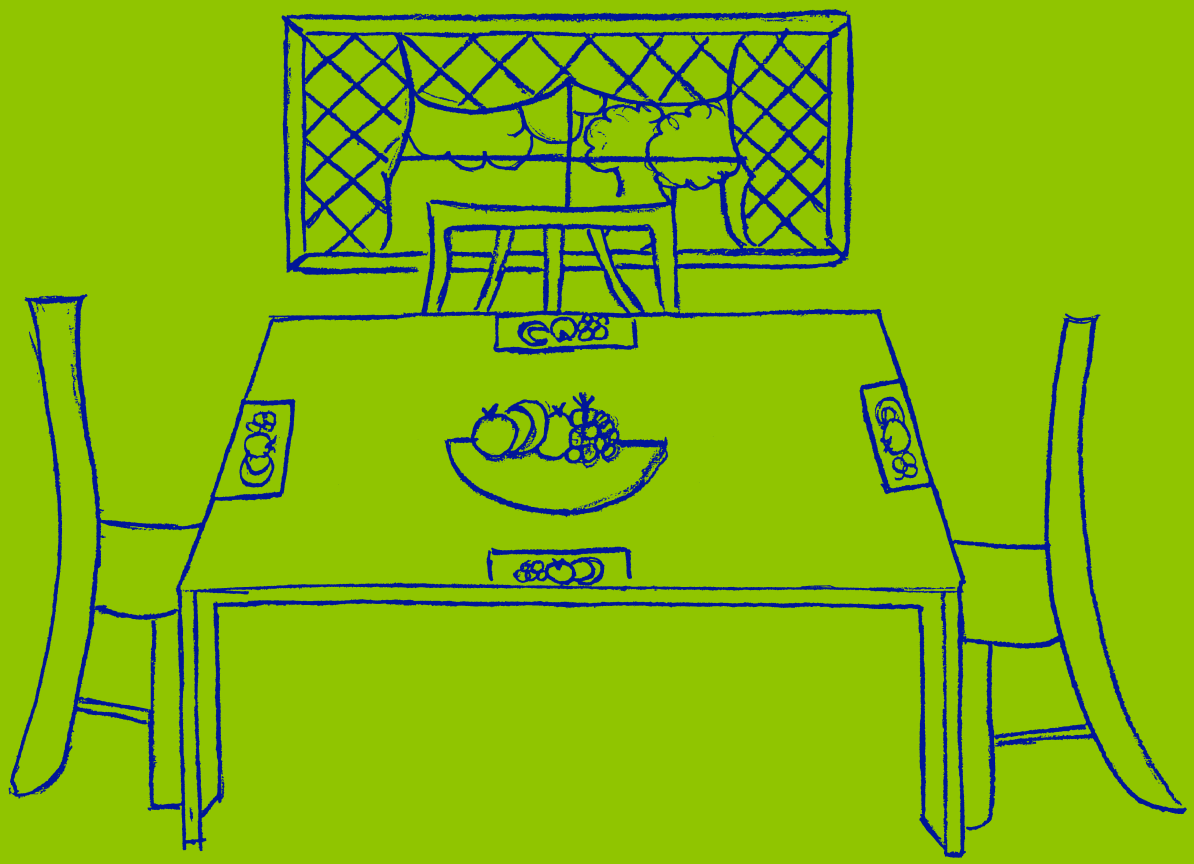
Eating well for looked after children and young people

Nutritional and practical guidelines

REPORT OF AN EXPERT WORKING GROUP



THE CAROLINE WALKER TRUST

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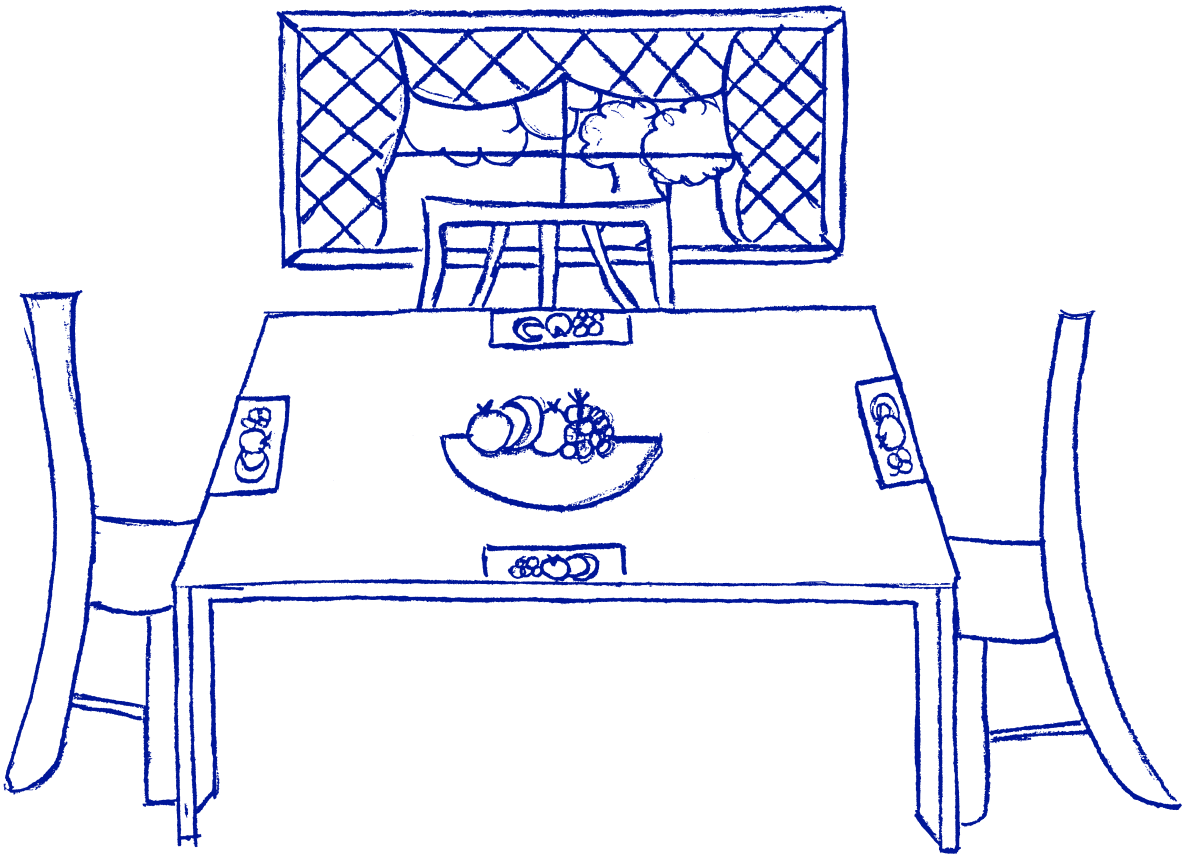

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The Caroline Walker Trust is a charity which aims to improve public health through good food. Set up in 1988, the charity is named after the distinguished nutritionist Caroline Walker who was an inspirational campaigner for good nutrition for all. For more information about The Caroline Walker Trust and its other publications and resources which encourage eating well in vulnerable groups, please see our website: **www.cwt.org.uk**

Other publications by The Caroline Walker Trust

Reports
Eating Well for Under-5s in Child Care
Nutritional Guidelines for School Meals
Eating Well for Older People

Also available:
Eating Well for Older People with Dementia (published by VOICES)

Training materials
Eating Well for Looked After Children and Young People Training Materials
Eating Well for Under-5s in Child Care Training Materials

Menu planner computer programmes
CHOMP Menu Planner – Eating Well for Under-5s in Child Care
CORA Menu Planner – Eating Well for Older People

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- all the staff and the children and young people at the residential homes who advised us and commented on the draft stages of this report
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Contents

Chapter 1

Summary and recommendations

This report deals with 'looked after children and young people' – children and young people up to the age of 18 who are looked after away from their own family by foster carers or in residential care or respite care settings. The term 'carers' applies to foster carers and to staff working in residential care and respite care settings.

The children's centre where I live
By Shane

Summary

Looked after children and young people

There are about 54,500 looked after children and young people in the UK. Of these, approximately 9,000 are looked after in a residential care setting such as a children's home, and about 45,500 are looked after by foster carers.

There is evidence that looked after children and young people are a particularly vulnerable group whose access to both adequate health care and health promotion information is often extremely poor. Their diets are a particular cause for concern because many of them will already have experienced deprivation and poor health care before they arrived in care.

Although many aspects of the care of looked after children and young people are regulated, there are currently no guidelines to enable the nutritional quality of the food provided to be monitored.

Healthy eating for all children and young people

Healthy eating and physical activity are fundamental for proper growth and development in childhood, and essential for good health and well-being in later life. To help children and young people develop patterns of healthy eating from an early age, it is important that the food and eating patterns to which they are exposed are those which promote positive attitudes to good nutrition.

A large national survey of 4-18 year olds in Britain shows that the diets of a significant proportion of children and young people:

- are too low in iron, zinc and calcium
- are too low in vitamin A and vitamin C
- contain too much of the type of sugars that most contribute to tooth damage, and
- contain too much salt.

Also, most children and young people are not eating enough fruit and vegetables.

It is therefore important to encourage all children and young people to eat well and to be physically active.

Eating is an important part of everyone's life. Encouraging children and young people to eat healthily does not mean denying them food they enjoy. Healthy eating is about having a varied, balanced diet and enjoying lots of different foods.

The way forward

The Caroline Walker Trust identified a need for clear nutritional and practical guidelines which encourage and enable healthy eating among looked after children and young people. With funding from the British Heart Foundation, the Department of Health and the Food Standards Agency, the Trust brought together an Expert Working Group to produce these guidelines.

The provision of a well balanced diet, and physical activity, are crucial to the health and well-being of looked after children and young people. The Expert Working Group recommends that the nutritional guidelines and other recommend-ations contained in this report should become standards of care for looked after children and young people. It also recommends that local authorities should organise appropriate nutritional training for carers, and that Government should support this work.

Recommendations

The term 'looked after children and young people' refers to children and young people up to the age of 18 who are looked after away from their own family – by foster carers or in residential care or respite care settings.

The term 'carers' applies to foster carers and to staff working in residential care and respite care settings.

Nutritional guidelines

1 The nutritional guidelines in this report should become standards for the care of looked after children and young people. (See page 72.)

2 Government departments should include reference to the nutritional guidelines in guidance and regulations on looked after children and young people.

3 Government should require good nutrition to form part of all Management Action Plans for improving the care of looked after children and young people.

4 Local authorities should adopt the nutritional guidelines and use them as standards in the residential homes which they provide or contract with, or which they register and inspect.

5 Local authorities should provide training and information to all relevant staff – including managers, carers and inspectors – to enable them to use the nutritional guidelines effectively.

6 External line managers and registration and inspection officers should monitor the nutritional standards of the food provided for looked after children and young people in the settings they visit. Inspectors' reports should include comments on food and nutrition. Appropriate expert advice and help should be obtained by any care setting which cannot meet the guidelines.

Management and training

7 Managers involved in the care of looked after children and young people should demonstrate a commitment to the principles of healthy eating. They should also recognise the need for looked after children and young people to develop their practical food skills so that they are better able to look after themselves when they have left care.

8 A detailed nutrition information record should be kept for each looked after child or young person. If possible and appropriate, the record could be held by the child or young person. A sample nutrition information record sheet is shown in Appendix 5.

9 In residential homes, healthy eating and food policy should be regular agenda items at management and staff meetings.

10 Within each residential home, there should be one staff member with a specific responsibility:

- for good nutrition, and
- for enabling and encouraging children and young people to take adequate physical activity, and to develop their interest, and confidence, in taking part in exercise and sporting activities.

Training

11 All carers should receive training on good nutrition and menu planning. This could be part of their skills development plan. Local authorities and other care providers should ensure that this training takes place at local level and is also

made available to managers, inspectors and other relevant staff. Government should support this work. (See page 83 for details of training materials currently available.)

12 Carers should be trained to enable all looked after children and young people to acquire information on healthy eating, and practical experience in cooking, budgeting for food, shopping, menu planning, and food storage and handling, so that they are better able to look after themselves when they have left care.

13 Those responsible for providing training for foster carers should introduce a module on healthy eating into existing training courses. This could be provided through use of the training materials currently available (see page 83).

14 A module on nutrition should be added to NVQ *Caring for Children and Young People - Level 3*, and to the equivalent SVQ.

15 A CD-ROM or Internet resource should be produced to help carers, children and young people produce nutritionally balanced menus. This resource should also be a means for children and young people to learn more about good nutrition.

Encouraging eating well

Listening to children and young people

16 Communication between carers, children and young people about food preferences is essential. Asking children and young people their views on food and food-related issues should be an integral part of everyday care.

17 Carers should actively encourage the involvement of looked after children and young people in planning menus and in preparing and cooking food.

18 Carers may find it helpful to negotiate a 'Food agreement' with the children and young people in their care. This can be an effective way of avoiding conflicts over food issues. A sample food agreement is shown on page 65.

Young people and food

19 Carers should use strategies for encouraging eating well among looked after children and young people, including:

- encouraging and helping young people to take responsibility for their health
- reminding them of the importance of good nutrition for sporting performance, good teeth, hair, nails and skin, and
- providing access to information about eating well.

