 or folate replacement therapy.[18]

Adequate energy intake is a critical factor in ensuring good nutrition. In order to achieve an adequate intake of vitamins and minerals, a varied diet is essential.

Recommendations

- Particular attention should be paid to the energy needs (ie the calorie requirements) of older people with dementia. These needs should be assessed on an individual basis.
- Within the first week after admission to a residential or nursing home, each older person with dementia should be weighed and have his or her food and fluid needs assessed. These needs should be monitored and regularly reviewed. A specific review after one month would be useful since by then the person will be better known to staff.
- All residential and nursing homes should have weighing scales, preferably sitting scales, for monthly weight checks. These scales should be checked regularly.
- The weight of each resident or patient should be recorded in the person's care plan at least once a month. Anyone with a recent unintended weight loss or gain of 3kg (7lbs) or more should be referred for assessment by a health care professional. Any action recommended following such a referral should be recorded in the care plan and monitored regularly.
- Managers and care staff in residential and nursing homes should be aware that an adequate fluid intake is essential to prevent dehydration and to aid regular bowel movements. To ensure an adequate liquid intake, older people with dementia should be encouraged to drink 1.5 litres (8-10 cups) of fluid each day.
- Managers and care staff should also be aware that restricting fluid intake does not reduce problems associated with incontinence. Drinks should be offered regularly throughout the day.

Chapter 5

Common health problems: how a good diet can help

Undernutrition can contribute to a number of health problems in older people, including those with dementia. Problems may include constipation and other digestive disorders, anaemia, muscle and bone disorders, mouth problems and swallowing difficulties. This chapter gives further details about these problems and about how a good diet can help.

Constipation and other digestive disorders

Constipation plagues and perplexes many older people. One in five older people in Britain has a problem associated with constipation which impairs their quality of life, particularly if their mobility is affected.[1] Constipation may be caused by poor intakes of dietary fibre, inadequate fluid intake and sometimes as a side-effect of medication.

Constipation is most common in those who are very old and frail, and therefore likely to be living in residential or nursing homes or hospital.[2] Most at risk are those who do not do enough physical activity, those confined to bed, and those who have severe difficulties in moving and getting about.

Constipation is a particular problem among older people with dementia since chronic disease, change in food habits and psychological distress all contribute to constipation.[3] They may be unable to indicate their need to go to the toilet, they may forget where the toilet is, or they may fail to remember when they last opened their bowels.[3] Chronic constipation is often treated with laxatives. Over-use of these can lead to dehydration and mineral imbalance, particularly potassium deficiency.

Diverticulosis can be another problem. This is a condition where pockets develop in the bowel wall, which can become infected and cause pain and changes in bowel movements. It is common in old age and is perhaps linked to a life-long diet too low in fibre. A diet with adequate fibre content can help prevent diverticulosis.

Low fibre intake, which is common among older people who have no teeth or who have poorly fitting dentures, has been shown to lead to gastrointestinal problems.[4] It is therefore important to maintain adequate fibre intake.

What can help

An adequate intake of fluid is essential in preventing constipation: 8-10 teacups of fluid a day are recommended.[5] Adequate intake of fibre, and increased physical activity,[6] can also help to prevent constipation. Sources of fibre are: whole grain cereals (found for example in wholemeal bread), whole grain breakfast cereals, pulses (peas, beans and lentils), fresh and dried fruit, vegetables and salads. For people who have difficulty with chewing, fruit and vegetables, for example, can be pureed or made into soups.

An adequate intake of fluid is essential in preventing constipation: 8-10 teacups of fluid a day are recommended.

Older people with gastrointestinal problems should have regular meals and snacks with an adequate fibre content, and enough fluid. Those known to have bowel or malabsorption disorders (difficulty absorbing nutrients) are likely to need expert advice from a doctor and/or a dietitian.

Raw wheat bran should not be added to the diet unless it has been recommended by a doctor or dietitian. Although raw wheat bran is high in fibre, it contains phytates which interfere with the absorption of important nutrients such as calcium and iron, and can cause bloating, wind, pain and loss of appetite.

Anaemia

There are several different causes of anaemia. A common cause is internal blood loss, for example

into the bowel. Many diseases and some medicines can cause small, repeated losses of blood, and a dietary cause should only be diagnosed after other causes have been excluded.[7]

Anaemia may be caused by insufficient dietary iron, especially if little meat or oily fish is eaten. It can also be caused by a diet deficient in folate. In older people, folate deficiency is common and is one cause of anaemia. Low folate intakes are particularly associated with diets low in fruit and vegetables, and older people with dementia have been shown to have lower intakes of these foods.[8] Older people who live alone, are depressed, drink too much alcohol or have dementia are at particular risk of folate deficient anaemia.

Pernicious anaemia is a disorder where vitamin B12 is not absorbed from food. This condition is treated with injections. One of the problems with anaemia among older people is that its progress is so slow that increasing paleness and tiredness are often not recognised. If the condition is left untreated, the person may eventually be found to have a very low haemoglobin level which will probably have impaired their well-being for months if not years.

What can help

To help prevent anaemia, all older people should be encouraged to eat iron-rich foods such as liver, kidney, red meat, oily fish, pulses and nuts (including nuts which have been ground for use in cooking). A food or drink rich in vitamin C, taken at the same meal, may help the iron to be absorbed.

All older people should also be encouraged to eat folate-rich foods such as Brussels sprouts and other green leafy vegetables and salads, oranges and other citrus fruits, liver, fortified bread, fortified breakfast cereals and yeast extract. Yeast extract provides a significant amount of folate even if only small quantities are eaten. (See Appendix 2 for other sources of iron and folate.)

Iron preparations should only be given if prescribed by a doctor.

Muscle and bone disorders

Over four million adults in Great Britain are affected by disabilities which hinder moving and getting about. Almost two million of them are 75 or over.[9] Nearly half of over-75-year-olds have such disabilities,[9] usually caused by disorders such as osteoarthritis, osteoporosis, osteomalacia (the adult form of rickets) and stroke.

Physical activity is extremely important for improving muscle strength and may also help to strengthen bone, thus helping to prevent falls which can cause fractures, including hip fractures which are particularly debilitating.[10, 11] In the case of osteoporosis, there is debate about whether taking additional calcium in older age will help prevent the disease, or whether it is too late because the major causes of decalcification are present earlier in life.[12-14] However, it is generally agreed that it would be sensible to ensure that all older people have an adequate calcium intake.[15-17]

Vitamin D is essential for maintaining bone and muscle strength. The main source of vitamin D for most people is that formed in the skin by the action of sunlight. However, exposure to the sun is limited in housebound older people, and the sunlight in the UK between October and April is not strong enough for synthesis of vitamin D. Furthermore, the ability of the body to convert vitamin D to its active form is impaired with ageing. As few foods contain vitamin D, it is unlikely that diet alone can provide adequate amounts of this vitamin. About 40% of people in residential accommodation have vitamin D levels in their blood which are well below those needed for health.[18]

About 40% of people in residential accommodation have vitamin D levels in their blood which are well below those needed for health.

What can help

Encouraging older people to take regular physical activity, such as walking, is important as this strengthens and builds up muscle

and bone, and increases calorie requirements, which in turn increases appetite.[19] Residential or nursing homes may wish to organise chair-based music to movement sessions, where residents do arm and leg exercises while sitting in a chair. *More Active, More Often* is a useful video on how to set up such sessions.[20] Chairbound people should also be encouraged to do regular leg and arm movements. Staff in residential care accommodation can help residents do things for themselves, rather than doing jobs for them. People who have suffered injuries or who have been ill should be encouraged to regain mobility as they recover.

It is sensible for all older people to eat foods that are high in calcium, for example milk and cheese, or foods made with these products, such as milky drinks, custards, and milk-based sauces.

Measures either to give older people more access to sunlight or to give vitamin D supplements,[21, 22] particularly to cover low levels of vitamin D in winter,[23] could help reduce the large numbers of hip fractures and other bone problems in old age by 25%.[24] Appropriate levels of supplementation are given on page 30. Levels of supplements taken should be monitored since excessive intakes of vitamin D are dangerous, causing excessive calcium absorption.

Architects designing accommodation for all older people should be encouraged to take account of the need for residents to have regular exposure to sunlight. Features could include sheltered alcoves on the south side of buildings, and well-paved paths with hand rails and no steps. Exposure to direct sunlight is important: seating people in a conservatory or behind a window will not improve their vitamin D status.

Mouth problems

Most older people either have no natural teeth and depend on false teeth, or have fewer than 20 natural teeth. The goal for oral health for older people is to have at least 20 teeth, 10 in the top and 10 in the lower jaw, free from pain and discomfort. People who do not have their own teeth are more likely to have poor nutritional status.[25] Those with dementia who find it difficult to manage their dentures may be particularly affected.

False teeth should be comfortable and well-fitting. If someone has lost weight, their dentures may no longer fit well and may need to be adjusted or replaced. Dentures should also look good, and should allow the wearer to bite and chew all types of food. People who cannot chew properly are less likely to eat high-fibre foods such as fruit and vegetables, thereby risking constipation and reducing their intake of essential nutrients.[4]

Good oral hygiene after meals is important for older people, whether they have teeth or not. Some people may deliberately avoid foods which stick to their teeth or to their dentures if they know that they are not going to be able to clean their mouth or dentures after eating. Some older people with dementia may 'pouch' food in their cheek, which can lead to poor oral hygiene.

Mouth care is important for all older people in care. If people have their own teeth they need to be cleaned well to prevent tooth decay and mouth infection. If they have no teeth, mouth care is essential to prevent infection and irritation and to provide comfort. Older people with dementia may have particular problems with the use of dentures and in some cases it may be more appropriate to encourage them to eat without dentures.

Mouth ulcers may be more common among older people and some people may have problems in producing enough saliva, leading to a dry mouth. This makes eating and swallowing difficult and sometimes painful. Thrush can also cause mouth pain. The symptoms of thrush are white patches on the inside of the cheeks and on the tongue. All these conditions need professional assessment and can usually be improved.

What can help

Toothcleaning can be improved by using a small-headed toothbrush which is easy to handle.

All older people should have a full dental check-up when they first enter a residential or nursing home. Facilities are needed to take the person to the dental surgery when appropriate. Alternatively, community dentists could bring their equipment to the home for routine check-ups.

Special attention should be given to sensitivity and discomfort of the teeth and mouth, as these conditions can restrict choice of food and lead to loss of social confidence.[26]

Thrush can be treated with an anti-fungal mouthwash.

Replacement of missing teeth should be limited to front teeth and pre-molars (the middle teeth), to enhance chewing and self-esteem. Badly fitting dentures could be relined rather than replaced with new ones, which older people may find it difficult to adapt to.

Useful extra information on dental care can be found in the Relatives Association publication *Dental Care for Older People in Homes*.[26]

Swallowing difficulties

Some older people with dementia have a delayed or diminished swallow reflex. This may make it difficult for them to eat chewy foods and to drink liquids. Lack of coordination in chewing and swallowing can result in choking.

Choking should not be confused with coughing. Coughing is a defensive reaction to particles of food or fluid starting to enter the larynx. These particles are expelled rapidly by the action of the vocal cords. Coughing is a normal reflex

What to do if someone chokes

Some people with dementia may pouch food in their cheeks and forget it is there. Inhaling pouched food (bolus) is a common cause of choking. If this happens ...

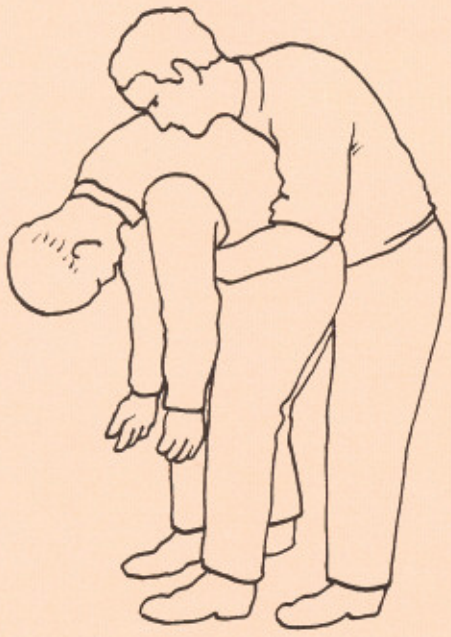
- Try to remove any loose bolus of food from the mouth. Call other staff for help. (If the person resists, he may injure you, rendering you unable to help. Also, other residents may try to stop you if they misunderstand your intentions.)

- If the person is wearing dentures, remove them. (The person may not understand that you are helping and in fear may bite you.)

- Stay calm. Talk to the person and reassure him. Encourage big deep coughs rather than shallow irregular ones if possible. Then begin the Heimlich Manoeuvre.

The Heimlich Manoeuvre

Stand behind the person and put your arms around the body at the level of the pit of the stomach, just at the bottom of the ribs. Put your two hands together as one fist, and draw up sharply and hard in a sort of 'bear hug' to dislodge the food. Repeat if necessary.



When the episode is over, try to reassure in a calm voice. The experience of choking is a very frightening one. Try to work out what caused the choking so that a similar incident can be prevented in the future.

While staff should supervise mealtimes and be aware of how to respond to a choking incident, it is important to remember that such episodes are rare. For most people, a textured soft diet is sufficient preventative action against choking.

and although it may be a symptom of a swallowing difficulty, occasional coughing is not usually a cause for alarm. Choking is the inability to breathe normally because of an obstruction in the airway. A person who is choking fights for breath, the face changes colour and they may lose consciousness.

A recent experience of choking that is severe enough to hinder breathing can lead to great anxiety among people with swallowing difficulties, and staff need to be aware of the reassurance and patience that may be needed. Severe anxiety may need treatment. Choking can be a very frightening experience for unprepared and untrained staff. It is therefore important that all staff working with older people should be trained in what to do if someone chokes. (See box on the left.)

Altered texture foods (for example pureed foods) can be invaluable in reducing the risks associated with coughing on liquids or inappropriate solid foods.

The type and especially the consistency of foods are very important when helping an older person with dementia to eat safely. Aspiration of foods (accidentally 'breathing them in') is extremely hazardous and can lead to suffocation. Fluids are a danger to people who have swallowing difficulties; these can be aspirated too, sometimes without causing coughing.