Carers as role models

20 Carers should be aware that they act as important sources of information and advice and as influential role models for looked after children and young people. They can provide a positive role model for children and young people in their care, for example in the snacks and drinks they choose for themselves, and in their own attitudes to food and eating and to the importance of physical activity.

Eating for health

21 Looked after children and young people should be encouraged to eat a varied diet. This means:

- following the Government's *Balance of Good Health* advice (see page 54)
- eating at least five portions of fruit and vegetables a day
- eating a good variety of foods to ensure that adequate amounts of iron, calcium, zinc and vitamins A and C are consumed (see Appendix 1 for information on good sources of these nutrients), and
- reducing the frequency and amount of the sorts of sugars that can damage teeth.

For more on iron deficiency, see recommendations 54 and 55.

Breakfast

22 Carers should encourage children and young people to get up early enough to have breakfast every day. Breakfast is an important meal for two main reasons. Firstly, many breakfast

foods are a very good source of fibre and other important nutrients. Secondly, children and young people who skip breakfast may be tempted to eat high fat, high sugar snack foods on their way to school or later in the day.

Snacks

23 Snacks offered between meals should be varied, and children and young people should be encouraged to choose lower fat and lower sugar alternatives to biscuits and crisps.

24 Children and young people should always have access to breads, sandwich fillings and fruit. However, it is not unreasonable to place restrictions on other foods between meals such as sweets, crisps and fizzy drinks.

Drinks

25 Children and young people should be encouraged to drink water. Water quenches thirst, does not spoil the appetite and does not damage teeth.

26 Milk is an excellent source of nutrients, particularly calcium. Semi-skimmed milk can be encouraged as a drink between meals. A hot milky drink at bedtime (before teeth cleaning) might also be useful, particularly if children or young people are in a growth spurt or need to gain weight.

27 Having a drink of unsweetened fresh fruit juice, which contains vitamin C, at mealtimes can help the body to absorb the iron in foods.

Packed lunches

28 Care should be taken to ensure that packed lunches are varied. A packed lunch should contain:

- a starchy-based food (such as bread)
- a meat, fish or alternative (such as cheese or egg), and
- two portions of fruit and/or vegetables.

Social aspects of mealtimes

29 The importance of eating well and respecting each other's food choices should be part of the ethos of all care settings.

Melon By Rachel

30 Carers should sit with the children and young people at mealtimes, eat the same food as them, and encourage appropriate social skills at table, to help them develop confidence in eating with other people.

Equal opportunities

31 All that children and young people bring with them to their place of care – their race, gender, language, culture and religion – should be valued in order that children and young people feel accepted and accepting of themselves.

32 Carers should be aware of the needs of different cultural groups, and of the needs of individual children and young people. Carers should ensure that they provide foods that are appropriate to the individual's culture and religion.

Vegetarianism

33 Carers should find out about the vegetarian diets that the children and young people in their care are following, and ensure that the diet is as varied as possible. In particular they should make sure that their diets include good sources of iron, zinc and calcium. (For information on foods that are good sources of these minerals, see page 79.)

Food allergy and intolerance

34 Food intolerance is a reproducible and unpleasant reaction to a specific food or ingredient. Food allergy is a form of food intolerance and can cause severe reactions to foods. If a single food causes reactions, it is sensible to avoid it. However, carers should seek advice before excluding a large number of foods.

35 If a child or young person has a medically diagnosed true food allergy, carers should seek appropriate advice and guidance from a State Registered Dietitian.

36 Food allergies, for example allergies to peanuts or eggs, can cause a serious reaction such as anaphylactic shock. Carers should be trained in how to deal with this in case it happens. The presence of such an allergy should be highlighted in the child's or young person's care plan and conveyed to every carer.

Diets for specific medical conditions

37 Carers should discuss any concerns about diets for specific medical conditions with a State Registered Dietitian. (See *Health professionals* on page 85.)

Children and young people with special needs

38 Some children and young people with special needs may have difficulty with eating. Their carers should have training to ensure that they can give the best and most appropriate assistance.

39 A report looking in detail at the practical and nutritional requirements of children and young people with special needs should be produced.

Communication between carers and health professionals about nutrition-related issues

40 Local authority Social Services Departments should ensure that there is regular contact between the health professionals involved in the health care of looked after children and young people, and those responsible for their day-to-day care.

41 Local authorities should ensure that carers have a named health professional whom the carers can consult about nutritionally-related health issues.

42 Following the example of some areas in the UK, each health authority should appoint a community consultant paediatrician and paediatric nurses (or special health advisers) with responsibility for advising on the health of looked after children and young people.

Important health issues for children and young people

Growth and development

43 If a carer is concerned that a child or young person is not growing adequately, he or she should contact the GP, who may refer the child or young person to a State Registered Dietitian or a paediatrician.

Physical activity: being active

44 Carers should encourage all young people to take part in at least one hour of moderate intensity physical activity a day. The activity can include walking, cycling, swimming, dancing, sports and other forms of exercise. Physical activity can enhance quality of life and self-esteem, help children and young people avoid becoming overweight or obese and, for underweight children and young people, improve appetites.

45 Local authority Social Services Departments should support carers in encouraging physical activity among looked after children and young people by:

- providing free passes to local leisure centres, and
- ensuring that appropriate equipment – such as bicycles, balls and other sports equipment – is available to children and young people where they live.

Promoting healthy body weight and body image

46 Carers should promote healthy body weight and body image among looked after children and young people by providing an environment in which they have the opportunity to eat healthy food and where the play and exercise they enjoy are actively enabled and encouraged.

Underweight

47 Children and young people who need to gain weight should eat regular meals and snacks throughout the day. They also need to keep active to stimulate their appetite.

48 If low weight does not appear to be due to a poor diet or does not respond to dietary measures, carers should ask a GP for advice, in case there is an underlying physical disorder.

Overweight

49 Carers should encourage those wishing or needing to reduce their body weight to:

- eat a variety of foods at mealtimes
- include plenty of fruits and vegetables in their diet, and
- avoid high sugar/high fat snacks and drinks throughout the day. (For suggestions for healthy snacks see page 56.)

Eating disorders

50 Carers should seek expert help for those affected by an eating disorder such as anorexia or bulimia. The first point of contact is the GP who can refer the child or young person on to a specialist.

Dental health

51 Carers should ensure that children and young people brush their teeth twice a day with a pea-sized amount of fluoride toothpaste.

52 Carers should make sure that children and young people visit the dentist for a check-up at least once a year. (Dental treatment is free up to the age of 18 or up to 19 for those still in education.)

53 Carers should encourage children and young people to reduce the total amount and especially the frequency of sugary foods and drinks that they have. This also applies to drinks which are labelled as 'no added sugar', and diet drinks.

Iron deficiency

54 Iron deficiency is common among children and young people in the UK. Children and young people should therefore eat a diet that is high in iron-rich food such as meat, poultry and fish, as well as fruits and vegetables. Those who do not eat meat should have a varied diet containing foods such as cereals, pulses (peas, lentils and beans such as baked beans or kidney beans), vegetables and fruits.

55 Girls with small appetites, those who do not eat a variety of foods regularly and those trying to lose weight should ensure that they include iron-rich foods in their diets. Girls who appear pale, listless, tired and unenthusiastic about exercise, or who report heavy periods, or periods which last for many days, should have their iron status assessed by their GP.

Bone health

56 To ensure healthy bones in later life, children and young people should:

- be physically active
- have a diet which provides sufficient calcium (see Appendix 1 for information on good sources of calcium), and
- get regular exposure to summer sunlight on the skin, taking care to avoid sunburn.

Alcohol

57 Carers should explain the risks associated with alcohol. They also need to make sure that looked after young people know the alcohol content of different drinks, particularly different strength beers.

58 Carers themselves should demonstrate a responsible attitude to alcohol: for example by not glamourising alcohol and by showing young people that alcohol is not a pre-requisite for enjoyment or relaxation in the adult world.

Developing food skills for life

59 Carers should ensure that all looked after young people acquire knowledge, skills and practical experience in the following areas, so that they are better able to look after themselves when they have left care:

- understanding healthy eating
- budgeting
- menu planning
- shopping
- food storage and handling
- cooking skills, and
- clearing away.

Learning these skills should be seen as an integral part of care for all looked after children and young people.

60 Local authority Social Services Departments (or, in the case of private and voluntary sector provision, the person with overall responsibility) should ensure that looked after children and young people have access to kitchen and cooking facilities, so that they can develop their food skills. Where local interpretation of health and safety regulations makes access to a home's main kitchen difficult, separate kitchen facilities – which include a gas or electric ring, a grill and a toaster – should be provided.

61 Looked after young people should be taught and encouraged to cook for others. This is an important skill to have for after they have left care. Being able to cook simple meals for friends can be a cheap and enjoyable social activity and can help reduce isolation and boost confidence.

62 Young people should be helped to obtain basic kitchen and cooking equipment when they establish themselves independently.

63 Food skills should be an important part of aftercare support for young people. Strategies to acquire them should be part of every Pathway Plan.

Chapter 2

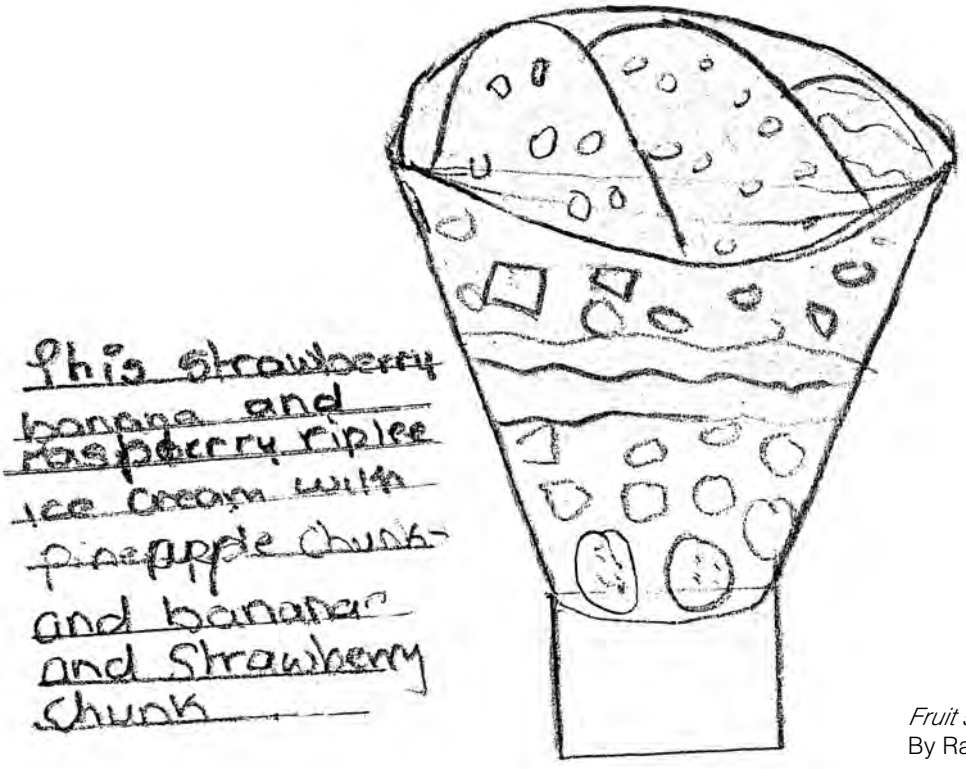
Introduction

The term 'looked after children and young people' refers to children and young people up to the age of 18 who are looked after away from their own family – by foster carers or in residential care or respite care settings. The term 'carers' applies to foster carers and to staff working in residential care and respite care settings.

Aims of this report

The aims of this report are:

- To provide clear, referenced background information about the relationship between good nutrition, physical activity and health and development for children and young people.
- To provide practical and nutritional guidelines to enable all those with responsibility for providing food for looked after children and young people to develop suitable menus and food choices which achieve good nutritional balance and variety.
- To highlight some of the important practical issues which need to be considered when helping looked after children and young people to eat well, and particularly:
  - the need for carers to receive training in nutrition
  - the preparation of healthy menus which are also appropriate for different cultures and religions
  - the need for children and young people to be involved in food preparation, and
  - the needs of children and young people with physical or learning disabilities, or with special dietary needs.
- To enable young people leaving care to have gained clear information from carers about eating well, and the skills to buy, prepare, cook – and enjoy – nutritionally adequate meals and snacks.
- To act as a resource document for all those who are interested in improving nutrition for looked after children and young people.



Fruit sundae
By Rachel

Who the report is for

The report has been written for:

- Directors, managers and senior staff in local authority Social Services Departments who are responsible for:
  - running children's homes, including staff recruitment and staff training
  - contracting with care providers, and
  - recruiting, training, assessing and supporting foster carers.
- Directors, managers and senior staff in voluntary and private sector organisations who provide care for looked after children and young people.
- Heads and senior staff responsible for registration and inspection of residential and respite care.
- Health professionals – including community paediatricians, GPs and State Registered Dietitians – who may be involved in assessing looked after children's or young people's health or who are asked for advice on helping them to eat well.
- Ministers and civil servants who are responsible for the policies which govern the standards of care for looked after children and young people.
- Local councillors who are accountable for the parenting of looked after children and young people.
- MPs and journalists and all those who would like to know about the importance of good nutrition among children and young people and the particular issues facing those in the residential care sector.

Finally and most importantly, we hope that the report will be used by all those who work with looked after children and young people. We also hope that young people in residential care and foster care may use the report themselves to find out more about the importance of good nutrition and its influence on their health and well-being in the short, medium and long term.

How to find your way around the report

Chapter 3 gives background information about looked after children and young people and explains why nutritional and practical guidelines are needed for this group.

Chapter 4 gives background information about energy (calories) and individual nutrients (carbohydrates, fat, protein, vitamins and minerals) – explaining why they are needed and which foods and drinks they are found in. It also examines how children's and young people's intakes of each nutrient compare with government recommendations.

Chapter 5 examines some of the nutrition and health issues that are particularly important for children and young people.

Chapter 6 examines general healthy eating principles and looks at food and nutrition issues such as vegetarianism, special diets, and children with special needs. It also offers some practical guidelines for encouraging looked after children and young people to eat well and looks at the important role of carers.

Chapter 7 looks at the information children and young people need to have about shopping, cooking and eating, to help prepare them for leaving care.

Chapter 8 gives quantified nutritional guidelines for looked after children and young people. It also offers advice on how to put the nutritional guidelines into practice, giving information on menu planning and budgeting and showing some sample menus which meet the guidelines.

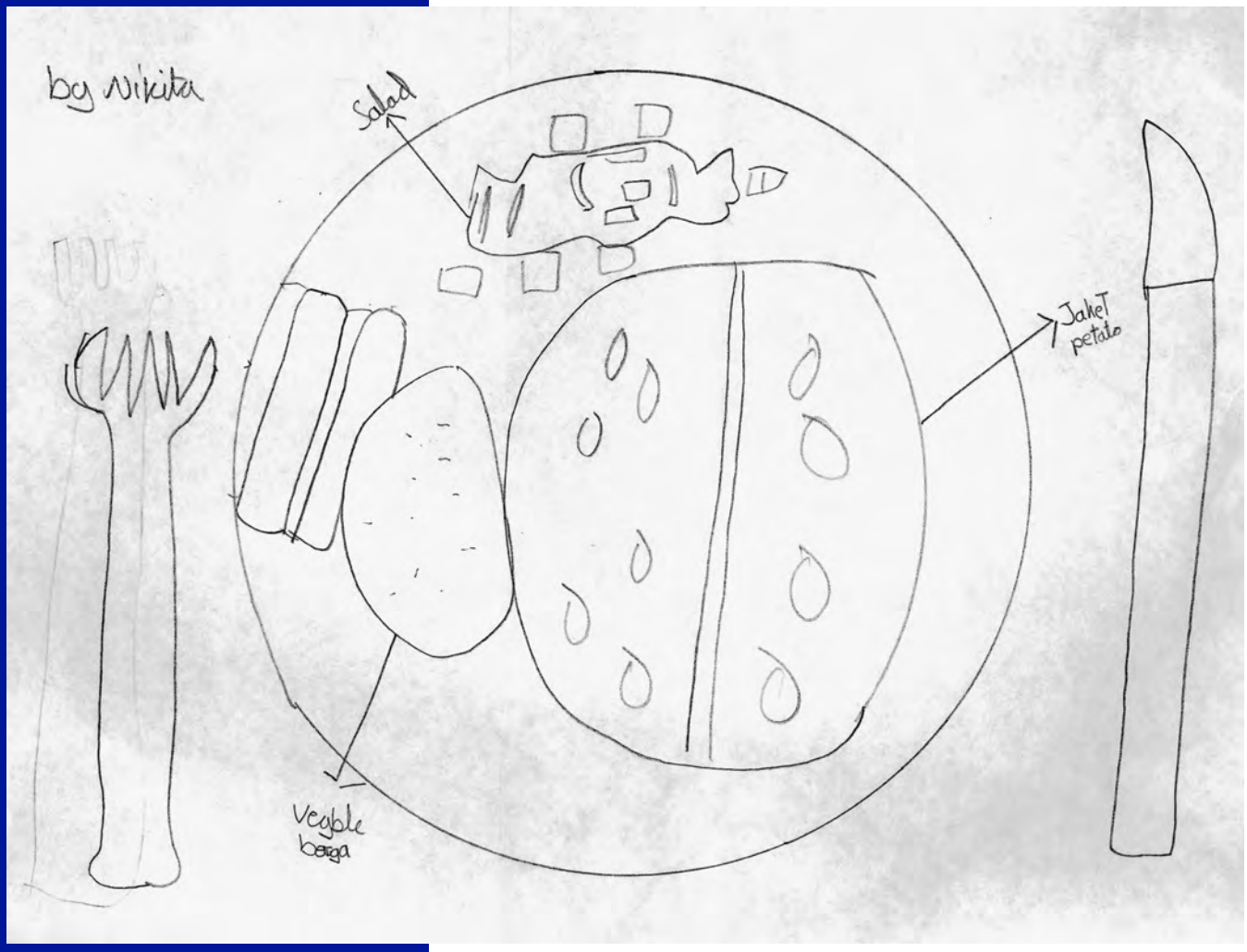
The Appendices give information on good sources of nutrients, food-related customs, sources of help and advice on eating well, and a sample nutrition information record which can be used to keep a record of the special dietary requirements and eating preferences of individual children and young people.

Chapter 3

Why nutritional guidelines are needed

Food plays a central role in everybody's life and eating well is essential for good health and well-being. Healthy eating and physical activity are fundamental for proper growth and development in childhood. A large national survey of 4-18 year olds in Britain[1] has reported that some children and young people have low intakes of essential nutrients such as iron, zinc, calcium, vitamin A and vitamin C and that many do not eat enough fruits and vegetables. It is therefore important to encourage all children and young people to eat well.

This report focuses on eating well for looked after children and young people (children and young people who are looked after in residential care and respite care settings or in foster care) because they are a particularly vulnerable group whose access to both adequate health care and health promotion information is often extremely poor.[2] The diets



Jacket potato, vegetable burger and salad
By Nikita

of looked after children and young people are a particular cause for concern because many of them will already have experienced deprivation and poor health care before they arrived in care.[3]

There is very little information available about the physical health of looked after children and young people despite considerable evidence that, as adults, young people who have been looked after have an increased vulnerability to ill health.[4] The need for a nutrition programme to support health education programmes for looked after children and young people has been recognised[5] and training in all aspects of health care for those involved in the care of looked after children and young people is essential.[2] Involving young people in food activities such as cooking and shopping not only enhances their food skills but also appears to provide a comfortable situation for young people to talk to adults.[6]

Children and young people looked after away from home

When families are unable to care for their children and neither extended families nor friends can help, substitute care may be needed. The two main forms of substitute care are children's homes and foster care. A small number of children are placed for adoption. Residential care is also provided in a variety of boarding schools, some of which offer places for children with special educational or social needs. Some children may go into therapeutic communities which provide care treatment and education within a residential setting. A small number of special establishments provide secure accommodation.

Children's homes potentially look after children and young people between the ages of 0 and 19 years. In practice it is often older children and teenagers who live in residential units. Younger children are more likely to go into foster care.

In the year up to March 2000, 6,600 children and young people were being looked after in children's homes in England, with a further 1,100 in residential schools and associated homes and hostels, 1,200 in lodgings, residential employment or living independently, and 1,700 in other types of residential placement. A further 38,000 children and young people were living with foster carers.[7]

In Scotland in 1999 there were 1,784 children and young people in residential care and 3,155 in foster care.[8] In Wales, there were 330 children and young people in residential care and 2,800 in foster care[9] and in Northern Ireland 285 children and young people in residential care and 1,611 in foster care.[10]

During the year up to March 2000 in England, a total of 4,100 young people aged 16-17 years left a care environment, with a further 2,600 leaving aged 18 or over – the majority on their 18th birthday.[7]

Data on the number of children and young people from different ethnic origins are not available but it has been estimated that between 1 in 10 and 1 in 5 children and young people who are looked after are from a minority ethnic group.[11] African Caribbean and African Caribbean English are reported to be the largest minority ethnic group who are looked after.[11]

The Children Act (1989) provides the legal basis for the provision of children's homes in England and Wales. Scotland and Northern Ireland have separate but similar

Looked after children and young people in the UK

	England to March 2000 [7]	Scotland to March 1999 [8]	Wales to March 1999 [9]	Northern Ireland to March 2000 [10]	TOTAL
In children's homes	6,600*	1,784	330	285	**8,999**
With foster carers	38,000	3,155	2,800	1,611	**45,566**

* Of the 6,600 children and young people in children's homes in England, there were 4,800 in community homes, 600 in voluntary homes and hostels and 1,200 in privately registered homes. In addition to these 6,600 there were also 1,100 children and young people in residential schools and associated homes and hostels, 1,200 in lodgings, residential employment or living independently, and 1,700 in other types of residential placement.[7]

legislation. Guidance and Regulations for Residential Care was provided in Volume 4 of The Children Act in 1991.[12] Since 1991 the programme of action for residential care has been significantly influenced by the Health Committee report *Children Looked After by Local Authorities* (1998),[13] the Utting *Review of Residential Child Care* (1991)[14] and more recently by *People Like Us,* the report of the review of the safeguards for children living away from home[15] and by the Government's response to this review published in 1998.[16] Improving the health of looked after children and young people is an important aspect of the Government's 'Quality Protects' programme in England, and of similar initiatives in other parts of the UK. At present there is a requirement to present management action plans (MAPs). It is recommended that good nutrition should form part of all management action plans.

At the time of preparing this report, National Standards for the Regulation of Children's Homes were being drawn up. It is recommended that the nutritional guidelines given in this report should be included in the new national standards.

Food provision for looked after children and young people

There is a general agreement that it is very difficult to create a good living environment for children and young people in residential care if they do not enjoy their food,[17] but little research has been done which investigates food and nutrition issues in this group.

A major survey of life in children's homes published in 1998[18] noted that while food was usually plentiful, there was an overall lack of fresh fruit and vegetables. Mealtimes were often a gauge of the atmosphere and of social interactions among residents and staff in a home, and were for the most part observed to be enjoyable. Some awkwardness was noted when the home was more institutionalised and, for example, there were insufficient chairs for staff and children to eat together. The same survey showed there was a great variation in the access children had to kitchens and food. Staff who prepared snacks for children contributed to a more homely and family-like atmosphere and it was noted that children who stayed out later often returned earlier if staff provided tasty late night snacks.

A National Children's Bureau study aimed at improving health care and health education for looked after young people[19] reported a number of comments from staff about dietary issues:

- It was generally reported that care was taken in homes to provide children and young people with foods they liked to eat, to encourage them to try new food, and to encourage healthy eating.
- Most carers said they were aware of the need to look at the amount of fat and sugar, and all carers agreed that children and young people should be encouraged to eat more fruit and vegetables.
- Carers reported that snacks between meals were an issue, especially biscuits and chips and there was a fear of letting children and young people go without food if they did not like what was served.
- Eating problems, undereating and overeating were reported as a major concern and it was suggested that food and mealtimes can potentially become a focus for conflict.

Social scientists have traditionally drawn attention to the importance of eating together at the same table for forging and sustaining good social relationships.[20] This has been recognised in official guidance and in other texts on residential child care which have also advised that, wherever possible, children should have access to kitchens and share in the preparation of food.[12]

Food skills for young people in care

A report published by Save the Children in 1998, *Look Ahead: Young People, Residential Care and Food,*[21] suggested that each year thousands of young people in the UK leave care inadequately prepared to live independently, for example to shop and cook and therefore to eat well. The report looked at food from the perspective of young people in care and those who had recently left care themselves. They found that young people in care themselves did not think they were learning enough food skills. Less than half of the young people questioned said they helped prepare meals. The activities that residents were most likely to do were setting tables, putting away, washing up and peeling vegetables. Less than a third felt they had a role to play in menu planning. The major barriers to the young people being involved were that 'staff and cooks do it' and that health and safety regulations excluded young people from the kitchens.

The problems appeared to be more common in larger homes. In smaller homes young people were more likely to be involved in food preparation and seemed to enjoy their food more. The skills suggested by the young people themselves as being important for independent living were:

- knowledge about balanced diets
- knowledge about food safety and hygiene
- budgeting and shopping skills
- knowing about freshness and quality
- knowing how to cook food properly
- knowing how to store, freeze and re-heat food

- being able to read labels and follow instructions, and
- using weights and measures.

Young people leaving care

There is particular concern about the ability of young people leaving care to provide themselves with a good diet. A report by Save the Children, *You're on Your Own*,[22] found that among those young people who said that leaving care affected their health, leaving care was strongly associated with perceived dietary problems, and in particular with weight loss. While this was in part indicative of low income, problems related to food were also emotional and practical. Depression and stress are closely related to poor food intake and in a survey of 77 young care leavers, 42% said that they were not eating enough, with some reporting quite considerable amounts of weight loss. Young people felt that in terms of health they were inadequately prepared for leaving care and many suggested that information on food and cooking was fundamental to their good health as independent adults.

A study of the health needs of a group of 48 young people leaving care[23] reported that almost half of this group claimed they rarely ate healthily. Their main reasons for this were lack of money, time, energy and motivation to cook. The young people themselves suggested that knowledge about healthy eating, cooking and budgeting would improve the physical health of children leaving care. Children interviewed by other care leavers for a video produced by Save the Children in 1995 reported that malnutrition, weight loss and physical and mental health problems were common among care leavers who often had little idea of how to manage money, pay bills or shop effectively.[24] Poor housing conditions on leaving care often mean that there are limited resources for cooking, and eating out on a budget reduces the choice and variety of foods available.