Paralysis or weakness of the face after a stroke may also make eating difficult, resulting in food being 'pouched' in one cheek. It is therefore essential to check oral hygiene.

What can help

Any swallowing difficulty needs to be investigated. People who complain of, or who are seen to experience, painful eating or swallowing should always be assessed swiftly so that the difficulty can be managed appropriately. A speech and language therapist will be able to assess problems with swallowing and make suggestions

about the appropriate texture of food and drink to offer, and ways to help someone eat or drink it. The role of the speech and language therapist in helping people to eat is discussed in chapter 7.

It is essential that the person with a swallowing difficulty gets enough calories and nutrient-rich foods. Adding water to food, for example in order to mash it, will increase the volume of the food, with the result that the person may not be able to eat as much of it and may not get enough calories. Adding a thickening agent (for example modified cornstarch) can help to ensure that food is presented in an acceptable texture (see page 38).

Recovery from illness and surgery

Older people's recovery from illness depends on their nutritional status.[27] The serious effects of a poor recovery and of rapidly succumbing to further disease are often reported.[28-31]

Good nutrition has been shown to play an important part in achieving a good recovery and is essential both to resist infection after surgery and to assist in healing.[32, 33]

What can help

After an operation, older people may need to increase their intake of energy and nutrients in order to regain their earlier nutritional status. It is therefore important to ensure that they eat enough. It is worth asking for advice from a dietitian or from the person's general practitioner (GP) if energy and protein supplements are needed. In some cases, the hospital doctor may ask the GP to prescribe such supplements.

Special attention should be paid to the energy requirements of older people who have had an amputation.

Recommendations

- Older people with dementia should be encouraged to remain physically active, since walking strengthens and builds up muscle and bone, and increases calorie requirements, which in turn increases appetite. For example, where possible, individuals should be helped to walk around both indoors and outdoors rather than using a wheelchair. Chairbound people should be encouraged to do regular leg and arm movements.

- Homes responsible for the care of older people with dementia should be proactive in ensuring good dental health. Oral hygiene should be checked regularly. Help should be given with brushing teeth and gums.

- Homes should provide facilities for regular dental check-ups for older people with dementia and particular care should be taken to ensure that false teeth fit comfortably.

Chapter 6

Practical guidelines for achieving a good diet

What is a good diet?

Older people with dementia need a healthy, balanced diet, in common with the general population and other older people. However, the advice which is given to the general public - for example to eat less fat and sugar - may have to be re-evaluated when dealing with a nutritionally vulnerable group such as older people with dementia. The progressive nature of dementia is likely to overshadow fears of developing, for example, heart disease or cancer.

A good diet can be defined as one which is nutritionally adequate. But if it is to be of benefit it must be eaten and therefore factors such as accessibility, taste and acceptability of foods are very important. In order to ensure that adequate energy and nutrient intakes are achieved, it is likely that a good diet will be of high nutrient density - that is, it must provide a high concentration of nutrients in a small volume of food.

In order to ensure that adequate energy and nutrient intakes are achieved, it is likely that a good diet will be of high nutrient density - that is, it must provide a high concentration of nutrients in a small volume of food.

Nutritional guidelines for the recommended nutrient content of an average day's diet for older people in residential and nursing homes – including older people with dementia – are given on the next page.[1]

Familiar foods, drinks and routines

Residential and nursing homes want their residents and patients to feel 'at home' and it can be particularly important for older people with dementia to maintain familiar routines when they enter care, providing these do not affect safety or well-being. It is therefore important to find out as much as possible about people's normal eating and drinking habits and likes and dislikes before they move in, so that familiar patterns can be built

Nutritional guidelines for food prepared for older people in residential or nursing homes

These guidelines provide figures for the recommended nutrient content of an average day's food for an older person over a one-week period. They also apply to older people with dementia.

ENERGY (calories)		EAR	WOMEN aged 75 and over: 1,810kcal (7.6MJ) MEN aged 75 and over: 2,100kcal (8.8MJ)
FAT			35% of food energy WOMEN aged 75 and over: 70g MEN aged 75 and over: 82g
STARCH AND INTRINSIC AND MILK SUGARS			39% of food energy WOMEN aged 75 and over: 188g MEN aged 75 and over: 218g
NME SUGARS			11% of food energy WOMEN aged 75 and over: 53g MEN aged 75 and over: 62g
FIBRE (non starch polysaccharides, or NSP)		DRV	18g
PROTEIN		RNI	WOMEN: 46.5g MEN: 53.3g
B VITAMINS	Thiamin	RNI	WOMEN: 0.8mg MEN: 0.9mg
	Riboflavin	RNI	WOMEN: 1.1mg MEN: 1.3mg
	Niacin	RNI	WOMEN: 12mg MEN: 16mg
FOLATE		RNI	200 micrograms
VITAMIN C		RNI	40mg
VITAMIN A (retinol equivalents)		RNI	WOMEN: 600 micrograms MEN: 700 micrograms
CALCIUM		RNI	700mg
IRON		RNI	8.7mg
SODIUM		RNI	1,600mg
POTASSIUM		RNI	350mg

VITAMIN D

As it can be difficult to supply the full daily requirement of 10 micrograms of vitamin D in the diet, some older people should consider taking 10 micrograms of vitamin D a day as a supplement. They should seek medical advice about this.

EAR = Estimated Average Requirement

DRV = Dietary Reference Value

RNI = Reference Nutrient Intake

NME sugars = Non-milk extrinsic sugars

For an explanation of these terms, see page 68.

These nutritional guidelines were prepared by The Caroline Walker Trust[1] and are based on the COMA report on *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom.*[2]

upon. For example, some might be used to having afternoon tea, or a bedtime drink. Alcohol consumption may be a usual part of someone's daily life and this may include a glass of sherry before a meal, wine with the meal, or drinks in the evening or before bed. Alcohol is a relaxant and can be useful in the diet of people who require greater energy intakes since it both provides energy and stimulates the appetite.

The influence of cultural differences

The relationship of food to culture, religion and way of life is an important consideration when catering for any client group. Many older people are now accustomed to the British diet of the mid 20th century and foods such as soup, meat and two vegetables and hot puddings may be particularly acceptable. Local foods and food-associated customs can be important for people's quality of life and discussions around foods can be a pleasant way for people to socialise and reminisce.[3]

Information about each person's eating habits, cultural and religious requirements and customary celebrations should be collected and acted upon. The importance of talking to the person, and to their relatives, friends and carers, to find out about their past history and food preferences cannot be overemphasised. Relatives and friends could be invited to give recipes or to help with food preparation so that staff are more aware of what food to provide and how it should look and be presented. This approach also helps families to develop a role in the care of residents and patients. Festivals and other celebrations provide an opportunity to include familiar foods which may encourage eating.

It is important that staff asking questions about, for example, cultural and religious food requirements, do so sensitively. This will help ensure that the residents or patients and their relatives and friends do not feel offended, patronised or disapproved of by the staff.

Presentation of foods

Attractively presented foods are important particularly when alterations in texture have been made, and care should be taken to make the foods look as appetising and familiar as possible.

Some older people with dementia can be distracted by colourful or fancy garnishes, and may want to look at (or eat) those instead of eating the meal. Removing garnishes may help to focus attention on the meal itself.[4]

It has been suggested, however, that providing a colour contrast between the food and the plate, serving small portions and serving only one course at a time can all increase independent eating among people with dementia.[5]

Timing of meals and time needed for eating

Many older people, including those with dementia, have small appetites. It is therefore important not to present people with too much food at a time, but to provide frequent opportunities for eating. Too large helpings, apart from being wasteful, may deter an older person from eating.

It is essential to provide nutritious snacks in between more formal meal-times: for example, at mid-morning, mid-afternoon and in the late evening. However, it has been reported that kitchens in some residential and nursing homes are locked at certain times. It is vital that care staff should be able to provide food and drinks for residents and patients whenever required. Snacks such as sandwiches, biscuits, tea, milky drinks and fruit juices, fresh fruit and water should be available all day and during the night.

Snacks such as sandwiches, biscuits, tea, milky drinks and fruit juices, fresh fruit and water should be available all day and during the night.

It is important to allow for the appropriate spacing of meals. Breakfast should be available at a time that is acceptable to residents or patients, for example from 7.30am to 9.00am. Suppers should be as late as possible in the evening, but early enough to leave time for a snack before bedtime. Mealtimes must not be rushed - everyone should have enough time to eat as much as they want.

It has been suggested that midday is the best time to maximise intakes of food for older people with dementia in residential or nursing homes. This may be because there are more staff on duty at this time when people's cognitive abilities are at their peak, combined with a poorer acceptance of food in the evening when they may be more restless and have greater resistance to eating.[6] There appear to be fewer difficulties with eating at breakfast than at other meals in some older people with dementia.[7]

Smaller, more frequent meals, four or five times a day, have been suggested as particularly beneficial for those with smaller appetites and limited ability to eat independently.[8] Those with swallowing difficulties may get tired, especially if a meal lasts 30 minutes or more, and people who have pureed foods are more likely to need between-meal snacks or drinks to meet their nutritional needs. It is suggested that people with dementia are more receptive to shorter mealtimes.[9] However, it has been argued that the eating process for some people is so time-consuming and tiring at mealtimes that between-meal snacks may be inappropriate.[6] High energy drinks between meals should be considered if this is the case.

Allowing enough time for people to eat, and offering encouragement

to eat, may help to correct problems of undernutrition.[10] The amount of time spent by people actively involved in eating a meal has been reported as about 35 minutes, with some people taking up to an hour.[11] Another study reported that only 18 minutes per day were spent helping people to eat in residential care accommodation compared with 99 minutes helping similar people living at home.[12]

Food hygiene

Good food hygiene is essential when preparing food, and older people are a particularly vulnerable group. Using the correct food handling procedures to prevent food contamination and food poisoning is particularly important.

The Department of Health currently recommends that, for all older people, eggs should be thoroughly cooked until both the yolk and white are solid. People with a lower resistance to infection are also advised to avoid soft ripened cheeses of the brie or camembert type.[13]

The importance of maintaining eating skills

The impact of dementia on cognitive ability, behaviour and eating habits (as discussed in chapter 3) has led to a number of suggestions for food modifications which may be appropriate to individuals with different dementia-associated eating problems. It is generally agreed that help with eating, while sometimes essential, can lead to a loss of self-esteem and sense of powerlessness and dependency among those with dementia.[9] Those who are able to eat independently, even if this is by hand only, should be encouraged to do so to maximise independence and dignity.

Older people with dementia are particularly at risk of 'excess disability', which means being more disabled than is warranted by their actual physical/neurological impairment. If independent eating skills are not encouraged, there may be a rapid decline to dependence.[3] The use of finger foods can help people to maintain and recover eating skills and has the advantage of boosting self-esteem and independence as well as allowing people to eat at their own pace.[9] (For more on finger foods, see page 34.)

Menu planning

This chapter contains three sample menus which meet the nutritional guidelines for older people living in residential and nursing homes (see this page, and pages 34 and 36). These menus have been prepared with the help of the *CORA Menu Planner*.[14] The *CORA Menu Planner* is a computer program which allows you to create your own menus, either from a database of 800 items or using your own recipes, and to assess them against the nutritional guidelines for older people.

It is not possible in this report to give examples of menus for every ethnic group, but residential and nursing home managers and caterers should make every effort to construct a weekly menu which meets the needs of the minority group residents and patients they are catering for.

Sample menu 1

	Monday
Breakfast	Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee
Mid-morning snack	Gingerbread Tea or coffee
Lunch	Fricassee of chicken Mashed potato French beans Baked apple with dates
Mid-afternoon snack	Digestive biscuits Tea or coffee
Evening meal	Ham omelette Wholemeal bread Fresh pear
Evening snack	Drinking chocolate or Ovaltine or Horlicks

The menu above would be suitable for older people with dementia, who do not have difficulties in eating independently.

The menu does not offer a 'choice' at main meals as would be likely in residential care homes. Also, choices of bread, hot drinks, cereals etc would usually be given. This menu outlines the quantity and quality of foods that could be served over a seven-day period to ensure that the recommended nutritional guidelines are met.

Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee	Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee	Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee	Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee	Fresh fruit juice Cornflakes or branflakes or milky porridge White or brown toast Tea or coffee	Fresh fruit juice Boiled or poached egg Brown or white toast Tea or coffee
Fruit scone Tea or coffee	Danish pastry Tea or coffee	Malted fruit loaf Tea or coffee	Date and raisin teabread Tea or coffee	Sticky prune cake Tea or coffee	Digestive biscuits Tea or coffee
Cod au gratin New potatoes Creamed spinach Banana jelly and cream	Meat balls in tomato sauce Savoury cobbler Stewed apple Vanilla ice cream	Spiced chicken, tomato and pasta bake Parsnips and carrots Apricot condé	Old fashioned fish pie Broccoli Summer pudding	Grilled sausage Oven chips Baked beans Tinned mandarins	Roast beef & gravy Roast potatoes Carrots Green beans Meringues with cream and chocolate sauce
Semi-sweet biscuits Tea or coffee	Chocolate digestives Tea or coffee	Digestive biscuits Tea or coffee	Semi-sweet biscuits Tea or coffee	Digestive biscuits Tea or coffee	Fairy cakes Tea or coffee
Leek and potato soup Brown roll Fruit yoghurt	Corned beef and tomato sandwich Melon and grape salad	Curried chicken on toast Blackberry and apple jelly	Bean and pasta soup White/brown roll Yoghurt jelly	Mixed vegetable bake Brown roll Prune mousse	Mushroom soup Brown roll Rice pudding
Drinking chocolate or Ovaltine or Horlicks	Drinking chocolate or Ovaltine or Horlicks	Drinking chocolate or Ovaltine or Horlicks	Drinking chocolate or Ovaltine or Horlicks	Drinking chocolate or Ovaltine or Horlicks	Drinking chocolate or Ovaltine or Horlicks

Some items on the above menu can be adapted for those who require a textured soft diet as they can be mashed or pureed to an appropriate consistency (see also the sample menu on page 36).