It has been estimated that between 1 in 4 and 1 in 7 young women leaving care at 16 and 17 years of age either have a child already or are pregnant.[25, 26] Knowledge of eating well is essential for teenage mothers who are particularly vulnerable to nutritional deficiencies as they themselves may still be growing, may be unaware of their pregnancy or may even be trying to restrict weight gain.

Guidance and regulations on food provision in children's homes

Guidance for catering arrangements in children's homes is given in Volume 4 of The Children Act Guidance and Regulations for residential care.[12] There is a requirement for "properly prepared, wholesome and nutritious food with reasonable choice". Dietary variety is encouraged and "special dietary needs due to health, religious persuasion, racial origin or cultural origin" should be met. However, there are no quantified guidelines to enable menu planning and good food choices, and those who inspect children's homes are currently unable to identify poor nutritional practice or encourage improvement based on the guidance provided.

The health standards in *Standards for Residential Child Care Services*[27] require the home to be "energetic in promoting the health care of each child". One of the key themes of 'Quality Protects' and other similar initiatives is promoting the voice of the child. Involving children and young people in decisions about food choice and menu planning is therefore essential.

What sort of nutritional and practical guidelines are needed?

There are different ways in which recommendations can be given. They can be given:

- as general guidelines about the sorts of foods that should be provided and how frequently they should be served, or
- as 'quantified nutritional guidelines'.

'Quantified nutritional guidelines' means guidelines on the actual amounts of energy and nutrients in the food served over a period of time. (The term 'nutrients' includes carbohydrates, fat, protein, vitamins and minerals.) This enables carers and regulators to ensure and encourage nutritionally appropriate diets for groups of people.

Quantified nutritional guidelines for looked after children and young people are given in chapter 8 of this report. Chapter 8 also offers some advice on how to put the guidelines into practice in menu planning and food choices.

General guidelines about the sorts of foods that should be included are given in chapters 4 and 5. Chapter 6 looks at the practical aspects of encouraging children and young people to eat well.

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Chapter 4

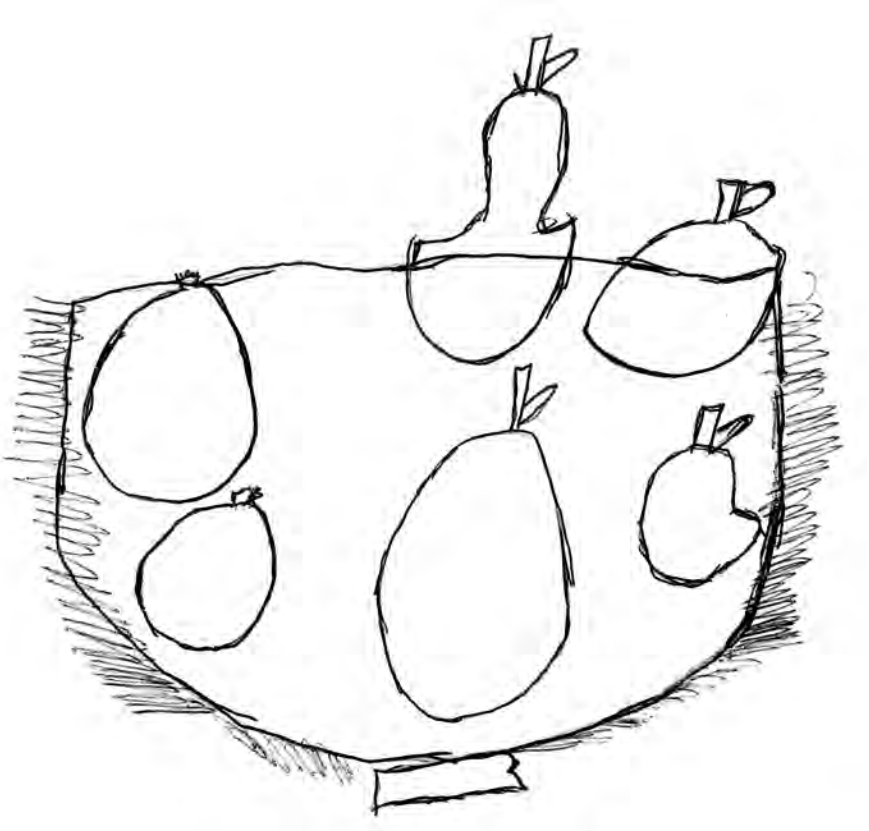
Why eating well is important for children and young people

This chapter provides information on the importance of good nutrition to children and young people between the ages of 5 and 18 years.

Nutritional guidelines for groups of people are expressed as amounts of energy (calories) and nutrients needed for good health. The term 'nutrients' includes:

- fat
- protein
- carbohydrates
- vitamins, and
- minerals.

Most foods contain a variety of nutrients so it is the *balance* of different foods within a person's eating pattern which determines whether the recommendations for 'healthy eating' are met, rather than whether a person is eating particular foods. It is important for everyone to have a diet that contains a variety of foods if they are to obtain all the nutrients their bodies need. Chapter 6 looks in more detail at how to achieve a balanced diet.



Bowl of fruit
By Kirti Ann

Eating well for under-5s

Specific information and recommendations on healthy eating for infants (under 1 year) and for children aged 1-5 years have been published in the Caroline Walker Trust report *Eating Well for Under-5s in Child Care.*[1] There are some differences in the recommendations made for younger children compared with those aged over 5 years as young children have a particular requirement for diets which are nutrient-dense. A summary of the recommendations for under-5s is given on pages 41-42 of this report. Those caring and catering for younger children are strongly encouraged to read *Eating Well for Under-5s in Child Care.*

The Caroline Walker Trust has also produced:

- *Eating Well for Under-5s in Child Care Training Materials*,[2] a training manual with information about good nutrition for under-5s in child care, as well as practical ideas for putting the theory into practice. The Training Materials can be used either by trainers or by individuals.
- *CHOMP Menu Planner*,[3] a computer program to help plan menus which meet the nutritional guidelines for under-5s in child care.

All of these materials are available from CWT, 22 Kindersley Way, Abbots Langley, Herts WD5 0DQ.

For more information see the Caroline Walker Trust website at www.cwt.org.uk.

Energy (calories)

Why we need energy

We all need energy (calories or Joules) to function and be active. The body gets energy from fat, carbohydrate and protein (and also from alcohol), but most energy needs are met by fat and carbohydrate.

Children and young people also need energy for growth and development.

Energy is measured in kilocalories (kcal), which is a metric term for calories. It can also be expressed in kiloJoules (kJ).
1kcal equals approximately 4.2kJ.
1,000 calories equals approximately 4.2MJ.

The importance of physical activity

The energy we need every day is determined both by a basic level of requirement to keep our bodies functioning (called the Basal Metabolic Rate or BMR) and by the amount of physical activity that we do (for example moving around, walking, or exercising). People who are inactive have lower energy needs and will need less food to maintain their body weight. If less food is eaten, it becomes much harder to get all the nutrients needed for good health.

Physical activity is essential for optimal growth and development in children. It is generally agreed that children and young people now are less active than those in previous generations. This has been caused by a number of factors including, for example, the time spent watching television. A number of studies have reported falling activity levels among children due to a more sedentary lifestyle. Restrictions on children being able to walk to school or play freely outside, for safety reasons, also contribute to this.

Overweight is as much a problem of too little activity as of overeating. Obesity in children is difficult to treat as care must be taken to maintain growth and development. Overweight children and young people should be encouraged to increase their activity levels. Information about strategies to prevent and reduce overweight among children and young people is given in chapter 5.

It is very important that children and young people play outdoors or spend time outside, particularly in the summer months, to ensure they are exposed to summer sunlight for the production of vitamin D. However, they should maintain adequate cover-up to prevent sunburn.

How much energy do children and young people need? Where do they get their energy (calories) from?

The average amounts of energy that groups of children and young people of different ages are likely to need are summarised below.[4]

Age	Average energy requirements in kcal (calories) per day			
	Boys		Girls	
	kcal	*MJ*	*kcal*	*MJ*
1-3 years	1,230	5.15	1,165	4.86
4-6 years	1,715	7.16	1,545	6.46
7-10 years	1,970	8.24	1,740	7.28
11-14 years	2,220	9.27	1,845	7.92
15-18 years	2,755	11.51	2,110	8.83

A national study of 4-18 year olds found that the average daily energy intakes of this age group were slightly below current estimated average requirements.[5] Among 15-18 year olds, boys had 83% of average requirements and girls had 77%.

Although energy intakes are reportedly lower than the estimated requirements, children and young people may still gain weight if they are eating more calories than their body needs each day. The increasing incidence of overweight among children and young people overall suggests that many are consuming more energy than they need. In particular, children and young adults who are inactive (ie who do very little physical exercise) are likely to have lower energy needs. (For more information on overweight see page 45.)

The nutrients fat, carbohydrate and protein all provide the body with calories. (For more about these nutrients see pages 23-26.) Recommendations for a healthy diet are often expressed as what *proportion* of energy should come from each of those nutrients. The current recommendations are that no more than 35% of total energy should come from fat, and about 50% should come from carbohydrate. Protein will provide about 15% of total energy.

The national study mentioned above found that the proportions of total energy from fat, carbohydrate and protein among children aged 4-18 years are broadly in line with these recommendations.[5] However, there are also recommendations for the proportion of total energy that should come from different *types* of fat – saturated fats and monounsaturated fats. The national study found that, in all age groups, more of the fat in children's diets was from saturated fats than currently recommended and less was from monounsaturated fats than recommended.[5] (See *Fat* on the next page.)

Similarly there are recommendations for the different types of carbohydrates, including the proportion of total energy that should come from sugars. In all age groups more carbohydrate was from 'sugars' than currently recommended.[5] (See *Carbohydrates* on page 24.)

Fat

Fat in the diet

Fat provides the most concentrated form of energy in the diet.

There are basically two types of fat:

- **saturated fats,** which are mainly from animal sources, and
- **unsaturated fats**, which are found mainly in plants and fish. The unsaturated fats include monounsaturated fatty acids and a group called polyunsaturated fats.

Some fat in the diet is essential and fat in foods is also associated with the fat-soluble vitamins – vitamins A, D and E (see page 28).

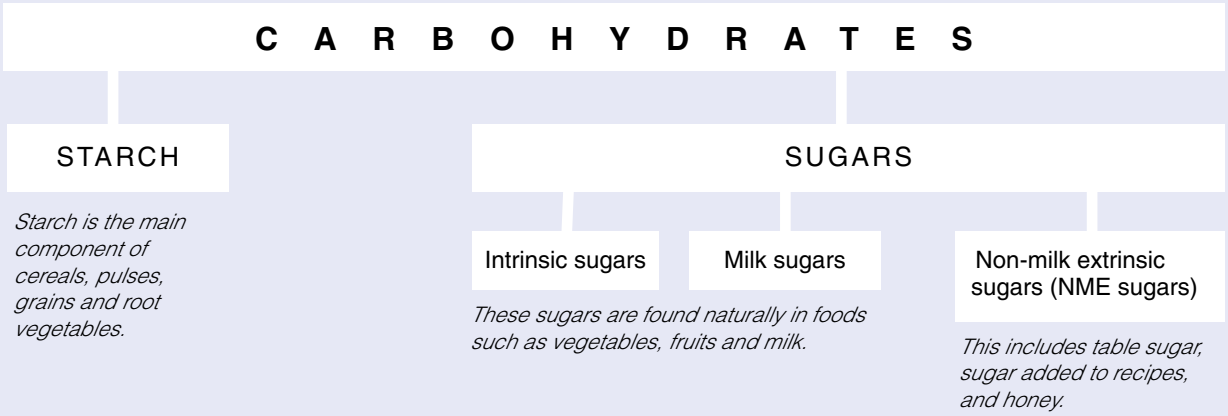
How much fat should there be in children's and young people's diets? Are they getting too much?

Healthy eating recommendations for those aged over 5 years are that total fat should provide no more than 35% of total energy, and that saturated fat should provide no more than 11% of total energy.[6] It is also recommended that intakes of monounsaturated fats in the diet are increased. This can be achieved by encouraging the use of cooking oils high in monounsaturates such as olive oil, soya oil and rapeseed oil.

A survey of children and young people aged 4-18 years in Britain suggests that the total fat intakes in this age group are broadly in line with current recommendations, with an average intake of fat of 35.4% for boys and 35.9% for girls[5] compared with a recommendation of no more than 35%. However, saturated fat intakes are higher than recommended (approximately 14% of total energy compared with the recommendation of no more than 11%). The main sources of fat in the diet for the 4-18 year olds in the survey were: milk and milk products; meat and meat products; and potatoes and savoury snacks. Each of these three groups contributed about 20% of the intake of total fat. These groups are also the main contributors to saturated fat intakes.

High total fat and saturated fat intakes among children are associated with raised blood cholesterol levels. Long-term studies have shown that blood cholesterol levels 'track' through childhood and adolescence and into adulthood and are a major risk factor for coronary heart disease in later life.[7, 8]

Carbohydrates



Carbohydrates is the term used to describe both starch and sugars in foods. Carbohydrates provide energy.

Starch is the major component of cereals, pulses, grains and root vegetables. Most people can visualise starchy foods when they think of flour and potatoes.

The term 'sugars' is often assumed to describe something white and granular found in sugar bowls, but in fact the sugars found in foods can be quite variable. In order to clarify the roles of different sugars in health, the sugars in foods have been distinguished as:

- intrinsic sugars
- milk sugars, and
- non-milk extrinsic sugars (or NME sugars).

Intrinsic sugars and milk sugars are the sugars found naturally in foods such as milk, vegetables and fruits. NME sugars include table sugar, sugar added to recipes, and honey. NME sugars are found in foods such as confectionery, cakes, biscuits, soft drinks, and fruit drinks and juices.

It is recommended that, for the population as a whole, carbohydrates should provide about 50% of total energy, and that most of this should come from starch and intrinsic sugars and milk sugars.[4]

A study of 4-18 year olds in Britain suggests that children and young people in this age group obtain just over 50% of their total energy from carbohydrate,[5] which is in line with the recommendation. However, a greater proportion of this energy currently comes from NME sugars than is recommended (see next page).

Starch, intrinsic sugars and milk sugars

How much do children and young people need? Are they getting enough?

It is currently recommended that starch, intrinsic sugars and milk sugars together should provide at least 39% of total energy.[4] A study of 4-18 year olds in Britain suggests that this figure is currently closer to 35% of total energy.[5]

Sources of starch

Sources of starch include bread, rice, chapatis, pasta, breakfast cereals, potatoes, yams and plantains. Whole grain cereals are also a valuable source of fibre (see page 27) and other vitamins and minerals.

Sources of intrinsic sugars and milk sugars

Sources of intrinsic sugars and milk sugars include fruits, vegetables and milk.

Non-milk extrinsic sugars (NME sugars)

What are non-milk extrinsic sugars?

In the past, sugars were often referred to as 'added sugars' and 'natural sugars' – terms which many people found confusing. The Government's advisory panel COMA (Committee on Medical Aspects of Food and Nutrition Policy) defined different sugars in the diet more precisely depending on their effects on health. 'Non-milk extrinsic sugars' – or NME sugars – are those which have been extracted from a root, stem or fruit of a plant and are no longer incorporated into the cellular structure of food. NME sugars therefore include table sugar, sugar added to recipes, and sugars found in soft drinks and fruit drinks. Honey is also included in this group.

The development of tooth decay is related to the amount and particularly the frequency of NME sugars in the diet.[9, 10, 11] This is most marked when sugar is eaten both at and between meals.

Children and young people do not need 'sugar' for energy. They can get all the energy they need from other carbohydrate foods.

How much are children and young people getting? Are they getting too much?

The recommendation to reduce the energy in the diet provided by NME sugars is primarily to prevent tooth decay.[4] The other concern is that foods high in NME sugars often provide calories but few other nutrients. This is particularly true for drinks such as squashes and fizzy drinks and sweets. Growing children need a relatively nutrient-dense diet. If a large proportion of the foods and drinks they consume are high in NME sugars, it may be difficult for them to obtain all the other nutrients they need each day.

Intakes of NME sugars among 4-18 year olds in Britain have been found to be considerably higher than recommended: they contribute between 16% and 18% of total energy compared with the recommendation of no more than 11%.[5] Children aged 7-10 years had the highest proportion of total energy from these sugars.

A third of the NME sugars in children's diets comes from drinks, with fizzy soft drinks providing 17% of NME sugars overall.[5] Among 15-18 year olds, boys obtained 28% of NME sugars from these drinks, and girls obtained 23%. Sweets and chocolate provide about 20% of NME sugars with about 15% coming from cakes and biscuits. Reducing the intakes of sweetened drinks would considerably reduce the amount of NME sugars consumed by children and particularly by young people.

For more information about drinks for children and young people see page 56. For information about dental health and practical ways to reduce tooth decay and tooth erosion, see page 47.

Sources of NME sugars

Sources of NME sugars include table sugar, honey, sweets, chocolate, cakes, biscuits, soft drinks, squashes and fruit drinks.

Protein

Why we need protein

Protein is needed for growth and the maintenance and repair of body tissues.

What is a Reference Nutrient Intake?

The Reference Nutrient Intake (RNI) is the amount of a nutrient that is likely to meet the requirements of nearly everybody in a group.

Reference Nutrient Intakes have been set for many nutrients including protein, B vitamins (thiamin, riboflavin and niacin), folate, vitamin A, vitamin C, calcium and iron.

How much protein do children and young people need? Are they getting enough?

Children need proportionally more protein than adults do.

The Reference Nutrient Intakes for protein are summarised below. The Reference Nutrient Intake is the amount of a nutrient which is likely to meet the requirements of most children or young people (see left).

Age	Average protein requirements in grams per day[4]	
	Boys	Girls
1-3 years	14.5g	14.5g
4-6 years	19.7g	19.7g
7-10 years	28.3g	28.3g
11-14 years	42.1g	41.2g
15-18 years	55.2g	45.0g

Most children and young people in Britain have more than adequate intakes of protein. Recent evidence[5] suggests that children aged 4-10 years have approximately twice the Reference Nutrient Intake (RNI) of protein, and older children aged 11-18 years have between 120% and 150% of the RNI. Children and young people obtain approximately 13% of total energy from protein.

Protein is available from both animal and vegetable foods, so children and young people who are vegetarians can get enough protein as long as they get a good variety of foods every day. For more information on vegetarian diets see page 60.

Children and young people in Britain obtain approximately one-third of their protein from meat and meat products and between a quarter and one-third from cereal foods such as bread and breakfast cereals.[5] Milk provides a quarter of protein for younger children (aged 4-6 years) but this declines as children get older.

Sources of protein

Sources of protein include: milk; meat, poultry and fish; eggs; cheese; tofu; pulses such as peas, lentils and beans (including baked beans, kidney beans, and butter beans); and cereal foods such as bread and rice.

Fibre

Why we need fibre

Fibre (or NSP – non-starch polysaccharides) represents those parts of cereal and vegetable foods which are not broken down in the small intestine and which are particularly important to prevent constipation and other bowel disorders. It is also suggested that some components of NSP are important for lowering blood cholesterol levels.

How much fibre do children and young people need? Are they getting enough?

No recommendation for fibre intake is made for children. It would seem sensible that children should have proportionally lower intakes compared to adults, for whom the recommendation is 18g a day. A recent study suggests that children aged 4-18 years currently have a fibre intake of between 9g and 13g a day, with intakes increasing with age.[5]

If a child has constipation, this may be alleviated by a modest increase in fibre-rich food (particularly fortified high fibre breakfast cereals, wholemeal bread, and fruit and vegetables). It is important that children and young people drink enough fluid. It is especially important that extra fluids are drunk if fibre intakes are increased or if children appear constipated. Raw bran should never be given as it can cause bloating, wind and loss of appetite and affect the absorption of other important nutrients. If constipation becomes troublesome, medical advice from a GP should be sought.

Sources of fibre

Sources of fibre include wholemeal bread, whole grain breakfast cereals, pulses (peas, lentils and beans – including baked beans, kidney beans and butter beans), dried and fresh fruit and vegetables. These foods provide useful sources of other nutrients too.

Vitamins

Fat-soluble vitamins

Vitamin A
Vitamin D
Vitamin E

These are stored in the body.
Vitamin A can be destroyed by heat or by oxidation if left exposed to the air.

Water-soluble vitamins

B vitamins: thiamin, riboflavin, niacin
Vitamin B_6
Vitamin B_{12}
Folate
Vitamin C

These are not stored in the body and, because they are water-soluble, are also more likely to be destroyed by heat or by oxidation if left exposed to the air.

Vitamins are often divided into two groups: those that are fat-soluble and those that are water-soluble. Some vitamins are found predominantly or only in animal foods – for example vitamin B_{12} (only in animal foods), and vitamin D (see page 30). Others are found predominantly in foods from vegetable origin – for example vitamin C.

The fat-soluble vitamins (A, D and E) are stored in the body and high doses of vitamins A and D should not be given.

Water-soluble vitamins (thiamin, riboflavin, niacin, vitamin B_6, vitamin B_{12}, folate and vitamin C) are not stored in the body and, because they are water-soluble, are also more likely to be destroyed if foods containing them are over-cooked or exposed to the air for long periods. This is why it is important to prepare vegetables close to the cooking time and not to over-cook them.

Reference Nutrient Intakes have been set for all vitamins except vitamin E. Not enough information is available at present to set a Reference Nutrient Intake for vitamin E.

It is important for children and young people to get enough of each vitamin. However, having too much does not bring any benefit and may even be harmful.

Vitamin and mineral supplements

Most people can obtain all the vitamins and minerals the body needs by eating a varied diet. Dietary supplements which contain vitamins and minerals may be useful in some cases where intakes of nutrients may be low (for example if young people are dieting to lose weight or are choosing to restrict their dietary choices in some way) or where needs may be greater (for example some young women may benefit from iron supplements, which should always be prescribed by a GP). However, high doses of certain vitamins and minerals can cause adverse reactions so before starting to take supplements it is important to get advice from a GP or State Registered Dietitian.

Supplements are often expensive and may not provide the right balance of nutrients that are needed. It may be more beneficial for young people to spend their money on a varied diet, particularly one which contains lots of fruits and vegetables, as there is good evidence that diets such as these are protective against some diseases.

Vitamin A (also known as retinol equivalents)

Why we need vitamin A

Vitamin A comes in two forms:

- retinol, which is only found in animal foods, and
- carotene, the yellow or orange pigment found in fruit and vegetables (both in those coloured yellow or orange and in many green ones where the orange colour is masked by chlorophyll pigment).

Carotene can be converted into retinol by the body; it takes 6 units of carotene to make 1 unit of retinol.

Vitamin A is often thought of as the 'anti-infection' vitamin as it plays an important role in maintaining the immune system. It is also essential for growth, which is why children need relatively more vitamin A than adults. Vitamin A is also associated with good vision in dim light as retinol is essential for the substance in the eye which allows night vision.

Experts now believe that carotene has a much wider role than just as a means to produce vitamin A. It may protect the body from internal damage to the cells, which could lead eventually to heart disease or the development of cancer.

How much do children and young people need? Are they getting enough?

Vitamin A is the most difficult vitamin to get right in the diets of children and young people as both deficiency and excess can be a problem, and also because relatively few foods contain high levels of this vitamin.

The Reference Nutrient Intakes (RNI) for vitamin A are: 500µg (micrograms) a day for children aged 4-10 years; 600µg a day for boys aged 11-14 and girls aged 11-18; and 700µg a day for boys aged 15-18 years (see Appendix 2).

Recent evidence[5] suggests that intakes of vitamin A are quite variable among children and young people in Britain. In all age groups there were some children with intakes lower than the Reference Nutrient Intakes, and among the older children a high proportion had very low intakes.

The majority of vitamin A in children's and young people's diets comes from vegetables and milk and milk products, with smaller amounts from meat and meat products, fat spreads and cereal products. Younger children who were given vitamin supplements had significantly greater (but safe) vitamin A intakes.[5]

Very high intakes of vitamin A can be dangerous. They can cause liver and bone damage, hair loss, double vision, vomiting and headaches. It is recommended that regular intakes should not exceed 3,000µg a day among 4-6 year olds, 4,500 µg a day among 6-12 year olds or 6,000µg a day among adolescents.[4] A normal diet and appropriate use of vitamin supplements should give no cause for concern.

Sources of vitamin A

Retinol

Few foods provide retinol naturally. The best sources are liver and liver pâté (since animals store vitamin A in the liver). However, as these foods can contain high levels of vitamin A, it is suggested that they are eaten not more than once a week. Anyone who is pregnant should avoid eating liver and liver pâté.

Butter contains retinol, as does cheese and to a lesser extent eggs. Margarine is fortified with vitamin A by law. Other fat spreads may also be fortified in this way. It is worth checking the label of other fat spreads to see if they are fortified. Milk and milk products usually provide about a third of daily vitamin A intakes in young children.

Carotene

Carrots are the best source of carotene but other orange foods such as sweet potatoes, mango, melon and apricots (dried or fresh) as well as green leafy vegetables (such as spinach, watercress and broccoli), tomatoes and red peppers are also good sources.

Children and young people who do not consume milk or milk products, or who do not regularly eat those fruits and vegetables which are high in vitamin A, are unlikely to achieve their RNI for vitamin A. They should be encouraged to include a variety of foods which are useful sources of vitamin A. For example, children and young people who do not like cooked carrots may enjoy them raw, or may not object to them in mixed dishes, stews, soups or stir-fries.

For more information on sources of vitamin A, see Appendix 1.

Vitamins (continued)

Vitamin D

Why we need vitamin D

Vitamin D is needed for healthy bones and teeth. Prolonged deficiency of vitamin D in children results in rickets, the main signs of which are skeletal malformation (such as bowed legs) with bone pain or tenderness and muscle weakness. A child with vitamin D deficiency is usually miserable and lethargic.

How much do children and young people need? Are they getting enough?

The main source of vitamin D is from exposure of the skin to ultraviolet (UV) radiation in summer sunlight. Vitamin D is present in a limited number of foods but after the age of 3 years people are generally able to maintain satisfactory vitamin D status from sunlight, so recommendations for intake are only made for children up to 3 years of age.