Finger foods

The use of finger foods (foods which are presented to the person in a form that can be eaten easily by hand) has been suggested as a way of preserving eating skills for those who have difficulty using utensils or who do not recognise the purpose of cutlery.[3, 9]

Finger foods have the advantage of allowing food to be served at room temperature so that people can eat at their own pace. Since spills are minimised, they make it easier to make an accurate assessment of the amount of food eaten by an individual. It is also suggested that the use of finger foods triggers people's attention and increases their physical involvement and interaction with their meal which may encourage them to eat more.[5] One possible solution for people who are unable to sit still during meals is to provide them with a 'brown bag' meal - suitable finger foods in a waist pouch or bag - which they can carry with them.[15] Or more practically, make sure that snacks are always available.

Some examples of finger foods are given in the box on the left. Finger foods should be easy to hold while eating. Some foods such as breaded chicken or meat may be too dry for some people to swallow; small, moist finger foods may be most appropriate.

A sample finger food menu which meets the nutritional guidelines for older people living in residential and nursing homes is given above.

Finger foods

The following are examples of foods which are appropriate for older people with dementia who are able to eat with their hands.

Breads and cereals

buttered toast fingers
rolls with butter
sandwiches
buttered muffins
buttered crumpet fingers
crackers with butter
biscuits with butter
buttered buns
French toast
fruit loaf
fruit cake
teabread
gingerbread
waffles
drop scones
cereal bars
chapatis
small pittas
won-tons
prawn crackers

Meat, fish, cheese and other protein alternatives

sliced meat, cut up into pieces
chicken fingers from moist breast
sausages and frankfurters
hamburgers
meatballs
meatloaf
pizza
slices of pork pie
quiche
fish fingers or fishcakes
fish sticks or crab sticks
smoked mackerel slices
vegetable/soya sausages
vegetable burgers/fingers
quarter hard-boiled eggs
cheese on toast
cheese cubes
fried bean curd cubes
Jamaican patties
kebabs

Vegetables

carrot sticks or coins, cooked
broccoli spears, cooked
Brussels sprouts, cooked
green beans, cooked
chips
potato waffles
new potatoes
sweet potato coins
fried battered onion rings
fried plantain
fried, crumbed whole mushrooms
sliced cucumber
quartered tomato
celery sticks
bhajias

Fruit

banana
melon
sliced apple or pear
strawberries
grapes
pear halves
mandarin orange segments

Snacks

dried apricots and prunes (stones removed)
jelly cubes
ice cream in cones
peanut butter sandwiches
muesli bars
marmite on toast
pate on toast
savoury snacks

Adapted from Ford[9]

Sample menu

	Monday
Breakfast	Orange juice Wholemeal toast Tea or coffee
Mid-morning snack	Banana Oatmeal parkin Tea or coffee
Lunch	Poached chicken Potato pancakes French beans Vanilla ice cream cone Fresh pear
Mid-afternoon snack	Gingerbread Tea or coffee
Evening meal	Ham sandwich Fresh tangerine Tea or coffee
Evening snack	Hot cross bun Ovaltine

Finger food menu

Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Orange juice Wholemeal toast Tea or coffee	Orange juice Wholemeal toast Tea or coffee	Orange juice Wholemeal toast Tea or coffee	Orange juice Wholemeal toast Tea or coffee	Orange juice Wholemeal toast Tea or coffee	Orange juice Wholemeal toast Tea or coffee
Fruit scone Tea or coffee	Malted fruit loaf Tea or coffee	Maids of honour Tea or coffee	Hot cross bun Tea or coffee	Banana Digestive biscuit Tea or coffee	Date and raisin teabread Tea or coffee
Smoked mackerel salad New potatoes Melon	Grilled chipolatas Oven chips Carrots Sticky prune cake	Meat balls Savoury cobbler Tomato quarters Apple Vanilla ice cream cone	Cheese and potato cakes Carrots Parsnips Tinned pineapple	Fish cakes Runner beans Carrots Vanilla ice cream cone Fresh tangerine	Roast beef Roast potatoes Carrots Broccoli Mince pies
Sultana bun Tea or coffee	Toasted crumpets Tea or coffee	Gingerbread Tea or coffee	Scone Tea or coffee	Rock buns Tea or coffee	Banana tea bread Tea or coffee
Cheese and tomato pizza Mange-touts Banana Tea or coffee	Pork pie and salad Apple Tea or coffee	Liver sausage and tomato sandwich Banana Tea or coffee	Tuna mayonnaise sandwich Grapes Tea or coffee	Chicken liver paté Brown toast Fresh pear Tea or coffee	Scotch eggs Celery Brown roll Melon Tea or coffee
Malted fruit loaf Drinking chocolate	Toasted teacakes Ovaltine	Fruit scone Drinking chocolate	Short biscuits Drinking chocolate	Digestive biscuits Ovaltine	Toasted teacakes Drinking chocolate

In order to achieve an adequate nutritional intake from finger foods, extra snacks are required throughout the day.

The nutrients which may be in shorter supply in a finger food diet are fibre and folate - since breakfast cereals and green leafy vegetables in particular will be missing. Liver sausage, paté or marmite on toast or in sandwiches, broccoli spears, orange, melon, green beans and wholemeal bread or toast will all contribute folate to the diet. To increase the fibre content of the diet, cakes and breads can be made with brown or wholemeal flour and muesli bars and dried fruit could be added as snacks.

Soft foods

The type and consistency of foods served are very important to ensure food is both acceptable and safe. Older people with dementia who have difficulty chewing may find a textured soft diet helpful. Foods should be soft enough to be mashed with a fork but should not be sticky or crumbly or have tough or fibrous skins.[16] Solid food in a liquid medium (for example cereal in milk, or minestrone soup) should be avoided because mixed consistencies like this are more difficult to contain in the mouth and may result in aspiration and/or choking. Examples of foods that could be used in a textured soft diet are shown in the box below.

People who have no teeth and who do not use false teeth do not necessarily need to have foods pureed and may find a textured soft diet suitable. Those with no teeth or poor teeth may eat better if given normal food which can be easily swallowed such as soft cooked meats and vegetables cut into small pieces or mashed. Although foods for people without teeth must be soft, foods such as white bread become excessively sticky in the mouth. Wholemeal bread is more easily swallowed and also provides valuable fibre to aid bowel movements.

A sample menu of textured soft foods which meets the nutritional guidelines for older people living in residential and nursing homes is given on the right.

Textured soft diets

The following would be suitable choices for a textured soft diet.

Cereals and bread

Breakfast cereals soaked in warm milk to soft texture (eg Weetabix or All Bran), porridge, Ready Brek, instant oat cereal

Sago, tapioca, rice, ground rice pudding

Plain cake/sponge mixed with custard, ice cream or cream

Cut up spaghetti in a well mixed savoury dish, or rice in sauce

Brown or wholemeal bread without crusts, or soft toast without crusts

Fruit and vegetables

These should be well cooked, with no stones or skins.

Tinned or stewed apple, peach, pear, apricot, plum, rhubarb, grapefruit segments (without membrane), fresh banana, mandarin oranges (no pips)

Carrots, cauliflower florets, swede, courgette, cabbage (not stringy), spinach, tinned tomatoes, small tender peas, mashed potato

Dairy products

Milk, ice cream, sorbet, custard, thick and creamy yoghurt, fromage frais

Cheese in dishes and sauces

Meat, fish, chicken and protein alternatives

Avoid gristly stringy meat and ensure that all meats are served with a thick sauce.

Minced beef, pork, lamb, chicken, turkey

Soya mince

Steamed or poached fish (no bones)

Tinned fish, mashed

Mashed baked beans or other pulses (without tough skins) in sauce

Steamed vegetable burger or tinned vegetarian sausage (if easily mashed with a fork)

Foods to avoid in a textured soft diet

Sticky foods: white bread, cheesecake, peanut butter

Foods that fall apart: fruit cake, dry sponge cake

Vegetables with tough skins: sweetcorn, red kidney beans, peas, broad beans, mixed vegetables, processed peas, green beans

Adapted from Burge[16]

Sample menu 3:

	Monday
Breakfast	Orange juice Milky porridge Wholemeal toast Tea or coffee
Mid-morning snack	Ovaltine
Lunch	Fricassee of chicken Mashed potato Young carrots Stewed rhubarb Vanilla ice cream
Mid-afternoon snack	Fruit yoghurt Tea or coffee
Evening meal	Ham and egg scramble Ratatouille Wholemeal bread Prune juice
Evening snack	Ovaltine

Textured soft diet

Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Cranberry juice Milky porridge Wholemeal toast Tea or coffee	Sunshine citrus juice Milky porridge Wholemeal toast Tea or coffee	Sunshine citrus juice Milky porridge Wholemeal toast Tea or coffee	Orange juice Milky porridge Wholemeal toast Tea or coffee	Cranberry juice Milky porridge Wholemeal toast Tea or coffee	Fruit juice Ham and egg scramble Wholemeal toast Tea or coffee
Drinking chocolate	Ovaltine	Drinking chocolate	Ovaltine	Drinking chocolate	Ovaltine
Cod au gratin Mashed potato Creamed spinach Baked egg custard	Meat balls in tomato sauce Mashed potato Stewed apple Vanilla ice cream	Shepherd's pie Swede Carrots Apricot condé	Old fashioned fish pie Creamed spinach Semolina pudding Apple sauce	Corned beef hash Baked beans Tinned pears Chocolate sauce	Roast beef Brown onion sauce Mashed potatoes Carrots Baked egg custard
Banana Tea or coffee	Fruit yoghurt Tea or coffee	Banana Tea or coffee	Fruit yoghurt Tea or coffee	Banana Tea or coffee	Fruit yoghurt Tea or coffee
Leek and potato soup Wholemeal toast Baked apple with honey Strawberry yoghurt drink	Curried chicken on toast Wholemeal bread Lemon and yoghurt mousse Orange juice	Cream of celery soup Wholemeal toast Baked egg custard Tea or coffee	Cauliflower soup Wholemeal toast Prune mousse Tea or coffee	Omelette Wholemeal toast Chocolate blancmange Tea or coffee	Mushroom soup Wholemeal toast Rice pudding Tea or coffee
Drinking chocolate	Ovaltine	Drinking chocolate	Ovaltine	Drinking chocolate	Ovaltine

This textured soft diet menu is adapted in part from the Sample Menu 1, shown on page 32, for older people with dementia who do not have eating difficulties.

In this textured soft diet, main meal items would be mashed to an appropriate consistency, or finely chopped into a sauce. Soups and drinks may have to be thickened for some people. Toast should be 'soft' for those on a textured soft diet.

In order to achieve a sufficient energy intake in a textured soft diet, milky drinks between meals may be required since the snack foods commonly consumed between meals will be inappropriate. Milky coffee or tea can be substituted for drinking chocolate or Ovaltine if preferred.

Pureed foods

Older people with dementia who have more severe swallowing difficulties or very limited chewing ability may need pureed foods. However, before deciding to give a person pureed food, it is important to make sure that a pureed diet is actually needed; it might be that a textured soft diet would be more suitable (see page 36). Once a person has started a pureed diet, their situation needs to be reviewed regularly.

While foods can be blended, care should be taken that the texture is smooth, that it is not over-diluted with liquid and that the foods do not become unrecognisable since this may alarm or confuse the person eating. It is important to ensure that pureed foods are still energy-dense - for example with the addition of calorie-rich foods such as butter or cream. Each part of the meal should be pureed separately so that the different flavours and colours can be appreciated.

Modifying food texture with thickeners (for example modified cornstarch) allows normal foods to be served at the texture appropriate to the person. (For details of thickeners which may be useful in the preparation of pureed diets, see *Resources* in Appendix 3.) Pureed vegetables can also be thickened with savoury white sauce. It has been demonstrated that thickened pureed foods re-formed into recognisable dishes - for example pureed pork re-formed into a 'pork chop' shape - are more acceptable than purees of indeterminate content.[4] Older people with dementia who have a delayed or incomplete swallow reflex, especially those who cough when drinking, may benefit from thickened drinks. Appropriate consistencies may be, for example, something similar to single cream, runny honey, syrup or yoghurt.

A pureed diet needs to be planned carefully to ensure that it is nutritionally adequate. Particular care should be taken to offer fruit and vegetable purees which will contain fibre and folate.

A speech and language therapist can evaluate the consistency of foods and drinks acceptable and safe for someone with swallowing problems (see page 46).

A pureed diet can be made up from the textured soft diet (see Sample Menu 3 on page 36), with foods made to appropriate consistencies. Bread and toast will not be consumed on a pureed diet. These items account for 10% of the calories in the textured soft diet, and the calories lost if these foods are not eaten will need to be made up with extra drinks, by fortifying other menu items or by eating larger portions.

A pureed diet needs to be organised carefully to ensure it is nutritionally adequate. Particular care should be taken to puree foods separately and to offer fruit and vegetable purees which will contain fibre and folate. Most dietitians would agree that it is difficult to achieve a nutritionally adequate intake from pureed foods unless great care is taken to monitor the foods eaten and to plan a varied menu.

Sweet foods

Older people with dementia who only eat sweet foods are unlikely to get a nutritious diet. It has been suggested that older people with dementia have a preference for sweet foods and that a craving for sweet food may be a significant part of the clinical syndrome for dementia.[17] No-one knows for sure why such cravings happen. It is likely that most people with dementia will accept sweet foods. This may be useful in encouraging people to eat but care should be taken that the sweet foods offered do not lead to a repetitive diet of little variety and low in nutrients. For example, honey on wholemeal bread might be a more suitable snack than sweet biscuits for people who prefer sweet food.

Staff in some homes find that some older people with dementia choose dessert before the rest of the meal and may seek a number of desserts from other people rather

than eat their own main course.[11] It may be better to serve the main course and the dessert separately, rather than presenting all courses on a tray at the same time, as a continual diet of desserts is unlikely to provide all the nutrients needed for good health.

Food supplement products and fortified foods

The value of food supplement products in maintaining adequate intakes among older people in hospital is well documented[18, 19] and this has also been reported for people with dementia.[6, 20] Concerns about possible over-prescription of food supplement products has however also been reported.[21]
A wide range of commercially produced high energy (and vitamin and mineral enriched) food supplement products are available and may be prescribed by a hospital doctor or GP. These supplements should not be seen as long-term food substitutes.