If children and young people rarely go outside, or go outside only when fully covered in clothing, they may have insufficient opportunity to make vitamin D in their skin during the summer months. If carers are concerned that a child or young person may have low vitamin D status they should make sure that foods and drinks which are good sources of vitamin D are consumed regularly (see Appendix 1) or seek advice from their GP.

There are concerns about the link between the exposure of the skin to UV radiation and subsequent skin cancer. It is recommended that children and young people should be protected from strong sunshine by using shade, covering up, and applying a high factor sunscreen on bare skin.[12]

High doses of vitamin D can be dangerous and the gap between the requirement and the toxic dose is not large – as little as five times the recommended intake taken regularly is associated with symptoms of vitamin D toxicity. It is therefore important that all vitamin supplements are kept out of reach of children.

Sources of vitamin D

Very few foods are good sources of vitamin D. Oily fish such as tuna, salmon and pilchards provide vitamin D, as do foods fortified by manufacturers such as margarine, many fat spreads, breakfast cereals, and some yoghurts and milk-based drinks.

For more information on sources of vitamin D, see Appendix 1.

B vitamins: thiamin, riboflavin and niacin

Why we need the B vitamins thiamin, riboflavin and niacin

B vitamins – thiamin, riboflavin and niacin – are particularly important for the brain and nervous system. The body also needs these vitamins to be able to use the energy (calories) in food.

How much do children and young people need? Are they getting enough?

The Reference Nutrient Intakes for these vitamins are given in Appendix 2.

A study of 4-18 year olds in Britain[5] found that average intakes of thiamin are well above the Reference Nutrient Intake (RNI) for this vitamin. Fortified breakfast cereals and other cereals and cereal products were the main dietary source of thiamin.

Average riboflavin intakes in this study were considerably higher than the RNI, but very low intakes were noted among just over 20% of girls between the ages of 11-18 years. The contribution made by milk and milk products to riboflavin intake decreased substantially as children got older, and the main source of riboflavin for all age groups was cereal and cereal products, particularly fortified cereals.

Niacin intakes were above the RNI for almost all children and young people and again cereals were the main provider of this vitamin.

A varied diet which provides sufficient energy and protein will usually provide enough of these B vitamins at the same time.

Sources of thiamin and niacin

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

Sources of riboflavin

Sources of riboflavin include: milk and milk products such as yoghurt; poultry; meat; oily fish (such as tuna, salmon or sardines); and eggs.

For more information on sources of thiamin, riboflavin and niacin, see Appendix 1.

Vitamins (continued)

Folate

Why we need folate

Folates are a group of compounds, found in foods, which collectively are known as 'folate' or 'folic acid'. Folate is an essential vitamin for many body processes, including forming red blood cells, making new cells, and use of protein in the body. Deficiency can lead to a particular type of anaemia known as megaloblastic anaemia. In addition low folic acid intakes in early pregnancy are associated with an increased risk of neural tube defect births (such as spina bifida) so it is particularly important that any young women who might become pregnant include good sources of folates in their diet. (For more information about teenage pregnancy see page 51.)

How much do children and young people need? Are they getting enough?

The Reference Nutrient Intake (RNI) for folate is 100µg (micrograms) a day for children aged 4-6, 150µg for children aged 7-10 years, and 200µg a day for older children.

A study of 4-18 year olds in Britain[5] suggests that the majority of boys have intakes above the RNI. However, average intakes among girls are slightly below the RNI, and 4% of girls aged 15-18 years have extremely low intakes. Cereals, cereal products, vegetables, potatoes and savoury snacks were the main sources of folate for children and young people.

Sources of folate

Sources of folate include green leafy vegetables and salads, oranges and other citrus fruits, liver and yeast extract as well as foods which have been fortified including breakfast cereals and some breads.

Folate is partly destroyed by prolonged heating, for example by overcooking food or by heating it and keeping it for long periods. So vegetables should be prepared as close to the cooking time as possible.

For more information on sources of folate, see Appendix 1.

Vitamin B6

Why we need vitamin B6

Vitamin B_6 is the name given to a whole group of substances that are commonly found in both animal and vegetable foods and which are involved in a number of body processes involving amino acids (the protein building blocks).

How much do children and young people need? Are they getting enough?

Deficiency is rare. If children and young people have a varied diet they are unlikely to be deficient in B_6.

Sources of vitamin B_6

Good sources of vitamin B_6 include liver, bananas, whole grain cereals and peanut butter.

Vitamin B12

Why we need vitamin B12

Vitamin B_{12} interacts with folate and vitamin B_6. Together these vitamins help the body to build up its own protein, especially for nervous tissue and red blood cells.

How much do children and young people need? Are they getting enough?

Vitamin B_{12} is found almost exclusively in animal products. Deficiency of this vitamin is virtually unknown except when animal products are very strictly excluded from the diet. Teenagers who become strict vegans need to be aware that they need to include a source of vitamin B_{12} in their diet (see page 61).

Sources of vitamin B_{12}

All foods of animal origin contain vitamin B_{12} – for example meat, fish and milk. Some other foods are fortified with vitamin B_{12} , such as fortified breakfast cereals, drinks such as fortified blackcurrant drinks, and some yeast extracts.

Vitamins (continued)

Vitamin C

Why we need vitamin C

Vitamin C has an important role in preventing disease and maintaining good health. The body needs vitamin C to produce and maintain collagen, the foundation material for bones, teeth, skin and tendons. It is also important in wound healing. It is suggested that vitamin C also has a role as an antioxidant vitamin in preventing damage to cells and tissues. Vitamin C also helps the body to absorb iron in the diet if both nutrients are present in the same meal.

How much do children and young people need? Are they getting enough?

The Reference Nutrient Intake (RNI) for vitamin C is 30mg a day for children aged 4-10 years, 35mg a day for children aged 11-14 years and 40mg a day for older teenagers.

There is a large variation in the intake of vitamin C among children and young people in Britain.[5] Overall, intakes in all age groups are higher than the RNI, and older boys have particularly high intakes. Some children and young people however do have intakes below the RNI. Encouraging all children and young people to eat more fruits and vegetables would ensure both sufficient vitamin C as well as increasing intakes of other important nutrients such as folates and vitamin A.

Nearly half the average daily intake of vitamin C in the diets of young people comes from fruit juice and fortified soft drinks, with potatoes, fruits and vegetables and savoury snacks contributing the majority of the remaining vitamin C. Fruit contributed only 10% of the vitamin C intake for boys and 13% for girls.

Sources of vitamin C

Sources of vitamin C include: fruit and fruit juices, potatoes (including chips) and other vegetables. Citrus fruits such as oranges are particularly good sources as are broccoli, green peppers, blackcurrants and strawberries. Some drinks are also fortified with vitamin C.

For more information on sources of vitamin C, see Appendix 1.

Minerals

There are a number of minerals in the diet which are essential including iron, calcium, zinc, copper, iodine, magnesium, phosphorus, potassium and selenium. Reference Nutrient Intakes have been set for all these minerals.[4]

Sodium (which is found in salt) is also discussed here as there are recommendations to reduce the amount of sodium in the diet.

Iron

Why we need iron

Iron is an essential part of the pigment in red blood cells called haemoglobin, which carries oxygen. A deficiency in iron will cause anaemia. In a person with anaemia, the blood transports less oxygen for the body's needs and so limits the person's ability to be physically active.

Children with anaemia may become pale and tired and their general health, resistance to infection, and vitality will be impaired. Sometimes there are no apparent symptoms and anaemia may be undetected. Prevention of iron deficiency is important because, apart from these immediate effects, it is suggested that iron deficiency in children affects intellectual performance and behaviour in the longer term.[4]

How much iron do children and young people need? Are they getting enough?

The current Reference Nutrient Intakes for iron are:

- 6.1mg a day for children aged 4-6 years
- 8.7mg a day for children aged 7-10 years
- 11.3mg a day for boys aged 11-18 years
- 14.8mg a day for girls aged 11-18 years.

The higher requirement proportional to body weight for the younger age group reflects their increased needs during this period of rapid growth and development.

Iron deficiency is common in most countries, especially among young women. It can be assessed by measuring:

- the amount of iron in the diet, or
- the haemoglobin level (the amount of iron being carried in the blood), or
- the amount of iron stores in the body (serum ferritin level).

Girls and boys need a greater amount of iron during the adolescent growth spurt. Girls also need more iron after the onset of menstruation. Iron deficiency anaemia has been commonly observed among adolescent girls, and reported dietary intakes of iron are often low.[13] Teenage girls who report trying to lose weight by dieting or who have become vegetarians are particularly at risk – nearly a quarter of girls in these groups have anaemia.[14]

A survey of 4-18 year olds in Britain[5] reported that average iron intakes for boys were above the

Minerals (continued)

Iron (continued)

Reference Nutrient Intake (RNI). However, among girls the average iron intakes were below the RNI, and a substantial number of girls had very low intakes.

In the study mentioned above, mean haemoglobin levels below the level used to define anaemia were found among 3% of boys and 8% of girls aged 4-6 years, and among 1% of boys and 9% of girls aged 15-18 years. (There is no defining limit for anaemia for children aged between these two age groups.) Serum ferritin levels – which give an indication of the amount of iron stores in the body – were found to be low in 18% of 4-6 year old boys and in 9% of 4-6 year old girls, and in 5% of the older boys and 27% of the older girls aged 15-18 years. (Overall, boys and girls who consumed more haem iron were more likely to have higher haemoglobin levels and serum ferritin levels.) It appears, therefore, that a substantial proportion of older girls in the UK would benefit from higher intakes of iron from food.

Cereal and cereal products were the main sources of iron for children and young people (due to the fortification of white bread and breakfast cereals) and vegetables, potatoes and savoury snacks contributed about a fifth of total iron intake. Less than 15% of total iron intake among children and young people comes from meat and meat products.

Sources of iron

There are two forms of iron in foods:

- haem iron, which is found in foods of animal origin such as meat and meat products, and
- non-haem iron, which is found in foods of plant origin.

Haem iron is found in foods of animal origin such as beef, lamb, chicken and turkey, liver* and kidney, and in some fish such as sardines and tuna. Haem iron is absorbed into the body more easily than non-haem iron.

Non-haem iron is found in foods of plant origin including cereal foods like bread, pulses (such as peas, beans and lentils), dried fruits and green vegetables. It is also found in fortified breakfast cereals.

For more information on sources of iron, see Appendix 1.

* Liver, including liver pâté, is very rich in vitamin A, which can be harmful in large amounts (see page 29.) Pregnant women are advised not to eat liver.

Preventing iron deficiency: what can help?

- For older children, a diet that includes meat*, poultry, fish and lots of fruits and vegetables will provide plenty of iron. Children who do not eat meat or fish require a diet of variety containing foods such as cereal foods, pulses, vegetables and fruit. For more information about vegetarian diets, see page 60.

- Although iron from plant foods is not absorbed by the body as well as iron from animal sources, there are ways of increasing the amount absorbed:

  – Foods with lots of vitamin C help the body absorb iron if they are eaten at the same time. Fruit and fruit juices, tomatoes and some green vegetables are good sources of vitamin C. Having a fruit juice along with an iron-fortified breakfast cereal, for example, will provide a good start to the day.

  – Meat* also helps the absorption of iron from vegetable foods.

- Some foods can hinder the absorption of non-haem iron from foods. For example, tannic acid in tea and coffee can reduce the amount of iron absorbed. It is advisable not to give these drinks to children and young people at mealtimes. If given at breakfast, for example, they would hinder the absorption of the iron in a fortified breakfast cereal.

Iron supplements for children and young people should be prescribed only by a doctor as iron can be harmful in large doses. Iron supplements (and all vitamin and mineral preparations as well as medicines) should always be kept safely out of the reach of small children.

** Meat, meat products and meat dishes*
Because of recent food scares, there may be some concern about giving meat to children. However, meat is a very important source not only of iron but also of zinc, another essential nutrient. Information on achieving adequate intakes of these nutrients on a meat-free diet is given on page 60.

Calcium

Why we need calcium

Calcium is needed for building bones and keeping them strong, for transmitting nerve impulses and muscle actions and for many other body functions.

How much do children and young people need? Are they getting enough?

The current Reference Nutrient Intakes for calcium for children and young people are:

- 450mg a day for children aged 4-6 years
- 550mg a day for children aged 7-10 years
- 1,000mg a day for boys aged 11-18 years
- 800mg a day for girls aged 11-18 years

A recent study of 4-18 year olds in Britain[5] suggests that there is a wide variation in calcium intake among children and young people. Younger age groups generally have intakes above Reference Nutrient Intakes. Among 11-14 year olds, one in eight boys and one in four girls had very low intakes, and among 15-18 year olds 9% of boys and 19% of girls had very low intakes. The main source of calcium was milk and milk products, but the amount provided by milk declined substantially with age from 25% of calcium intake for children aged 4-6 to 8% of intake for 15-18 year olds. Cereals and cereal products provide most of the remaining calcium, particularly white bread.

It is important to ensure that children and young people who do not have milk or dairy products have sufficient calcium, for example in a soya drink which has been fortified with calcium, or from tinned fish mashed with the bones. For more information about dairy-free diets, see chapter 6.