The fortification of commonly eaten foods is another way of increasing nutrient intake and can be valuable if used to enhance foods which residents enjoy. Foods can be fortified locally, for example by adding dried skimmed milk powder, butter or cream to soups and puddings. Foods fortified by food manufacturers can also be used - for example fortified breakfast cereals, some breads and hot drink powders.

Frozen drinks

People who have eating problems may benefit from high calorie frozen drinks. These provide variety of texture and a relatively low volume food. For people with eating difficulties, frozen drinks can also reduce the choking and coughing often associated with drinks, particularly milk-based ones.[4, 23]

The cost of a good diet

There is no evidence that providing the raw materials for meals and snacks for older people with dementia, or the process of cooking that food, involves any additional cost when compared with the cost of catering for people who do not have dementia.

As The Caroline Walker Trust report *Eating Well for Older People* showed,[1] there has been very little research on the cost of providing food for people in residential and nursing homes. A 1990 Scottish study[24] found that local authority residential care homes for older people spent an average of £13 per person per week on food, voluntary sector residential homes an average of £17, and private sector residential homes an average of £15. In 1994, general indications were that expenditure on food ingredients per resident per week ranged from £11 to £21.50, reflecting not only the wide variety of types of home but also the efficiency of catering.

Spending more on food ingredients does not automatically improve the nutrient content of the food. Tight specification and quality control, bulk purchasing for groups of homes and careful waste control can make a substantial difference to the overall cost of similar meals. However, The Caroline Walker Trust's own research in 1994 suggested that it is difficult to provide food of sufficient nutritional content if less than £15 per resident per week is spent on food ingredients (£16 at 1998 prices).

The *Eating Well for Older People* report therefore recommended that individuals, their relatives or advocates should enquire about a prospective home's commitment to nutritional standards and should ask how much money per resident per week is spent on food ingredients.

How to use food supplement products

- Check that the composition of the supplement is suitable for the person who will consume it.
- Check the use by date on products before you use them.
- Do not use damaged or distorted packets.
- Follow the manufacturer's instructions for use and storage.
- Remember good hygiene practice.

Adapted from NAGE[22]

Recommendations

- Nutritional guidelines for food prepared for older people in residential or nursing homes are given on page 30 of this report. They apply equally to older people with dementia. These guidelines should be adopted by residential and nursing homes and should become benchmark standards for care in residential and nursing homes.

- Local authorities, health authorities and health trusts should adopt these nutritional guidelines and use them as benchmark standards in the residential and nursing homes with which they contract for long-term care.

- Residential and nursing homes which apply for registration should be required, as part of the registration process, to demonstrate that they provide food which meets these guidelines.

- Registration and inspection officers should monitor the nutritional standards of the food served in the homes they visit, particularly during the unannounced visits. The inspector's report should include comments on food and nutrition. Homes which do not meet the guidelines should receive appropriate advice and help.

- Home owners, managers, caterers and care staff should seek appropriate information and training on how to meet the guidelines.

- The nutritional guidelines in this report should be used as benchmark standards by others involved in the care of older people with dementia. This includes care agencies, organisations providing food for residential and nursing homes and sheltered accommodation, and those providing community meals.

- Older people with dementia need a healthy, balanced diet, in common with the general population and other older people. Food and nutrition must therefore be seen as an essential, integral part of the care plan. Individuals should be given an opportunity to comment on the food served.

- A variety of foods should be offered which enable some choice. This is important for older people with dementia, despite the common misconception that choice can create confusion. Help from supportive, trained care staff may be beneficial.

- Efforts should be made to find out about each person's special dietary needs, food preferences and religious or cultural requirements. This information should be sought from family and friends as well as from individuals themselves, preferably before they move into the home. The information should be recorded and form part of each person's individual care plan, and should be regularly updated.

- Attention must be paid to the way the food looks and how it is presented. Families or friends - particularly those of ethnic minorities - should be encouraged to be actively involved in helping staff get this right. This information should form part of the care plan and all staff should be made aware of individual requirements.

- Care staff should be able to offer food and drinks for residents and patients whenever required. Snacks and drinks - such as sandwiches, fresh fruit, biscuits, tea, milky drinks, fruit juices and water - should be available all day and during the night.

- All foods served should be attractive, appetising and appropriate to the needs of the residents and patients. Where appropriate, these might include finger foods and textured soft foods as well as more conventional meals. If pureed foods are served, particular care should be taken to ensure that they look and taste appetising.

- Food supplement products (which are sometimes used to replace meals) should be used appropriately. Over-use of these supplements in the medium to long term may delay the return to normal eating patterns.

- Cost considerations should not be allowed to override the need for adequate nutritional content in the planning and preparation of food for older people with dementia.

Chapter 7

Strategies to encourage older people with dementia to eat well

Organisational culture

It is essential that residential and nursing homes are committed to good nutrition for their residents and patients. Managers and staff at all levels need to demonstrate their commitment to good nutrition so that it becomes part of the organisational culture of the home. Achieving good nutrition will have implications for the organisation of staff shifts and rotas, staff training and staff support.

It is suggested that the care of older people with dementia be guided by a philosophy that every care activity has two dimensions: the task aspect and the relationship aspect. This is particularly true when residents or patients need help with eating and drinking.[1]

In order for people to be treated appropriately by staff, a programme of care is required which is person-oriented rather than task-oriented. Care staff need to know as much as possible about each individual - finding out about their past history, life and experiences and about their current condition. The care plan for each resident or patient should include an assessment of how well they can eat independently. Records of individuals' food preferences should be kept. These should be part of the care plan and should be regularly updated. A sensory assessment of residents and patients – including an assessment of their sense of taste and smell – is also useful.

Managers and staff at all levels need to demonstrate their commitment to good nutrition so that it becomes part of the organisational culture of the home.

In all care homes where there are older people with dementia, it is essential that all staff know about dementia and how it affects people and how it progresses. (See next section on *Staff training*.)

Staff training

Training for all staff - including managers - is a crucial factor in encouraging older people with dementia to eat well.[2]

Staff who work with older people with dementia need to know about dementia and its effects and its likely progress. In this way they can understand and recognise the response or lack of response from the people they are caring for. Information such as that contained in chapter 3 *About dementia* is essential background reading.

The importance of supporting and encouraging older people with dementia to eat well needs to be recognised. Staff training should emphasise the importance of helping people to retain their ability to eat independently for as long as possible. Training should also cover everyday strategies for enabling older people with dementia to eat well. (For more information on everyday strategies, see page 44.)

Care staff will need special training if they are involved in supporting people who cannot eat independently. Some of the important issues to be covered are outlined in *Helping people to eat* on page 44. It can be beneficial if staff members themselves have been through a process of experiencing what it is like to be helped to eat.

Care staff will need special training if they are involved in supporting people who cannot eat independently.

It is recommended that this report should become course material within the relevant units of the NVQs in Care (Unit U4 'Contributing to the health, safety and security of individuals and their environment' and Unit Z10 'Enabling clients to eat and drink').

For details of training courses and videos available for staff working with older people with dementia, see *Training* on page 63.

Teamwork

Helping people to eat well involves food and how it is served, the eating environment, the social environment, staffing issues and residents' and patients' own views on meals and mealtimes. This means that all staff have an important part to play in helping people to eat well - cooks, those serving meals, care assistants, nursing staff, domestic workers, housekeeping and administrative staff and managers.

Staff need to share views about what works well at mealtimes and what improvements could be made. An emphasis on good team communication is critical.[3] Identifying a specific forum for team communication - for example including mealtime activity as a standing agenda item at staff meetings, or having a staff group dining committee - could provide a starting point for improved communication.

Staff organisation and support

Adequate numbers of staff

Adequate numbers of staff are essential to produce varied, palatable and nutritious food and to encourage those who can entirely or mainly eat without specific staff intervention. Adequate numbers are also needed to help people who cannot eat independently. The number of care staff required will depend on the number of people who need help with eating. This could mean staffing levels of one to three in units with high dependency.

One study found that people with dementia who required special help with eating might take 30 minutes of one-to-one staff time per meal.[4]

Consistency of staff care

Case studies show that where there is consistency of care (ie with the

same people working with the same residents or patients), carers are in a better position to interpret people's eating behaviours.[5] Regular contact between a carer and resident or patient will allow the carer to become better acquainted with the person, more able to interpret the cues given and more empathetic with his or her needs.[1] The interaction between the carer and the resident with severe communication problems becomes fundamentally important during meals. It is also found that when a carer looks after the same person, and gets to know them and their history, this leads to greater job satisfaction.

Residents or patients who only require encouragement to eat, should be offered that support by carers who are familiar to them. This ensures that someone not eating their usual amount of food will be noticed.

Consistency of staff care will have implications for the ratio of staff to residents or patients.

Should staff eat with residents or patients?

There are many advantages to staff eating with residents or patients. Many homes have successfully adopted this policy. Staff acting as role models at mealtimes can help older people maintain their social skills. Eating together also enables carers to get to know residents and patients better. However, there are some practical points which need to be considered (see box below).

When staff sit with residents or patients at mealtimes but do not have anything to eat or drink themselves, some older people with dementia may offer part of their meal or drink to the carers and feel rejected or stop eating if their offers are refused.[6]

Should staff eat with residents and patients?

The benefits	Other considerations
Staff acting as role models can help people maintain social skills.	It may not be practical for carers to eat their own meal if they also have to help other people to eat. (However, staff may be able to take their break either before or after the residents' or patients' mealtime.)
Socialising at mealtimes helps carers and residents or patients to get to know each other.	If eating with residents or patients means that staff are eating more than they would normally eat, they may put on weight. (However, staff could have smaller portions.)
	There may be cost implications in providing food for staff.

Food-related activities

It might be helpful to organise reminiscence sessions for older people, including those with dementia. Some of the sessions can be based around people's memories of food and eating. For more information, contact the Age Exchange Reminiscence Centre (address in Appendix 3).

Staff support

Caring for older people with dementia is a demanding job which can be particularly stressful in the later stages of dementia. Many staff find that helping people with dementia to eat is a very challenging task, particularly when helping those with swallowing problems or who cough or who have choked. Staff may not give the whole meal if they find the experience distressing. The carer needs support from another person[1] and staff need to support each other through peer group support sessions or specialist help and support.

For additional practical support, relatives or volunteers could be invited to come in and help at mealtimes. However, they might need prior training.

Staff should agree a policy on standards of care for eating. Some points for inclusion in such a policy are shown below.

Standards of care for eating

Points to be included in a sample policy

Planning and organisation

- Staff should be present and involved at mealtimes.
- All staff should respect the need for quiet and calm during meals.
- Staff should review the timing of meals to ensure they are appropriately spaced.
- Staff should ensure that information about each person's food preferences is in the care plan and is acted on. The information might be from the person him/herself, or from relatives or friends.
- To avoid disorientation, tables should be set no more than 30 minutes before a meal.
- Meals should be served in courses rather than using service trays.
- Finger foods should be served where appropriate.

Giving choice

- Residents or patients should be allowed to choose where they sit.
- They should be offered a napkin or apron rather than a bib. Loose napkins should be used rather than napkins in plastic wrap.
- Residents or patients should be asked about their preferred portion sizes of menu items.
- Where possible, residents or patients should serve themselves to promote independence.
- When serving soup, offer the choice of a cup or bowl.
- Offer a choice of drink.

Practical issues

- Present food in a ready-to-eat form so that the person does not have to unwrap anything.
- Use salt and pepper pots rather than individual packets of condiments.
- Do not use small containers of butter, jam, milk or cream.
- Do not use polystyrene or frail plastic cups.

Everyday strategies for staff

Helping people to eat

Staff involvement and commitment to successful mealtimes are critically important factors in ensuring that older people with dementia eat well.

While it is essential that those who can fully or partly eat independently are encouraged and enabled to do so, those who need help with eating must be treated sensitively. The perspective of helping people to eat rather than 'feeding' them is essential. Mealtimes should be seen as a therapeutic time for activity involving physical, sensory, emotional and social stimulation.

Speech and language therapists can be particularly important in recognising and helping with eating difficulties (see page 46). Verbal prompting during eating to 'Open your mouth,' 'Chew,' or 'Swallow' has been suggested as particularly helpful.[7] If direct verbal prompting fails to work, touching food against the person's lips gives a non-verbal cue to open the lips. If someone cannot initiate voluntary movement it is better to give indirect encouragement to eat, for example saying 'This meal looks tasty.' Some guidelines for helping a person to eat are given on the next page. It is also essential for staff to be trained in helping people to eat. This might include experiencing what it is like to be helped to eat.

Other practical suggestions include ensuring that residents or patients have an empty bladder before they start eating, and that their glasses or dentures are accessible and well-fitting.[8]

Staff involvement and commitment to successful mealtimes are critical factors in ensuring that people with dementia eat well.

Suggestions for dealing with particular problems and behaviour associated with eating are given on the next page.

Guidelines for helping a person to eat

- The same carer should stay with the resident or patient throughout the meal.
- Make sure the person has his or her glasses, dentures and/or hearing aid in place.
- Make sure the person is sitting in an upright position.
- The carer should sit at eye level or slightly below, and either immediately in front of or slightly to one side of the person who needs help.
- Give small mouthfuls but enough for the person to feel the food in his or her mouth.
- Give adequate time for the person to swallow each mouthful before continuing.
- Assist but never force.
- Maintain eye contact with the person who needs help. Do not talk to someone else while offering food.
- Use verbal prompts: talk clearly about the food you are offering (especially if it is pureed), and use a gentle but firm tone.
- Discourage the person from talking with food in their mouth because of the risk of choking.

Adapted from Layne[9] *and Holzapfel et al*[10]

Mealtime behaviour assessment: an example

Observed behaviour	Suggestions for dealing with the behaviour
Style of eating and pattern of intake	
Incorrectly uses spoon, fork or knife.	Make sure that the person can use the utensils provided. May benefit from additional aids or devices. Consult with occupational therapists.
Unable to cut meat.	Provide cut meats.
Difficulty getting food onto utensils.	Plate guard or lipped plate may help.
Eats desserts/sweets first.	Serve meal in courses, not on trays.
Eats only certain foods.	Serve one item at a time: high-calorie, high-protein foods first.
Eats too fast.	Offer food in small portions. Provide verbal cues. Use gentle physical restraint.
Plate wanders on table.	Use no-skid placemat or suction plate.
Eats other people's food.	Keep other people's food out of reach. Limit number of foods available at one time.
Incorrectly uses cup or glass.	Verbal or manual cue. Offer cup with handles or straw.
Mixes food together.	Ignore as long as the food is eaten.
Slow eating, prolonged mealtimes.	Serve food on warmed plates. Give small portions and offer second helpings.
Resistive or disruptive behaviour	
Hoards, hides or throws food.	Remove items.
Verbally refuses to eat or states 'No more,' 'Finished,' or 'Not hungry.'	Remove meal for 5-10 minutes and then serve again. Investigate cause, eg food preferences.
Interrupts servers, or wants to help.	Give the person a role in meal service eg. setting table, pouring water, greeting guests.
Plays with food.	Remove item.
Distracted from eating.	See chapter 8 *The eating environment.*
Stares at food without eating.	Verbal or manual cue, eg placing food or utensils into the person's hand.
Demonstrates impatient behaviour during or before meal.	Serve them their meal before other people. Offer food in courses and minimise waiting time.
States 'I can't afford to eat' or wants to pay for meal.	Ensure that the person is not depressed (see page 46). Provide meal tickets or vouchers.
Eats small amounts and leaves table, unable to sit still for meals.	See chapter 8 *The eating environment.* Provide a bag with finger food to take away.
Oral behaviour	
Difficulty chewing.	Provide softer, easier to chew foods.
Difficulty swallowing.	Liaise with speech and language therapist.
Prolonged chewing without swallowing.	Verbal cue to swallow. Provide soft, easy to swallow foods.
Does not chew food before swallowing.	Verbal cue to chew. Puree and thicken food.
Holds food in mouth.	Verbal cue to chew. Massage cheek. Experiment with different tastes and textures.
Bites on spoon.	Use plastic-coated spoon.
Spits out food.	Check for bites too big. Provide textured soft food.
Refuses to open mouth.	Verbal cue to open mouth. Touch lips with spoon. Manually assist with food.

Dealing with food refusal

Food refusal is a common difficulty, especially among older people in the moderate to severe stages of dementia.

It is important to explore the possible reasons for food refusal. The person may be refusing the food because he or she does not like it, or has never had it before. The importance of knowing the person well, keeping a record of each person's food preferences, and being aware of dietary and religious requirements can provide insights into food refusal.

There may be a physical problem: for example the person may have a sore mouth, or thrush in the mouth. These problems should be dealt with promptly (see page 26).

Older people with dementia may refuse food because of their dementia - meaning that they do not recognise that it is time to eat or cannot make appropriate voluntary movements to open the mouth or because they are unable to communicate that they do not wish to eat.[11] In these circumstances the interpretation of the person's behaviour by the carer is particularly important and the commitment of staff to build relationships at mealtimes is fundamental.

Residents or patients who will not take food from staff will sometimes take it from their loved ones. This can allow the relative to play an integral part in the provision of care.

A carer's ability to interpret an individual's behaviour over time by establishing a consistent care plan can make a particularly positive contribution to successful eating.[5]

Touch is an important way for staff to attract and focus a person's attention on eating.[3, 7] Holding hands, giving reassuring touches and singing softly have been found to help overcome resistance to eating.[12]

Depression causes loss of appetite and lack of desire to eat and can be treated with anti-depressants (see page 16). Paranoid ideas and delusions are common in older people with dementia in the early and moderate stages. People may believe their food is poisoned and subsequently refuse to eat. Paranoia can respond well to treatment and should be recognised and treated promptly. Whatever treatment is given should be reviewed regularly.

Some people may refuse food because they believe they cannot pay for it. If this happens, it is essential to investigate the reasons for this (for example depression) and give treatment if appropriate. If residents cannot be reassured that they do not need to pay, it may be worth trying a meal ticket system where residents or patients hand over a meal ticket when they are given their meal.[13]

Increasing job satisfaction among staff

Many of the suggestions in this chapter involve staff getting to know individual residents or patients well - finding out about their past history, life and experiences, and also knowing about dementia and why people with dementia act as they do. Homes where these principles have been guiding elements of policy have found increased job satisfaction among staff and an improved atmosphere and social interaction among residents or patients and between residents or patients and staff. Unless staff see people with dementia as human beings, there will always be a level of tension.[2, 14]

How health professionals can help

Staff in residential and nursing homes need to have ready access to speech and language therapists, occupational therapists and dietitians, who can help in a variety of ways. Community speech and language therapists may be able to visit people in residential care and some speech and language therapists specialise in dementia. However, this facility is not always readily available.

Speech and language therapists

A speech and language therapist can offer invaluable advice on helping older people with dementia to eat, and on communication.

They can also provide support for people with swallowing difficulties. Possible signs of a swallowing problem include dehydration, a gurgling voice after swallowing, coughing during or after eating or drinking, prolonged chewing, pouching of food in the mouth, regurgitation and excessive drooling. Sudden weight loss or recurrent chest infections may also indicate a swallowing problem. Assessment of swallowing function can lead to appropriate changes in food texture to aid mechanical swallowing difficulties and may help to prevent choking which can be very dangerous and distressing.

Speech and language therapists have an important role in staff training on overcoming difficulties in eating and drinking. They can also offer advice and training in what to do if someone chokes (see page 27).

Dietitians

Dietitians can assess nutritional status and intake and give advice on the changes to make to a person's diet to improve energy and nutrient intake. Dietitians can also advise catering staff on menu planning, adjustments to recipes, and cooking practices.

Occupational therapists

Occupational therapists can offer support and guidance to meet specific difficulties associated with eating and mealtimes such as:

- organisation of the immediate environment at mealtimes
- establishing which skills and behaviours associated with eating have been retained, and how to maintain and make the most of remaining abilities
- general approach required by care staff
- use of appropriate utensils
- the level of supervision and assistance needed
- advice on correct positioning and appropriate seating to promote function, comfort, and safety as well as to aid digestion and respiration.

Ethical considerations

A person at the end stage of life may refuse to open their mouth and accept any food and drink. When carers come to the conclusion that they cannot make someone accept food or drink without using force, a number of ethical principles need to be considered by the relatives, carers and medical team, while respecting the person's autonomy. Staff may feel they are prolonging suffering by attempting to give food to people who do not want to eat or who persistently cough and choke on food.[15] Staff need training and support in dealing with the ethical issues involved. When a person is not eating, a decision may need to be taken about whether to feed them nasogastrically (by inserting a tube from the nose to the stomach) or by gastrostomy (directly to the stomach). This decision is taken by a doctor in consultation with relatives and carers.[16]

Recommendations

- There is a constant flow of new information about dementia and the care of older people with dementia. Managers and staff therefore need regular training to keep up-to-date with new developments.
- In all residential and nursing homes, managers and staff need to be trained to understand dementia and its effects and know how to manage dementia-related behaviour. They should also be familiar with other conditions, particularly depression, paranoia, anxiety and the side-effects of some medications.
- Adequate numbers of staff should be available at mealtimes to ensure that older people with dementia have enough time and help to eat well.
- Staff should make sure they relate to their residents and patients at mealtimes. Direct contact with older people with dementia is important, particularly when staff are helping individuals to eat.
- Staff should be trained in how to help older people with dementia to eat. This training should include helping individuals to retain their ability to eat independently for as long as possible, and assisting those who can no longer eat independently.
- Where staff are helping older people with dementia to eat, it is important that they are treated with dignity and respect. It is useful for staff to have experienced the process of being helped to eat themselves, in order to understand how best to help people in their care.
- When older people with dementia are being helped to eat, the same member of staff should be present throughout the meal. As far as possible the same members of staff should be involved with the same residents or patients, as such contact brings benefits to both parties.
- Residential and nursing homes should consider the benefits of staff eating their meals with residents and patients with dementia, both to support them in eating and to encourage social interaction. Consideration might also be given to involving relatives and friends at mealtimes and perhaps suitably trained volunteers.
- Each residential or nursing home should develop a policy on standards of care for eating (see page 44).
- Speech and language therapists and occupational therapists should be consulted to ensure that appropriate assistance is offered in helping people to eat and drink.
- In residential and nursing homes, residents, patients and staff need to have access to the expertise of speech and language therapists, occupational therapists and dietitians. This is not always widely available.
- Registration and inspection officers should look for management commitment to training of staff caring for older people with dementia. This is particularly important where a residential or nursing home applies for a variation in registration to enable them to provide accommodation for older people with dementia, as staff may not have any experience of dealing with people with this condition.
- NVQs and SVQs are important training opportunities. The information in this report should become an integral part of the course material within the relevant units. Other courses for those caring for older people with dementia should contain an appropriate section on nutrition and the relationship between staff, residents and patients at mealtimes.

Chapter 8

The eating environment

The provision of nutritious and accessible food is essential in helping older people with dementia to achieve an adequate diet. It is also recognised that an appropriate eating environment is vitally important in helping older people with dementia to cope with the demands made on them by the complex processes of meals and eating.[1, 2]

There are many ways of designing residential and nursing homes to compensate for the main disabilities experienced by people with dementia.[3-11] This chapter focuses on those aspects that affect good nutrition.

There are a number of design features which can help encourage people with dementia to eat well (see page 50). Architects planning new homes for older people who have, or who may develop dementia, should incorporate these features in their design. In homes which are already built, it is possible to make some design modifications which encourage people to eat well.

Layout and atmosphere of the dining room

A congenial atmosphere has been shown to encourage older people with dementia to eat well.[12] A 'homely' dining room with appropriate furniture is suggested, using tablecloths, salt and pepper pots and table napkins, and seating small numbers of residents or patients together.[13]

A large proportion of residential and nursing homes were designed for use by residents or patients who were less old and frail than current users. Many homes have just one large dining room which may be too noisy, busy and frenetic for some residents. Different, smaller rooms or areas of the building could be used instead. Two separate sittings can also help, although this may be impractical if people need a long time to eat. Unless food is cooked separately for each sitting, palatability and nutritional value of food are affected. Vitamins are lost if food is kept heated for a long time.

In one organisation, marked improvements in social interaction were noticed after introducing smaller, round tables, staff giving residents or patients a warm welcome to the dining room, staff and residents or patients chatting before the meal, having an informal activity (such as flower arranging) just before lunchtime, and offering people a choice of seating and having care assistants sitting at tables (after consultation with the residents or patients). These changes improved social interaction and created a peaceful and therapeutic atmosphere.[14]

Quiet and calm in the dining room

Older people with dementia have difficulty concentrating on more than one thing at a time. This is particularly so when a cognitively impaired person is attempting the complex task of eating. The noise and activity of other residents or patients or staff may cause a person to forget what they are doing. The noise from a television or radio in the dining room can be a particular problem.[12, 15]

Helping residents or patients to eat in a quiet, relaxed atmosphere has been shown to increase food intake and decrease agitation.[16] One study found that those with dementia were better able to eat independently if there were fewer interruptions and distractions.[17]

A study by the Royal College of Nursing which aimed to improve the nutrition of older residents found that separating out those people who needed help with eating improved the ability of more able residents to concentrate on their meals, and allowed staff to concentrate on those who were more vulnerable to poor intake.[18]

Plates and cutlery

Plates and cutlery should add to the 'homely' atmosphere of the dining room. Some practical suggestions on the use of plates and cutlery are included in the sample policy on *Standards of care for eating* on page 44.

Plates should be simple, with good colour contrast between the table, plate and place mat. These should be consistent at every meal, with plate and cutlery always placed in the same way.[16]

Utensils may be simplified or modified to make them easier for older people with dementia to use. Items which may be helpful include large-handled utensils, cups with large handles (to assist grasp) and heavy bases (to reduce the effects of tremor and reduce spillage). For details of suppliers of specialist tableware see page 63.

For people with swallowing difficulties, feeder beakers with spouts increase the risk of aspiration (when food or liquid gets into the unprotected airway). This is because they increase the speed of transit of fluid to the throat and give less preparation time for the swallow reflex. They should be used with care.

Plate guards can prevent food from sliding about the plate. Plastic place mats or suction cups may prevent the plate from sliding on the table. Velcro or foam rubber curlers covering the handle of a fork or spoon may aid grasp.[19]

Making it easy to find the dining room

It is important to make it as easy as possible for older people with dementia to find the dining room. The following suggestions might be helpful.

- *Landmarks.* Landmarks can be a very effective way of helping residents or patients to find places. The door to the dining room could have something memorable beside it, such as a large painting or pot plant.
- *Signposts.* For those who have difficulty finding their way around, signs with words and pictures can indicate the way to the dining room. A sign on the dining room door is important.
- *Colours.* Some homes have the dining room door and doorframe painted in a distinctive colour. However, colour needs to be used with care. Some older people with dementia will notice brightness rather than colour. In any case it may be better to reserve 'special colours' for the doors to WCs.
- *Inside views.* The dining room door should be hung so that residents or patients can see the inside of the room. Seeing tables laid out ready for a meal can be a helpful reminder that it is mealtime. Glass panelled doors, or walls with glass panels, can help the person see what lies beyond.
- *Scent.* Aromas of food from the dining room can also help guide people in the direction of the dining room (see *'Cues' to stimulate the appetite*, below).

'Cues' to stimulate the appetite

People's ability to see, hear, smell, taste and touch all change in different ways to different extents as people get older. Providing a range of 'cues to eating' can help older people with dementia to make sense of their environment and stimulate their appetite. Anything that helps to orientate and remind people that it is time to eat is likely to be helpful.

Anything that helps to orientate and remind people that it is time to eat is likely to be helpful.

Cues can appeal to any of the five senses. The smell of cooking can be a powerful stimulus to the appetite.[16] It helps if the kitchen is close to the dining room.[13] Or the final stages of cooking foods could be carried out in the dining room -

for example heating a soup, grilling meat, or making toast. Seeing the tables being laid out for a meal can also help, although it is better to set them no more than 30 minutes in advance, in order to reduce the risk of confusing older people with dementia. Hearing the sounds of food being prepared - for example the sound of chopping vegetables or the sizzling of frying - or the sound of cutlery and plates can help. Cues can also involve touch. It may be possible in some circumstances for residents or patients to help with preparing some foods, such as vegetables, although it is important to follow food hygiene regulations.