Sources of calcium

Sources of calcium include: milk, soya drink fortified with calcium, yoghurt, cheese, cheese spread, bread, tinned fish (eaten with the bones), tofu, egg yolk, pulses such as beans, lentils and chick peas, spinach and green leafy vegetables, dried fruit, oranges and sesame products.

For more information on sources of calcium, see Appendix 1.

Minerals (continued)

Zinc

Why we need zinc

Zinc plays a major role in the functioning of every organ in the body. It is needed for normal metabolism of protein, fat and carbohydrate and is associated with the hormone insulin which regulates the body's energy.

Zinc is also involved in the immune system, the use of vitamin A, and in wound healing. Although it is known to have all those functions, more research is needed before the role of zinc can be defined more precisely.

How much do children and young people need? Are they getting enough?

The Reference Nutrient Intakes for zinc are:

- 6.5mg a day for children aged 4-6 years
- 7mg a day for children aged 7-10 years
- 9mg a day for children aged 11-14 years
- 9.5mg a day for boys aged 15-18 years and 7mg a day for girls aged 15-18 years.

A study of 4-18 year olds in Britain[5] suggests that overall average intakes of zinc in this age group are below the Reference Nutrient Intakes, and a significant proportion have very low intakes (for example about 1 in 8 older boys and 1 in 3 older girls).

An increase in the intake of meat and meat dishes will ensure a higher zinc intake. Those not eating meat should regularly include in their diet whole grain cereals and breakfast cereals, milk, milk products and eggs.

Sources of zinc

Sources of zinc include meat, eggs, milk, cheese, whole grain cereals and pulses.

Sodium

Sodium in the diet

Sodium is essential for fluid balance, but too much sodium as salt is associated with raised blood pressure in later life, and this is a risk factor for heart disease. There is also evidence that adolescents who are obese may be particularly sensitive to the effect salt has in raising blood pressure.[15]

How much sodium do children and young people need? Are they getting too much?

The main source of sodium in the diet is as salt (also called sodium chloride), added to manufactured foods and used in cooking and at the table. It is generally agreed that most people in the UK eat too much salt and, if children get used to food which is salty early in life, this may encourage a lasting taste for salty foods.

Children and young people who regularly eat snack foods such as crisps or salted nuts, processed meats (such as salami or ham), cheese and tinned foods such as beans or spaghetti in sauce, are probably getting far more salt than they need.

A study of 4-18 year olds in Britain found that average sodium intakes were well above the Reference Nutrient Intake (RNI) in all age groups, and the highest consumers have intakes between four and five times the RNI.[5] Most children and young people reported having salt in food cooked for them. About half also added salt at the table and this was more likely as children got older.

The main sources of sodium for children and young people are: foods to which salt is added in processing or preparation, such as meat products, some canned foods, salted potato and other savoury snacks, and some cereal foods.

Sources of sodium

Children and young people should not eat foods which are high in sodium too often. Foods high in sodium include: bacon, ham, sausage, smoked cheese or smoked fish, crisps and salted snacks.

Fresh meat and poultry and all fresh and frozen fruit and vegetables are low in sodium.

It is important not to add (or to add only very little) salt to foods in cooking. Other spices can be used instead of salt to add flavour to food, for example chilli, herbs, lemon juice or mustard.

Minerals (continued)

Other minerals

A number of other essential minerals have a Reference Nutrient Intake and the intakes and sources of these nutrients are summarised below.

Copper

Copper is an essential component of many substances which control body functions. We do not yet know whether the health of those with low intakes is affected. No tests are yet available to make this assessment. Copper is found in a wide variety of foods, particularly in vegetables, fish and liver.

Iodine

Iodine helps to make thyroid hormones necessary for maintaining the metabolic rate. Iodine deficiency is now rare in the UK but is still common in many areas of the world. Iodine is found in milk and fish in particular and intakes are generally greater than requirements.

Magnesium

Magnesium is important for the development of the skeleton and for maintaining nerve and muscle function. The main sources of magnesium in the diet are cereals and green vegetables, with cereal foods providing about a third of daily magnesium intake.

Phosphorus

About 80% of the phosphorus in the body is present in the bones, and phosphorus, with calcium, provides rigidity to the skeleton. Phosphorus is found in all plant and animal cells, so children and young people will get enough phosphorus as long as they eat a varied diet.

Potassium

Potassium helps to regulate body fluids and also has a role in nerve and muscle function. It is therefore important for children and young people to have an adequate intake. A large range of foods contain potassium and an inadequate intake is unlikely if children and young people have a varied diet. Potassium is particularly abundant in vegetables, potatoes, fruit and fruit juices.

Selenium

Selenium is involved in the mechanism which protects the body from damage inside the individual cells due to oxidation. There is little evidence to suggest that low intakes of selenium have been associated with ill health in the UK to date. Selenium is found in cereals, meat, fish, and Brazil nuts.

Examples of good sources of vitamins and minerals in foods can be found in Appendix 1. Details of the dietary reference values (including the Reference Nutrient Intakes) for all nutrients for children and young people are given in Appendix 2.

Nutrition and 1 to 5 year olds

Much of the advice and information provided for older children on pages 22-40 is equally important for children aged 1-5 years. However, there are some specific recommendations on eating well for children of this age which are summarised here.

Eating for health

- It is important that the under-5s get enough energy (calories) for growth and development. While adults and children aged over 5 are encouraged to eat a diet that is high in starchy foods and low in fat, younger children on this sort of diet may not have the appetite to eat enough food to provide all the nutrients they need. Carers should therefore be sensitive to the needs of children who are fussy eaters or small eaters and ensure that these children are offered food that they will accept.
- Fruit and vegetables are particularly important for good health. Under-5s should be encouraged to eat five child-sized portions of fruit and vegetables a day – for example: half an apple; two portions of vegetables (such as peas, carrots or tomatoes); a glass of fruit juice (diluted, and preferably served with a meal); and a small banana or a dried fruit snack (such as raisins).
- It is recommended that children up to the age of 5 years should receive vitamin drops containing vitamins A, C and D.
- The iron intake of children under 5 is currently lower than recommended and there is evidence to suggest that low iron status is common in this age group. Under-5s should therefore eat a diet that is high in iron-rich food such as meat, poultry and fish, as well as fruits and vegetables. (Meat and meat dishes are also a good source of zinc.) Children who do not eat meat should have a varied diet containing foods such as cereals, pulses (peas, beans and lentils), vegetables and fruits.
- The intakes of the type of sugars in the diet which most contribute to tooth decay are higher than recommended among the under-5s. If children have sugary foods and drinks, these should be given with meals rather than as snacks between meals. Children do not need sugary foods such as sweets, chocolate, honey or soft drinks for energy. Starchy foods – such as potatoes, bread, rice, pasta and yam – are better sources of energy as these foods contain other important nutrients too.

Drinks for 1 to 5 year olds

- Children should be encouraged to drink water if they are thirsty. Water quenches thirst, does not spoil the appetite, and does not damage teeth.
- Milk is a good drink for 1 to 5 year olds. Whole cow's milk is suitable as a main drink for most children from 12 months of age. Semi-skimmed milk can be introduced gradually after the age of 2 years, provided that the child is a good eater and has a varied diet. Skimmed milk is not suitable as the main drink for children under 5 years of age.
- Diluted fruit juice is a useful source of vitamin C. Younger children should be encouraged to have a glass of diluted fruit juice with their main meal or with breakfast, as this may also help the body to absorb iron.
- If children are given soft drinks (such as squashes) containing the intense sweetener saccharin, these should be diluted more than they would be for an adult or older child – for example, 1 part squash to at least 8 parts water.
- Tea and coffee are not suitable drinks for under-5s as they contain tannic acid which interferes with iron absorption.

Nutrition and infants (children aged 0-12 months)

Nutrition in the early years of life is a major determinant of growth and development and it may also influence adult health. Weaning – the introduction of solid foods to babies as they become less dependent on milk – coincides with a period of rapid growth and development, so a good diet during this period is crucial. Advice on infant feeding is largely based on recommendations from the Government Committee on Medical Aspects of Food and Nutrition Policy (COMA). For further sources of information, see Appendix 4. Recommendations for infants under 1 year, taken from the Caroline Walker Trust report *Eating Well for Under-5s in Child Care*,[1] are summarised here.

Drinks

- Milk is the main source of nutrition for infants. Breastfeeding provides the healthiest start. (However, in circumstances where breastfeeding is not possible, infant formula is an appropriate substitute.) The choice of infant formula and milks for infants is very important, so carers should talk to a Health Visitor to find out the best type to give.
- Babies who are bottle fed should be held and have warm physical contact with an attentive adult while being fed.
- Babies should never be left propped up with bottles as this may cause choking and is inappropriate to babies' emotional needs.
- From 6 months of age, infants should be introduced to drinking from a cup or beaker.
- Cow's milk is not suitable as a main drink for infants under 12 months. However, whole cow's milk can be used as an ingredient in weaning foods – for example to moisten mashed potato.

- If drinks other than milk or water are given – for example baby juices or baby drinks – these should be diluted with at least 8 parts water and should be confined to mealtimes. Because of the risk to dental health, children over 6 months should not be given these drinks in a feeding bottle. Water given to children under 6 months, either directly or in a diluted drink, should be boiled and cooled first.
- Adult-type soft drinks or 'diet' drinks, tea and coffee are not recommended for infants.

Weaning (from 4-6 months)

- Foods containing gluten (such as bread, pasta or chapatis) should not be given to infants under 6 months.
- Salt should not be added to foods for infants.
- Naturally sweet fruits (such as apples or bananas) can be used to sweeten foods rather than adding sugar to them.
- Artificial sweeteners should not be added to foods for infants.
- Soft cooked meat, fish and pulses (for example peas, beans and lentils) are suitable foods to include in the diet from 4-6 months.
- It is important to offer a variety of flavours and soft textures. Between 6 and 12 months, food should be given which allows the infant to learn to chew and accept a wide variety of food textures.
- If using commercial weaning foods, follow the manufacturer's instructions carefully.
- Eggs given to babies or toddlers should be cooked until both the yolk and the white are solid.
- It is recommended that children up to the age of 5 years should receive vitamin drops containing vitamins A, C and D.

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Chapter 5

Important health issues for children and young people

Growth and development

Good nutrition is fundamental to growth and development in children and young people. Nutritional status is usually measured by looking at the child's height and weight.

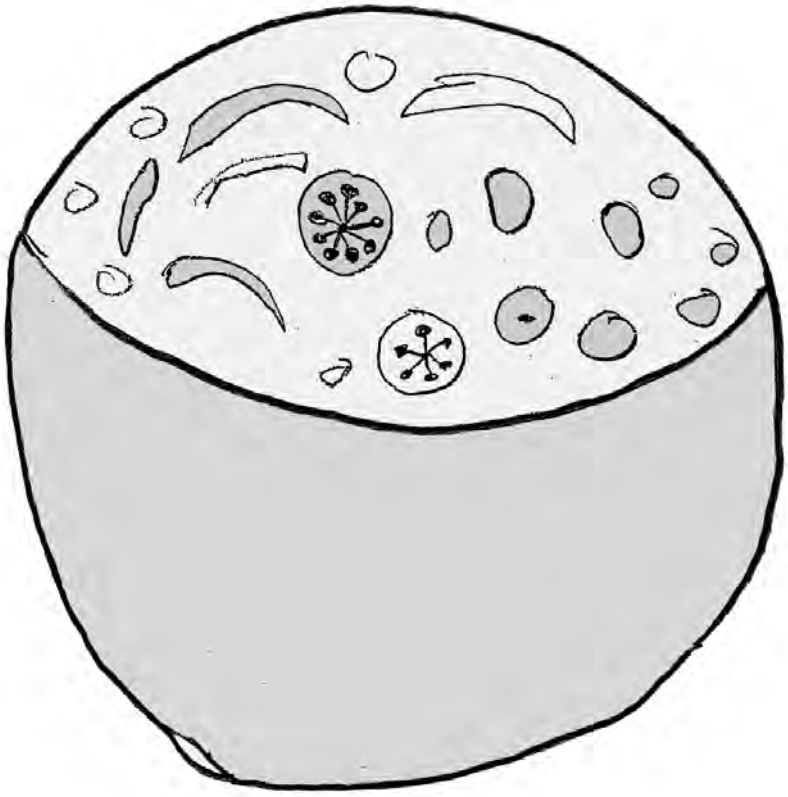
At times of growth spurts, children and young people need extra nutrients and will need and want to eat more food. Young people have a growth spurt at the start of adolescence – the most rapid period of growth after infancy. This growth spurt commonly starts between the ages of 9 and 13 years in girls, and between 11 and 15 years in boys.[1] However, there can be a wide variation in the age of onset of puberty and the growth spurt in both boys and girls, and a later onset than these is not a cause for concern. A second, slower increase occurs in late adolescence.

KEY MESSAGES

Good nutrition is fundamental to growth and development in children and young people.

What carers can do

- If you are concerned that a child or young person is not growing adequately, contact the GP, who may refer the person to a State Registered Dietitian or a paediatrician. Health professionals use special charts to check the child's or young person's growth against the average growth for children of the same age and can advise on appropriate action.