'A counter kitchen'

It can be of great benefit to have a 'counter kitchen' – with, for example, a work surface and a kettle – integral to or adjacent to the dining room. This is additional to the main kitchen, which residents or patients may be excluded from due to food hygiene and health and safety regulations. Residents or their visitors can use the counter kitchen themselves, for making tea or coffee or doing light cooking such as making toast. The kitchen is a comforting environment for many people, and familiar activities such as making tea can enhance the confidence and self-esteem of older people with dementia.

Having the counter kitchen in an open area such as a dining room, or next to the dining room, makes it easy for staff to keep an eye on residents or patients, and also residents or patients are constantly reminded that it is there. Staff can also use it for 'finishing off' cooking of dishes, thus creating food aromas which can help stimulate the appetite (see *'Cues' to stimulate the appetite*, on page 49).

Design of new residential and nursing homes

Design features which can encourage older people with dementia to eat well

- Smaller units are better for the successful care of older people with dementia. For example, 'domus units' for about six to eight people where each unit has its own kitchen and dining room, are successfully used by some care accommodation organisations in the United Kingdom. A key feature is that all the meals can be cooked within the unit, providing opportunities for many normal, everyday activities as well as many 'cues to eating' (see page 49).
- Where it is not possible to have small, separate units, larger units should be divided into living groups with their own identified space and staff and in particular their own dining room or area, with a counter kitchen within or adjacent to that space.
- It can be very helpful to have a 'counter kitchen' within the dining room, but separate from the main kitchen. This gives residents or patients the opportunity to make tea or do light cooking, and staff can use the kitchen for 'finishing off' cooking, thus creating food aromas which can help stimulate the appetite (see *'A counter kitchen'* on the left).
- In larger homes it may be preferable to have more than one small dining room or dining area rather than one large dining room.
- The dining area, kitchen and sitting area should be at the heart of the building, so that residents or patients can see them and are therefore drawn to them naturally.
- The dining room or dining area should have small tables with plenty of space in between so that people can move about easily.
- Quiet is crucial. Noise-absorbing finishes such as wall coverings and carpets are recommended.
- Having areas where residents or patients can sit in front of open windows, or can sit outside, maximises the opportunities for older people to access vitamin D from exposure of the skin to sunlight (see page 19).

Recommendations

- Particular attention should be paid to the layout and atmosphere of the eating environment of older people with dementia, to ensure that it is homely and congenial.

- The eating environment for older people with dementia should be quiet and calm, with noise and other distractions kept to a minimum.

- Some older people with dementia who cannot eat independently may prefer to have their meals in a different room or at a different time to others. Providing separate eating environments for those who can eat independently may improve the ability of this group to concentrate on their meals. However, each person's needs should be assessed on an individual basis and their preferences and those of others within the living group should be accommodated. For example, the more able will sometimes help those who have eating difficulties.

- Some residents and patients with dementia may benefit from specially designed cutlery and other eating utensils. Care staff should ensure that residents are able to use the cutlery and utensils and that they are culturally appropriate. Care staff should ask for advice from a speech and language therapist or occupational therapist.

- Eating environments should be designed to allow as many 'sensory cues' as possible. For example, the smells and sounds of cooking, and seeing food being prepared and cooked, can all help to stimulate the appetite. Food aromas can be particularly important.

- Dining tables should be set up no more than 30 minutes before a meal, to avoid creating confusion among residents and patients with dementia.

- Within or adjacent to the dining room, there should be an additional 'counter kitchen' - for example with a work surface and kettle - for residents or patients and their visitors to use. It should be separate from the main kitchen.

- Architects designing accommodation for older people with dementia should take account of their need for regular exposure to sunlight to maintain their vitamin D status. Safe gardens and sheltered seating areas are very important.

- Architects should also incorporate design features which enable older people with dementia to move around safely indoors and to move easily to and around the dining room.

- Design should encourage physical independence, for example, handrails to help with walking. Design should also enable easy access to lavatories.

- Ideally people with dementia should be cared for in small units of, for example, eight people. Where this is not possible, larger units should be divided into living groups with their own identified staff and space, including their own dining room. Each unit should have a counter kitchen (kitchen facilities, separate from the main kitchen) which residents, patients and their visitors can use.

Appendix 1

Energy and nutrients

The text in black in the left-hand columns shows the recommendations of the COMA report on *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*.[1] For an explanation of the terms used, see page 68.

COMA recommendations

Energy (calories)

ESTIMATED AVERAGE REQUIREMENT

WOMEN aged 75 and over:
1,810kcal (7.61MJ*) a day

MEN aged 75 and over:
2,100kcal (8.77MJ*) a day

It is important to monitor the energy (calorie) intake of older people.[2] Those older people who are relatively inactive require fewer calories because they use less energy. However, although the energy requirements of such people may be lower, their requirements for other nutrients will not have changed and may well have increased. Their diet therefore should be one of quality.

On the other hand, some older people, especially those who have long-standing chronic illness such as heart disease or lung disease and those with dementia or other related disorders, have increased energy requirements. These people are more likely to be living in residential or nursing homes and therefore present a particular challenge to caterers, because they not only have an increased energy requirement but in many cases also have poor appetites. In such cases, nutrient-dense foods (foods which contain a concentration of nutrients) may be suitable, for example fortified milk puddings, or milky drinks.

Housebound older people have energy intakes up to one-third lower than those of free-living older people.[3] When calorie intakes are reduced below 1,200kcals it is difficult to achieve a diet that is sufficient in all nutrients.

Fat

THE CONTRIBUTION OF FAT TO THE DIET

35% of food energy

WOMEN aged 75 and over:
70g a day

MEN aged 75 and over:
82g a day

Fat provides the most concentrated form of energy (calories). Saturated fats are mainly derived from animal sources, and are found for example in meat, butter and cheese. Unsaturated fats are mainly from plant and fish sources, and are found for example in some margarines and oils.

It is recommended that fat should contribute about 35% of the food energy in the diet. However, the proportion of fat in the diet must be tailored to meet the needs of the individual. For the thin older people who need additional energy but who have a poor appetite, fat may both add flavour to food and provide an additional useful source of calories.

Sources of fat

Sources of fat include fats and oil added to food when cooking or frying; butter, margarine and low fat spreads; and the fat incorporated in many manufactured foods such as biscuits, cakes, pastry and chocolate. Fatty meats and whole milk are also sources of fat.

* Megajoules and kilocalories are both measurements of energy.

kcal = kilocalories
1 kcal = 1 calorie

MJ = megajoules
1MJ = approx. 239kcal

COMA recommendations

Carbohydrates

THE CONTRIBUTION OF CARBOHYDRATES TO THE DIET

50% of food energy

The term carbohydrates includes both starches and sugars. It is recommended that, for the population as a whole, carbohydrates should provide about 50% of food energy: 39% from starch and intrinsic and milk sugars (the sugar in fruit, vegetables and milk), and only about 11% from non-milk extrinsic sugars.

Starch and intrinsic and milk sugars

THE CONTRIBUTION OF STARCH AND INTRINSIC AND MILK SUGARS TO THE DIET

39% of food energy

WOMEN aged 75 and over: 188g a day

MEN aged 75 and over: 218g a day

Starchy foods are a good source of calories and can also provide important nutrients, such as fibre and some B vitamins. Frail people who have difficulty in eating large amounts of food may find starchy foods too filling and may need to rely on fat rather than starch as a source of calories.

Sources of starch

Sources of starch include bread, pitta bread, chapatis, potatoes, pasta, rice, breakfast cereals, yams and plantains.

Sources of intrinsic and milk sugars

Fruit and vegetables that contain sugars; and milk.

Non-milk extrinsic sugars (NME sugars)

THE CONTRIBUTION OF NME SUGARS TO THE DIET

11% of food energy

WOMEN aged 75 and over: 53g a day

MEN aged 75 and over: 62g a day

In the past sugars have often been referred to as 'added sugars' or 'natural sugars'. As the interpretation of these two terms often led to a great deal of confusion and misleading information on the health consequences, COMA tried to remedy this by defining the different groups of sugars to identify their effects on health, particularly dental health.

Non-milk extrinsic sugars, or 'NME sugars', are sugars which have been extracted from the root, stem or fruit of a plant and are no longer incorporated into the cellular structure of food. NME sugars include table sugar, sugar added to recipes, and honey, and are found in foods such as confectionery, cakes, biscuits, soft drinks and fruit juices.

Sources of NME sugars

Sources of NME sugars include table sugar, honey, confectionery, cakes, biscuits, soft drinks and fruit juices.

Fibre (Non-starch polysaccharides, or NSP)

DIETARY REFERENCE VALUE

18g a day

Fibre is important in the prevention of constipation. The quality of life for many older people is impaired by the symptoms of constipation. A high fibre diet can prevent over-use of laxatives.

An adequate fluid intake (1.5 litres of non-alcoholic fluid each day) aids the action of fibre and can thus help prevent or alleviate constipation.

Although raw wheat bran is high in fibre, it contains phytates which interfere with the absorption of important nutrients such as calcium and iron, and it can cause bloating, wind and loss of appetite. It should therefore not be added to the diet of older people. It should only be used if recommended by a doctor or dietitian.

Sources of fibre

Sources of dietary fibre include: wholemeal bread, wholemeal biscuits, whole grain breakfast cereals, pulses (peas, beans and lentils), fruit and vegetables. These foods provide useful sources of other nutrients too.

COMA recommendations

Protein

REFERENCE NUTRIENT INTAKE

WOMEN:
46.5g a day

MEN:
53.3g a day

Protein is needed for building and for repairing body tissues. As people get older, worn out tissue and injured tissue are replaced more slowly, and wounds heal more slowly and are more vulnerable to infection. The diet of older people should provide adequate protein. This is most easily derived from animal sources but can also be obtained by combining different vegetable sources of protein such as pulses and cereals.

There is still debate about the amounts of protein older people can absorb and use successfully.[4] The COMA recommendations therefore set a balance between providing sufficient protein for repair of tissue and not overburdening the kidneys.

Some older people, especially those with infections or bedsores or those who are less mobile, may require a higher level of protein,[5-7] but advice should always be sought from a dietitian or doctor if it is thought that extra protein is required.

People with known severe kidney failure sometimes need to be on a low protein diet.

Sources of protein

Sources of protein include: meat, poultry and fish; pulses such as peas, beans and lentils; eggs and cheese. Milk can also be a useful source. Several protein supplements are available in ready-to-drink or powdered form.

B vitamins (thiamin, riboflavin, niacin)

REFERENCE NUTRIENT INTAKE

WOMEN:
Thiamin - 0.8mg a day
Riboflavin - 1.1mg a day
Niacin - 12mg a day
(women aged 50 and over)

MEN:
Thiamin - 0.9mg a day
Riboflavin - 1.3mg a day
Niacin - 16mg a day
(men aged 50 and over)

The body needs the B vitamins - thiamin, riboflavin and niacin - to be able to utilise the energy in the diet. B vitamins are particularly important for the brain and nervous system. There is a possibility that lack of the B vitamins may contribute to confusion in older people.

Surveys of people living in their own homes show that few people suffer from deficiencies of B vitamins as long as they have a diet providing a sufficient calorie intake. However, older people living in residential or nursing homes may have lower intakes of these nutrients.[8, 9] It is therefore important to ensure that these people have a varied diet providing sufficient calorie and nutrient intake.

People who have a history of alcohol abuse or are presently abusing alcohol, may need more than the recommended minimum amounts given on the left.

Sources of B vitamins

Sources of thiamin and niacin include bread and other foods made with flour (such as bread, pasta and biscuits), breakfast cereals, pork (including bacon and ham), kidney, liver, potatoes, yeast extract and fish.

Sources of riboflavin include milk and milk products (such as yoghurt), poultry, meat, oily fish such as herring, mackerel, canned sardines, tuna and salmon, and eggs. For more details on sources of B vitamins, see Appendix 2.

COMA recommendations

Folate

REFERENCE NUTRIENT INTAKE

200 micrograms a day

Folate deficiency leads to a particular type of anaemia known as megaloblastic anaemia. Folate is essential for many vital metabolic processes.

Many studies have shown that older people's folate intakes are low.[10] People with dementia have particularly low levels of folate.[11]

The real problem for older people is achieving an adequate intake of folate provided in a varied diet with plenty of vegetables. However, folate is destroyed by prolonged heating - for example by overcooking food or by heating and keeping it for long periods. Many breakfast cereals are fortified with added vitamins and this is a useful source.

Bowel diseases, such as coeliac disease, can cause malabsorption. People who are taking certain drugs or who are drinking excessive amounts of alcohol are at risk of being deficient in folate. Folate supplements may be needed, but should be given under medical supervision.

Sources of folate

Sources of folate include Brussels sprouts and other green leafy vegetables and salads, oranges and other citrus fruits, fortified bread, fortified breakfast cereals, liver, and yeast extract. Yeast extract provides a significant amount of folate even if only small quantities are eaten. For more details on sources of folate see Appendix 2.

Vitamin C

REFERENCE NUTRIENT INTAKE

40mg a day

Vitamin C has an important role in preventing disease and maintaining good health. Low vitamin C intakes are associated with susceptibility to pressure sores,[12] infection,[13] and possibly the development of cataracts and poor eyesight.[14, 15] Vitamin C will help the absorption of dietary iron if both nutrients are present in the meal.

Some surveys show that quite a large proportion of older people are getting less than their required amount of vitamin C.[16-18]

The use of drinks fortified with vitamin C offers a practical alternative source. If used daily in the diet, these could ensure an adequate vitamin C intake for older people.

Preparing vegetables long before they are cooked can lead to loss of vitamin C. Prolonged cooking or storage of fruit and vegetables can also lead to substantial loss of vitamin C content, so it is wise to cook these foods for as short a time as possible, and not to keep them hot for too long. This is not always the case in the provision of meals in residential or nursing homes, so a change in practice may be required.

Sources of vitamin C

Fruit and fruit juices, potatoes and other vegetables are all sources of vitamin C. Some drinks are fortified with vitamin C: for example blackcurrant juice and orange juice. Some residential and nursing homes prepare their own vitamin C enriched drinks by adding vitamin C to fruit squashes. For more details on sources of vitamin C see Appendix 2.

COMA recommendations

Vitamin A (retinol equivalents)

REFERENCE NUTRIENT INTAKE

WOMEN:
600 micrograms a day

MEN:
700 micrograms a day

Vitamin A comes in two forms: retinol, which is found only in animal products, and carotene - the yellow or orange pigment found in fruit and vegetables - which can be converted to retinol by the body. If a food contains both retinol and carotene, the total vitamin A content is expressed as units of retinol equivalents.

Vitamin A is often thought of as the 'anti-infection vitamin', as it plays an important role in maintaining the immune system.

Sources of vitamin A

Sources of retinol are liver, and fat spreads such as margarine. As very few foods provide vitamin A naturally in the diet, all margarines in the UK are by law fortified with vitamin A (and vitamin D). Many low fat spreads are also fortified, so it is worth checking the labels.

Carotene is found in leafy green vegetables, carrots, orange-fleshed sweet potato, and fruits such as apricots, canned or fresh peaches, plums, prunes, mangoes and papayas. For more details on sources of vitamin A see Appendix 2.

Vitamin D

REFERENCE NUTRIENT INTAKE

10 micrograms a day*

*to be supplied either through the diet or as a supplement

Vitamin D is needed for healthy bones and to maintain muscle strength. Lack of vitamin D contributes to bone disorders leading to bone fractures, including hip fractures, and bone pains.

The action of summer sunlight on skin can produce enough vitamin D to meet the needs of most adults in the United Kingdom. However, older people are more likely to stay indoors and, if outside, they may be fully covered with thick clothes. Furthermore, the skin is less able to make vitamin D as people age, and the kidneys are less able to convert vitamin D into its active form.

COMA recommends a daily intake of 10 micrograms of vitamin D. As it may be impossible for older people to achieve this level of intake by diet alone, it has been recommended that some people in this age group may need to take supplements. People in residential or nursing homes need particular attention because they do not generally spend much time outdoors.

High intakes of vitamin D are dangerous.

Sources of vitamin D

Dietary sources of vitamin D include oily fish such as mackerel, herring, tuna, salmon and pilchards. Margarine and several breakfast cereals have this vitamin added. For more details on sources of vitamin D see Appendix 2.

Calcium

REFERENCE NUTRIENT INTAKE

700mg a day

One of the most common disorders among older people, especially older women, is osteoporosis - the loss of minerals which causes thinning and weakening of the bones. There is debate as to whether taking additional calcium in old age will help prevent this disease or whether it is too late because the major causes of decalcification are present earlier in life.[19-21] However, it is generally agreed that it would be prudent to ensure that older people have an adequate calcium intake. Vitamin D is needed for the body to absorb calcium.

Recent evidence has also pointed out the importance of physical activity to older people as a protection against osteoporosis.

Sources of calcium

Sources of calcium include: milk and foods made with milk, such as yoghurt, cheese, milky drinks, custards and milk puddings; foods made with white or

COMA recommendations

brown flour such as bread, pasta and biscuits. Other sources are canned pilchards, sardines, and salmon (if the soft bones of the fish are also eaten). For more details on sources of calcium see Appendix 2.

Iron

REFERENCE NUTRIENT INTAKE

8.7mg a day

Iron is an essential part of haemoglobin, which carries oxygen in the red blood cells. A deficiency in iron will cause anaemia.

The recommendation for iron for older people has been set at the same level as those for men of all ages and for women who no longer have menstrual periods. However, older people may have higher iron needs because of losses from slight bleeding in either the stomach or the lower bowel. This may be the result of drug therapy or medical conditions of the bowel, such as piles or cancers. In the recent *National Diet and Nutrition Survey of People Aged 65 Years and Over*, more than 30% of people in residential homes and sheltered accommodation had blood haemoglobin levels associated with deficiency.[10]

In older people, the gut may not be as effective at absorbing iron as in younger people and therefore the iron needs to be in a form that is readily absorbed. The iron in meat and offal is the most readily absorbable iron (haem iron). The iron in cereals, pulses and vegetables tends to be more difficult to absorb but absorption is made easier if there is sufficient vitamin C in the diet. The iron may be more easily absorbed by the body if some food or drink containing vitamin C is taken in the same meal. Tannins in tea, and raw wheat bran, can make it harder for the body to absorb iron.

Sources of iron

Sources of iron include liver, kidney, red meat, oily fish, pulses and nuts (including nuts which have been ground for use in cooking). Iron preparations should only be given if prescribed by a medical practitioner. For more details on sources of iron, see Appendix 2.

Sodium

REFERENCE NUTRIENT INTAKE

1,600mg a day

The most common form of sodium in the diet is salt (sodium chloride). Sodium is also found in taste-enhancers such as monosodium glutamate, in sodium bicarbonate, and in sodium nitrate (a preservative found in bacon).

The COMA report[22] on how diet can help to prevent heart disease and strokes recommends that people of all ages should reduce their intake of salt. Older people are no exception to this advice. The average intake of salt in the UK is 9g per day. The advice is to reduce this by one-third, to 6g a day. A reduced salt intake may be beneficial for older people suffering from high blood pressure as it may reduce the need for blood pressure-lowering medication.

However, any severe reduction in salt should be made only on the basis of medical advice. Low intakes of salt in the diet can lead to sodium depletion, especially in those over the age of 85, the majority of whom are on salt-losing water tablets. This can lead to confused mental states. Low salt diets also tend to be very bland and may well depress an already poor appetite.

If salty foods are being restricted, it is important to ensure that the food is still tasty and appetising. Imaginative use of herbs, spices, lemon juice, mustard, onion and celery to flavour food can help reduce the amount of salt needed.

Sources of sodium

Sources of sodium include table salt and cooking salt, some prepared foods, processed meats (such as ham and bacon), cheeses and salted smoked foods.

COMA recommendations

Potassium

REFERENCE NUTRIENT INTAKE

350mg a day

Lack of potassium is probably more common in older people than is generally realised. Low potassium intake leads to depression, muscular weakness, and mental confusion, and loss of appetite. One of the major causes of potassium loss among older people is the use of drugs to control either blood pressure or oedema (fluid retention). Patients taking these drugs should be regularly monitored by blood tests. This is important to ensure that they do not become short of potassium.

Sources of potassium

Sources of potassium include fruit (especially bananas and all dried fruits), coffee (both instant coffee and ground coffee beans), fruit juices, potatoes and other vegetables. For more details on sources of potassium, see Appendix 2.

Fluids

1.5 litres a day
(just over 2 1/2 pints,
or about 8 teacups)

A regular and adequate intake of fluids is extremely important for older people. It helps prevent dehydration, which can lead to confused states; helps to prevent and alleviate the symptoms of constipation; and helps to 'flush the system', carrying away toxins.

Older people should aim to drink about eight cups of non-alcoholic fluid a day.[23] Tea and coffee are sociable and relatively cheap drinks. Milky drinks are easy to digest and an excellent source of nutrients, especially calcium. Fruit juices contain vitamin C. Fruit squashes could also be used to increase total fluid intake.

Many older people have a fading sense of thirst and therefore forget to drink.

Many older people with dementia and their carers may believe that restricting fluids will help to relieve urinary incontinence but in fact the opposite is true.[24] Fluid restriction can lead to constipation as well as dehydration.

For people with renal failure there may be specific limits to fluid intake.

Alcohol

Some older people drink to excess, but this is rare for those in residential or nursing homes. The Royal College of Psychiatrists acknowledges that "a drink or two may revive a jaded appetite".[25] In residential homes and nursing homes, having the opportunity to meet and have a drink before a meal will often help people socialise, which in itself can stimulate the appetite. Alcoholic drinks can also provide calories and some nutrients. The yeast in beer, for example, provides folate and other B vitamins.

Alcohol has a dehydrating effect, so older people who drink alcohol should be advised to drink extra fluid to compensate. Excessive alcohol is a risk associated with undernutrition.[16, 26, 27] In older people, it is associated with thiamin[28] and folate deficiency,[29] and other deficiencies in minerals and vitamins, including vitamin C.[30]

Appendix 2

Rich sources of energy and nutrients

Energy and protein

An adequate energy intake is important if residents or patients are failing to maintain, or are losing body weight. Current average recommendations for women of approximately 1,800kcals a day, and for men of 2,000kcals a day would require twelve or thirteen 150kcal portions a day respectively.

Each of the following portions provide approximately 150kcals (620KJ)	Approximate number of grams of protein provided
40g of most breakfast cereals	4
2 small slices of bread and butter	6
2 digestive biscuits	2
1 small slice of sponge cake	2
1/3 large tin of rice pudding	5
1 large glass of whole milk	9
1 fruit yoghurt	6
1 matchbox size piece of hard cheese	8
2 scoops of dairy vanilla ice cream	3
2 small eggs, scrambled	7
1 tablespoonful of peanut butter	5
1 small roast chicken breast (no skin)	27
3 fish fingers	10
1 1/2 sausages	10
1/4 portion of lasagne	8
1 teacup of Horlicks made with whole milk	6
10 dried apricots	4
1/2 portion of chips	3
5 boiled new potatoes	2
1/3 of a Mars bar or similar	3

The charts below show a number of foods which are rich in or are important sources of certain nutrients. The figures are based on average servings.

	HIGH	INTERMEDIATE	MODERATE
B VITAMINS			
Thiamin	***over 0.15mg*** liver liver paté roast game fortified breakfast cereal Horlicks/Ovaltine nuts	***0.15-0.07mg*** iced buns currant buns wholemeal bread yeast extract	***0.07 - 0.03mg*** white bread semi-sweet biscuits lean meat chicken eggs
Riboflavin	***over 0.6mg*** liver kidney	***0.6-0.3mg*** milk Horlicks/Ovaltine fortified breakfast cereal roast duck almonds	***0.3-0.1mg*** roast meat bacon herrings mackerel sardines white fish cheese yoghurt
Niacin	***over 6mg*** fortified breakfast cereals tuna canned salmon pilchards chicken	***6-3mg*** lean roast meat sausages kidneys herrings sardines	***3-1mg*** peanut butter yeast extract pork pie bacon liver sausage wholemeal bread
FOLATE	***over 100 micrograms*** chicken liver spinach	***40-100 micrograms*** most fortified breakfast cereals, eg cornflakes, branflakes, All Bran, rice krispies yeast extract kidney pig liver ox liver cabbage Brussels sprouts cauliflower orange melon peas	***20-40 micrograms*** wholemeal bread/flour broccoli runner beans tomatoes parsnip potatoes beef ackee peanuts wholegrain unfortified cereals, eg Weetabix
VITAMIN C	***over 40mg*** blackcurrants canned guava orange (and juice) grapefruit melon	***20-40mg*** canned gooseberries Brussels sprouts canned grapefruit green pepper broccoli cabbage cauliflower spinach tomato	***10-20mg*** satsumas eating apples nectarines potatoes
VITAMIN A	***over 500 micrograms*** liver liver sausage/paté carrots spinach sweet potatoes cantaloup melon dried apricots fresh/canned apricots	***100-500 micrograms*** nectarine peach blackcurrants watercress tomatoes cabbage (dark) Brussels sprouts runner beans broad beans margarine cheese butter kidney	***40-100 micrograms*** canned salmon herrings egg honeydew melon prunes orange sweetcorn peas

	HIGH	INTERMEDIATE	MODERATE
VITAMIN D	***over 1 microgram*** herrings pilchards sardines tuna canned salmon egg	***0.5-1 microgram*** liver (other than chicken liver) liver sausage/paté margarine	***0.2-0.5 micrograms*** chicken liver
CALCIUM	***over 300 mg*** spinach sardines cheese tofu	***150-300mg*** pilchards yoghurt milk (whole/skimmed)	***50-150mg*** canned salmon evaporated milk muesli white bread/flour orange
IRON	***over 5mg*** pig liver kidney chicken liver liver sausage/paté All Bran	***2-5mg*** beef beefburger corned beef lamb sardines pilchards soya beans chick peas lentils spinach Weetabix dried apricots wholemeal bread/flour	***1-2mg*** baked beans broad beans black-eyed peas blackcurrants salmon herrings sausage chicken egg muesli white bread tofu
SODIUM	***High sources*** bacon ham tongue sausage smoked fish or cheese All Bran cornflakes salted snacks	***Moderate sources*** bread milk cheese marmite fish	***Low sources*** fresh meat frozen meat chicken fresh fruit canned fruit fresh vegetables frozen vegetables fruit juice puffed wheat shredded wheat tea coffee
POTASSIUM	***Good sources*** jacket potatoes chips roast potatoes vegetable soup dried fruit cereals milk bananas tomato juice	***Moderate sources*** parsnips Brussels sprouts tomatoes melon orange juice dried fruit coffee meat bacon sausages fish	***Useful sources*** fresh fruit canned fruit fresh vegetables canned vegetables bread

Appendix 3

Useful addresses and further information

Useful addresses

Dementia Services Development Centres

BRISTOL
Dementia Voice
Blackberry Hill Hospital
Fishponds
Bristol
Tel: 0117-975 4863

NORTH-EAST/CUMBRIA
Dementia Services
Development Officer
Centre for Health Services
Research
University of Newcastle
Tel: 0191-222 7045

OXFORD/ANGLIA
Dementia Services
Development Centre Project
Oxford Brookes University
Tel: 01865-483950

SCOTLAND
Dementia Services
Development Centre
University of Stirling
Stirling SK9 4LA
Tel: 01786-467740

REPUBLIC OF IRELAND
St James' Hospital
Dublin 8
Tel: 003531-453 7941

Dementia Services Development Centres for some other areas of the country are planned.

YORKSHIRE
Bradford Dementia Group
University of Bradford
Bradford BD7 1DP
Tel: 01274-383996

Advisory Body for Social Services Catering (ABSSC)
45 Palace View
Bromley
Kent BR1 3EJ
Tel: 0181-290 5931

Age Concern
Age Concern England
Astral House
1268 London Road
London SW16 4ER
Tel: 0181-679 8000

Age Concern Cymru
4th Floor
1 Cathedral Road
Cardiff CF1 9SD
Tel: 01222-371566

Age Concern Northern Ireland
3 Lower Crescent
Belfast BT7 1NR
Tel: 01232-245729

Age Concern Scotland
113 Rose Street
Edinburgh EH2 3DT
Tel: 0131-220 3345

Age Exchange Reminiscence Centre
11 Blackheath Village
London SE3 9LA
Tel: 0181-318 9105

Alcohol Concern
Waterbridge House
32-36 Loman Street
London SE1 0EE
Tel: 0171-928 7377

Alzheimer Scotland - Action on Dementia
22 Drumsheugh Gardens
Edinburgh EH3 7RN
Tel: 0131-243 1453

Alzheimer's Disease Society
2nd Floor
Gordon House
10 Greencoat Place
London SW1P 1PH
Tel: 0171-306 0606

Alzheimer's Disease Society Wales Development Office
Tonna Hospital
Tonna
Neath
Neath and Portalbot SA11 3LX
Tel: 01639-641938

Alzheimer's Disease Society
403 Lisburn Road
Belfast BT9 7EW
Tel: 01232-664100

British Dental Health Foundation
Eastlands Court
St Peter's Road
Rugby
Warwickshire CV21 3QP
Tel: 01788-546365

British Diabetic Association
10 Queen Anne Street
London W1M 0BD
Tel: 0171-323 1531

British Dietetic Association
7th Floor
Elizabeth House
22 Suffolk Street
Queensway
Birmingham B1 1LS
Tel: 0121-643 5483

See also Nutrition Advisory Group for Elderly People, in next column.

British Federation of Care Home Proprietors
840 Melton Road
Thurmaston
Leicester LE4 8BN
Tel: 01162-640095

British Geriatrics Society
1 St Andrew's Place
London NW1 4LB
Tel: 0171-935 4004

Carers National Association
20-25 Glasshouse Yard
London EC1A 4JS
Tel: 0171-490 8818

Carers National Association in Wales
Pantglas Industrial Estate
Bedwas
Newport
Gwent NP1 8DR
Tel: 01222-880176

Carers National Association in Scotland
3rd floor
162 Buchanan Street
Glasgow G1 2LL
Tel: 0141-333 9495

Carers National Association in Northern Ireland
3rd floor
113 University Street
Belfast BT7 1HP
Tel: 01232-439843

Centre for Policy on Ageing
25-31 Ironmonger Row
London EC1V 3QP
Tel: 0171-253 1787

Citizens Advice Bureaux
National Association of Citizens Advice Bureaux
136-144 City Road
London EC1V 2QN
Tel: 0171-251 2000

College of Occupational Therapists
6-8 Marshalsea Road
London SE1 1HL
Tel: 0171-357 6480

Counsel and Care
Twyman House
16 Bonny Street
London NW1 9PG
Tel: 0171-485 1566

Disabled Living Foundation
380-384 Harrow Road
London W9 2HU
Tel: 0171-289 6111

General Dental Council
37 Wimpole Street
London W1M 8DQ
Tel: 0171-486 2171

Health Visitors' Association
50 Southwark Street
London SE1 1UN
Tel: 0171-717 4000

Help the Aged
St James Walk
London EC1R 0BE
Tel: 0171-253 0253

Huntington's Disease Association
108 Battersea High Street
London SW11 3HP
Tel: 0171-223 9489

National Care Homes Association
3rd floor
Martin House
84-86 Grays' Inn Road
London WC1X 8BQ
Tel: 0171-831 7090

National Osteoporosis Society
PO Box 10
Radstock
Bath
Avon BA3 3YB
Tel: 01761-471771

Nutrition Advisory Group for Elderly People (NAGE)
(A group of dietitians who work with older people)
c/o the British Dietetic Association (address on this page)

RADAR (Royal Association for Disability and Rehabilitation)
12 City Forum
250 City Road
London EC1V 8AF
Tel: 0171-250 3222

Registered Nursing Homes Association
Calthorp House
Hagley Road
Edgbaston
Birmingham B16 8QY
Tel: 0121-454 2511

Relatives Association
5 Tavistock Place
London WC1H 9SN
Tel: 0171-916 6055

Research into Ageing
Baird House
15-17 St Cross Street
London EC1N 8UN
Tel: 0171-404 6878

Resuscitation Council (UK)
9 Fitzroy Square
London W1P 5AH
Tel: 0171-388 4678

Royal College of Nursing
20 Cavendish Square
London W1M 0AB
Tel: 0171-409 3333

Royal College of Speech and Language Therapists
7 Bath Place
Rivington Street
London EC2A 3DR
Tel: 0171-613 3855

VOICES
Voluntary Organisations Involved in Caring in the Elderly Sector
c/o The Association of Charity Officers
Beechwood House
Wyllyotts Close
Potters Bar
Herts EN6 2HN
Tel: 01707-651777

Resources

Suppliers of special tableware

Coopers Healthcare
c/o Sunrise Medical
High St
Woollaston
Stourbridge
West Midlands DY8 4PS
Tel: 01384-446688

Kapitex Healthcare
Kapitex House
1 Sandbeck Way
Wetherby LS22 7GH
Tel: 01937-580211

Nottingham Rehab
Ludlow Hill Road
West Bridgford
Nottingham NG2 6HD
Tel: 0115-945 2345

Smith and Nephew Homecraft
Sidings Road
Lowmoor Road Industrial Estate
Kirkby in Ashfield NG17 7JZ
Tel: 01623-721000

Suppliers of thickening products

Thick and Easy
Fresenius Healthcare
6-8 Christleton Court
Stuart Road
Manor Park
Runcorn
Cheshire WA7 1ST
Tel: 01928-579333

Thixo-D
Sutherland Health
Rivermead
Piper's Way
Thatcham RG19 4EP
Tel: 01635-874488

Vitaquick
Vitaflo
6 Moss Street
Paisley PA1 1BJ
Tel: 0800-515174

Further reading

A professional reading list which gives details of information sheets on training and publications is available from the Alzheimer's Disease Society (address on page 62). Areas covered include how to provide activities for people with Alzheimer's disease, how to deal with disturbed behaviour, counselling for carers, pre-senile dementia and therapies for people with dementia.

Catercare One. The Reference Manual for Caterers in the Caring Sector
D Sandy.
Published by The Food and Nutrition Information Service, Cottingham.
Tel: 01482-844102.

Choking: The Heimlich Manoeuvre
Fact Sheet 6. Published by the Huntington's Disease Association (address on page 62).

Dental Care for Older People in Homes
Published by The Relatives Association (address on this page).

Diet and Huntington's Disease
Fact Sheet 20. Published by the Huntington's Disease Association (address on page 62).

Dietetic Standards of Care for the Older Adult in Hospital
Published by the Nutrition Advisory Group for Elderly People, 1993.
Available from NAGE, c/o The British Dietetic Association, 7th floor, Elizabeth House, 22 Suffolk Street, Queensway, Birmingham B1 1LS.

Eating and Swallowing Difficulties
Fact Sheet 5. Published by the Huntington's Disease Association (address on page 62).

Eating through the 90s
Published by the Nutrition Advisory Group for Elderly People.
Available from: Mrs E Haughton, Dietetic Dept, Gloucestershire Royal Hospital, Great Western Road, Gloucester GL1 3NN.

Enhancing the Role of Relatives and Residents
Published by The Relatives Association (address on this page).

Food Safety
Published by the Ministry of Agriculture, Fisheries and Food. Number 1 in the Food Sense series.
Available from Food Sense, London SE99 7TT.

Healthy Eating for Older People
Ministry of Agriculture, Fisheries and Food.
Available in large print from Food Sense, London SE99 7TT. Tel: 0181-694 8862, or in Braille and on audio cassette from Royal National Institute for the Blind Customer Services, PO Box 173, Peterborough PE2 6WS. Tel: 01345-023153.

Managing Eating and Swallowing Disorders in Dementia. A Checklist and Management Tool
Copies available by post from Ms B Tanner, Speech and Language Therapist, Jocelyn Sally House, Victoria Road, Macclesfield SK0 3JF.
Price £3.

Nutrition and Health. A Management Handbook for the NHS. DO25/NUT/IOM
Health of the Nation/ Department of Health.
Published by HMSO, London, 1994.

Nutrition Assessment Checklist: Guidance Notes and Advice
Published by the Nutrition Advisory Group for Elderly People (NAGE), 1990.
Available from: Mrs H White, 30 Winford Terrace, West Park, Leeds LS16 6HY. Cost £1: cheques made payable to NAGE.

Nutrition of Elderly People. Report of the Working Group on the Nutrition of Elderly People (COMA). Report on Health and Social Subjects No. 43.
Department of Health.
Published by HMSO, London, 1992.

Nutrition Standards and the Older Adult
Royal College of Nursing.
Published by the Royal College of Nursing, 1993.

The Puree Gourmet: A Cookbook for Pureed Foods that Look and Taste Delicious
By J William Richman
Thick and Easy Instant Food Thickener Cookbook. Available from Fresenius Healthcare, 6-8 Christleton Court, Stuart Road, Manor Park, Runcorn, Cheshire WA7 1ST. Tel: 01928-579333.

A Relative's Perspective
Published by The Relatives Association (address on this page).

Relative Views
Published by The Relatives Association (address on this page).

Setting up Relatives' Groups in Homes
Published by The Relatives Association (address on this page).

Taking Steps to Tackle Eating Problems
Handbook and poster published by the Nutrition Advisory Group for Elderly People (NAGE), 1994.
Available from: Mrs H White, 30 Winford Terrace, West Park, Leeds LS16 6HY.

Windows to a Damaged World
By A Clarke, J Hollands and J Smith. Published by Counsel and Care (address on page 62).

Computer software

CORA Menu Planner. Eating Well for Older People
Published by DGAA Homelife/ The Caroline Walker Trust.
Available from DGAA Homelife, 1 Derry Street, London W8 5HY. Tel: 0171-396 6745. Price £130 for single-user licence.

Training

For a list of training courses in nutrition and dementia contact VOICES (address in column 1).

A Brief Guide to Training Resources
Edited by Alan Chapman.
Published by the Dementia Services Development Centre, University of Stirling, Stirling FK9 4LA.

Care to Make a Difference
Available from the Alzheimer's Disease Society (address on page 62). Price £149.99 plus VAT.
A course designed especially for care workers in nursing and residential homes, consisting of a 100-minute video and course booklet. The seven sessions of the course cover: understanding dementia, communication skills, rethinking routines, good practice and difficult behaviour. The course can be used with or without a facilitator and is suitable for individual and group study. Accreditation scheme tests are available at a cost of £20 per applicant.

Eating Matters: A Resource for Improving Dietary Care in Hospitals
Published by the Centre for Health Services Research, University of Newcastle upon Tyne, 21 Claremont, Newcastle upon Tyne NE2 4AA. Tel: 0191-222 7044.
Produced by Newcastle University and funded by the Nursing Division of the Department of Health.

More Active, More Often
A video explaining the practical benefits of setting up regular chair-based music to movement sessions for older people, and advice on how to set up the sessions. Published by Research Into Ageing, Baird House, 15-17 St Cross Street, London EC1N 8UN. Tel: 0171-404 6878.

Nourishing the elderly in residential care
For details of one-day courses on Nourishing the elderly in residential care, contact the Royal Institute of Public Health and Hygiene, 28 Portland Place, London W1N 4DE. Tel: 0171-580 2731.

Training for Dementia: Resources
An information sheet produced by the Alzheimer's Disease Society, which lists videos and other materials about dementia that may be useful in training. Available from the Alzheimer's Disease Society (address on page 62).

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Glossary

anorexia Loss of appetite.

aspiration Inhalation of food or drink into the unprotected airway below the lungs.

Calorie Measurement of energy. 1 Calorie = 1 kcal.

cognitive deficit Problems with reasoning power and memory.

cognitive function Reasoning power and memory.

COMA Committee on Medical Aspects of Food and Nutrition Policy (formerly the Committee on Medical Aspects of Food Policy).

DRVs Dietary Reference Values (or DRVs) are quantified nutritional guidelines for energy and nutrients. They apply to groups of people; they are not intended for assessing individual diets. The COMA report gives three figures for requirements for most nutrients: RNI, EAR, and LRNI (see below).

dysphagia Problems with swallowing caused by neurological, mechanical or structural abnormality.

EAR Estimated Average Requirement. The amount that meets the needs of 50% of people in a group for energy or a nutrient.

fibre See NSP.

intrinsic sugars Sugars contained in fruit, vegetables and milk.

kcal Measurement of energy. 1 kcal = 1 Calorie.

LRNI Lowest Reference Nutrient Intake. The amount of the nutrient which is sufficient for about the 3% of people in a population who have the lowest needs. Anyone regularly eating less than the LRNI may be at risk of deficiency.

NME sugars Non-milk extrinsic sugars. A group of sugars which are neither found naturally incorporated into the cellular structure of food, such as in fresh fruit and vegetables, nor found in milk and milk products. NME sugars include table sugar, sugar added to recipes, and honey, and are found in foods such as confectionery, cakes, biscuits, soft drinks and fruit juices.

NSP Non-starch polysaccharides. The name now given to those parts of plant foods which provide 'fibre' in the diet.

RNI Reference Nutrient Intake. The amount of a nutrient which is sufficient to meet the dietary requirements for about 97% of the people in a group. Intakes above this amount will almost certainly be adequate.

For too long, weight loss and poor nutritional status have been seen as an inevitable consequence of dementia. *Eating Well for Older People with Dementia* challenges that view by showing how a healthy, balanced diet, firmly founded on variety and quality, can help significantly in promoting and improving the health and quality of life of older people with dementia.

This work results from the ground-breaking earlier report, *Eating Well for Older People* by The Caroline Walker Trust, which gave nutritional guidelines for food served in residential and nursing homes and community meals. Written by an Expert Working Group, *Eating Well for Older People with Dementia* looks more closely at dementia. The report:

- looks at how dementia affects the ability to eat well
- examines the role that good nutrition can play in the care of older people with dementia
- emphasises the importance of organisational commitment to good nutrition, and the need for appropriate staff training, and
- provides practical and nutritional guidelines for residential and nursing homes and others catering for older people with dementia.

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