Soup By Rachel

Physical activity: being active

Research has shown that physical activity, exercise and sport have an important role in stimulating appetite and in preventing overweight as well as in enhancing physical, mental and social well-being.[2] People who have been active when they were young appear to have better physical and mental health in later life than those who were not active when young.[3, 4]

In a study of young people in England, 73% of 11 year old girls and 78% of 11 year old boys reported exercising twice a week or more. While this level of activity was maintained for boys at 13 and 15 years, only 63% of 13 year old

girls and 50% of 15 year old girls reported this level of exercise with only 40% of these claiming to exercise for two hours a week or more.[2] In contrast, almost a third of 15 year old girls and boys reported watching four hours or more of television a day, with a third of boys also reporting playing computer games for four hours a week or more. Those exercising more regularly reported a greater feeling of confidence, felt healthier, and found it a good way of socialising.[2]

It has been suggested that TV viewing has played a part in the development of obesity among young people since increased viewing is associated with increased snacking.[5, 2]

Evidence suggests that people who exercise are better able to regulate their food intake to match the amount of energy they use.[1]

It is currently recommended that all young people should take part in at least one hour of moderate intensity physical activity a day.[6] Physical activity can include everyday activities such as walking or cycling as well as organised sports and activities such as football, tennis, swimming, basketball or dancing. It is important to encourage any activity which is enjoyed.

Evidence suggests that boys are more likely to be active as young people than girls, and to be involved in sports such as football.[7] Involvement in a local sports club can encourage regular activity. Girls who are unwilling to take part in exercise and sport may be more receptive to other forms of activity – for example different forms of dancing, including disco dancing.

Some children's home managers have reported that some looked after children and young people may find it difficult to take part in group play as well as local exercise and sporting activities. This may be because they find it difficult to integrate with such groups or because they frequently move from one area to another.

KEY MESSAGES

It is essential to encourage children and young people to be physically active. Physical activity can enhance quality of life and self-esteem, help children and young people avoid becoming overweight or obese and, for underweight children and young people, improve appetites.

Dancing is a good activity to encourage among children and young people.

What carers can do

- Encourage young people to take part in at least one hour of moderate intensity physical activity a day. There are a number of ways of increasing the amount of activity children and young people do:
  - Walking is the most important exercise to encourage as it requires no special equipment or clothing, is easily achieved by most people and can be done regularly. Encourage children and young people to walk to school and leisure activities where possible.
  - Cycling is also a good form of exercise for children and young people and can often be incorporated into everyday life. Make sure that cyclists always wear a safety helmet and that those cycling on the roads have passed their cycling proficiency test (see page 85).
  - Swimming is an excellent and enjoyable form of exercise and all children and young people should be encouraged to go swimming.
  - Children and young people who are not interested in exercise and sport could be encouraged to dance, for example disco dancing, Latin and salsa, line dancing or dancing related to different cultures such as Irish dancing, Asian, African or belly dancing.
  - Some young people may prefer to improve fitness and keep active using workout and dance videos at home.
- Children and young people with special needs also need to be as active as possible and carers should work with health professionals to ensure that appropriate, enjoyable activity is encouraged every day.
- Within each residential home, there should one staff member with a specific responsibility for enabling and encouraging children and young people to take adequate physical activity, and to develop their interest, and confidence, in taking part in exercise and sporting activities.

Children and young people may be particularly receptive to positive views of exercise and sport and the links these have to eating well through sporting heroes. Many sports personalities now acknowledge the importance of good nutrition for their performance and children and young people may be motivated to follow behaviours promoted by their role models. It may help if carers draw the attention of children and young people to these sporting personalities.

Local authority Social Services Departments should support carers in encouraging physical activity among looked after children and young people by:

- providing free passes to local leisure centres, and
- ensuring that appropriate equipment – such as bicycles, balls and other sports equipment – is available to children and young people where they live.

Promoting healthy body weight and body image

People come in a wide range of body shapes and sizes and there are many different body shapes that can be healthy. Being fit and active, eating healthily and not smoking are the most important ways we can improve health and well-being. All those involved in the care of looked after children and young people should make sure that positive messages are given about healthy eating, reinforced by positive attitudes to healthy lifestyles by carers. (For more information about the importance of carers' attitudes and behaviour see page 66.)

There are health issues associated with people being very light, or very heavy, for their height (see below). However, for many young people the relationship between food, eating and body weight are highly complex. It is therefore essential that carers deal sensitively with issues of underweight and overweight.

Body image

Contemporary western ideals for body shape emphasise extreme slenderness, and many people with body weights which are acceptable in terms of health, perceive their own body shape in negative terms. Larger women in particular are more likely to be dissatisfied with their appearance and to have a poor body image. Dissatisfaction may be particularly common among children and young people who may be teased by their peers and humiliated by teachers, especially in connection with sporting activities.[1]

There is some evidence that reducing body image distress among people who are overweight can make a significant contribution to their general well-being.[1] However, there is no clear research evidence to show that improving body image can affect people's weight.

Carers themselves need to ensure they do not contribute to poor body image among children and young people by using derogatory language about their own or other people's body shapes, or by commenting on people's food choices.

There is also very little research that looks at the relationship between emotional 'triggers' or 'cues' and overeating, although associations between emotional eating (eating for comfort) and obesity have been found.[8, 9] It is therefore important for carers to deal sensitively with children and young people who may eat more as a response to emotional issues in their lives.

Promoting a healthy body weight

As well as promoting an acceptance of a variety of healthy body shapes, carers also need to promote good health and physical fitness among the children and young people in their care. Carers need to be aware that being underweight or overweight can affect both health and quality of life. In extreme cases, young people may develop eating disorders which require professional intervention. (For more information about these see page 46.)

Underweight

Being underweight is undesirable at any age and is associated with an increased risk of ill health. Among children and young people it may contribute to tiredness, limited physical activity, increased rate of infection and an inability to concentrate. Being underweight might be a sign of a food intolerance, bowel disorder or unrecognised infection. If low weight does not appear to be due to a poor diet or does not respond to dietary measures, carers should ask a GP for advice, in case there is an underlying physical disorder. It is also important to seek expert help for those affected by an eating disorder such as anorexia or bulimia (see page 46).

There has been very little research into the health status of looked after children and young people, but it has been suggested that unintended weight loss is a common feature for young people after leaving care.[10]

Overweight

The proportion of children and young people who are overweight or obese (very overweight) is increasing throughout the developed world.[2] Becoming overweight or obese is attributed to:

- doing too little physical activity, and
- eating too much, in relation to the amount of activity taken.

There are health risks associated with being very overweight in childhood – such as higher blood pressure and higher blood cholesterol levels.[11] Being overweight also increases the risk of orthopaedic disorders of the hips and knees.[12, 13] However, the most common problem associated with overweight in childhood is social stigmatisation.[14] Obese children are viewed very negatively by their peers.[15]

Food choice and body weight

Overweight has not been clearly linked to preferences or intakes of any individual foods, nor to a preference for sweet foods.[1] However, there is some evidence that a preference for foods containing fat is linked to overweight, and that palatable, high fat, energy-dense foods may be particularly linked to emotional responses to eating.[1] Snack foods which are high in fat and those which are energy-dense – such as crisps and other savoury snacks, chocolate, confectionery, cakes and biscuits – may be the ones which young people find it hardest to give up.

Empowering children and young people to take an interest in their health and increasing their knowledge about food composition and how to choose tasty, lower fat snacks may help children and young people to reduce their energy intake from snack foods and drinks. Increasing fruit and vegetable intakes is important for everyone to

KEY MESSAGES

Carers should promote healthy body weight and body image among looked after children and young people by providing an environment in which they have the opportunity to eat healthy food and where the play and exercise they enjoy are actively enabled and encouraged.

Underweight

Children and young people who need to gain weight should eat regular meals and snacks throughout the day. They also need to keep active to stimulate their appetite.

What carers can do

- Children and young people who need to gain weight should be encouraged to be active to stimulate their appetites.
- They may also need to eat regular meals and snacks. Larger portions at mealtimes may be off-putting. Smaller meals more regularly can often help thinner children and young people consume more calories throughout the day.
- Milky drinks (made with whole, full fat milk) between meals and before bedtime can be a useful source of additional calories and other nutrients. Foods such as breakfast cereals, bread-based snacks and toasted sandwiches can be useful between meals.
- Children and young people who have a poor appetite should be discouraged from frequently drinking sweetened drinks and juices as these will fill them up while providing relatively few calories and other nutrients.
- If you are concerned about a child or young person's thinness but do not suspect an eating disorder (see below right), contact a State Registered Dietitian for advice on simple ways of increasing calorie intake. (See *Health professionals* on page 85.)
- If low weight does not appear to be due to a poor diet or does not respond to dietary measures, ask a GP for advice, in case there is an underlying physical disorder.

Overweight

Becoming overweight is attributed to:

- doing too little physical activity, and
- eating too much in relation to the amount of activity taken.

Increasing any activity or sport that children and young people enjoy is vitally important for encouraging well-being and promoting a healthy body weight.

High calorie snacks and drinks (such as crisps and biscuits, or fizzy drinks and squashes) at and between meals can contribute to overweight.

What carers can do

- Encourage those wishing or needing to reduce their body weight to:
  - eat a variety of foods at mealtimes
  - include plenty of fruits and vegetables in their diet, and
  - avoid high sugar/high fat snacks and drinks throughout the day. (For suggestions for snacks see page 56.)
- Promote fitness and physical activity among all children and young people. (See *Physical activity: being active* on page 43.)
- Show sensitivity if children and young people have an emotional relationship with food and eating.
- Take care that children and young people do not become obsessive about their body shape and size (see *Eating disorders* on the right).
- Act as a good role model, avoiding making negative comments about your own, or anyone else's body shape.

improve long-term health, and these foods are also good choices for those who wish to have lower energy diets.

Finding a balance

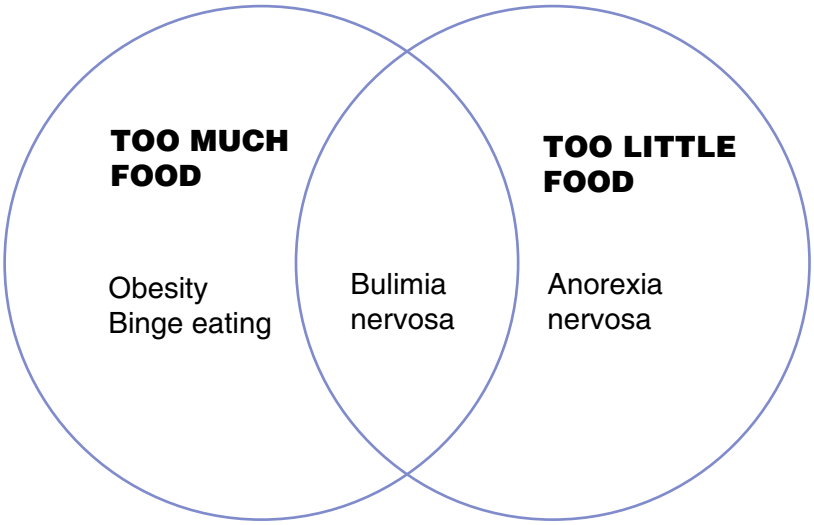
Finding a balance between acceptance of a child's or young person's weight and shape and intervening to prevent health problems associated with overweight or underweight will not always be easy. It is important for everyone to realise that there is no one answer to dealing with overweight or underweight. Carers need to do their best to provide a culture free of stigmatisation and an environment in which children and young people have the opportunity to eat healthy food and where the play and exercise they enjoy are actively enabled and encouraged. The most helpful approach is for informed carers to decide on an individual basis how to work in each child's or young person's interests to ensure that their weight does not affect their quality of life.

Eating disorders

The term 'eating disorders' refers to a whole range of eating-related problems such as anorexia, bulimia, selective eating and overeating. They are often the young person's way of expressing emotional distress, and are linked to negative beliefs about themselves, the world and their relationships with others.[16]

Anorexia nervosa and bulimia nervosa can be officially defined and are serious disorders that require treatment. There are also several variants of eating disorders which may be a cause for concern.

Eating disorders can be a very isolating experience for a young person and they may feel they cannot share their concerns and feelings with anyone around them.



Both anorexia nervosa and bulimia nervosa are characterised by an overwhelming dissatisfaction with the shape and size of the body, often leading to an uncontrollable compulsion to achieve an unattainable level of thinness and a dread of fatness. It has been suggested that dieting among teenagers, even at a moderate level, is the most important predictor of new eating disorders among adolescents.[17] Encouraging exercise rather than dieting as a means of weight control is therefore particularly important among children and young people.

Anorexia nervosa

Anorexia nervosa is most common in girls and women aged 15-24, but children as young as 7 can develop anorexia. Accurate figures for the incidence of anorexia among young people vary, but it is thought to affect between 1% and 2% of young people, and 90% of these are young women.[18] Some of the signs of anorexia nervosa to watch out for include:

- regularly missing meals
- being too busy to eat
- eating alone
- hiding or throwing away food
- disguising weight loss with baggy clothes
- excessive and compulsive exercise
- loss of periods, or delay in onset of symptoms of puberty
- growth of downy body hair
- itchy skin/scratching, and
- ritualistic behaviour around food (for example, cutting food up into small pieces).

There are serious health consequences of extreme starvation and continued weight loss will lead to death. Specialist treatment is always required.

KEY MESSAGES

Concerns about eating disorders in young people should be taken seriously and medical help and advice sought.

Anorexia nervosa and bulimia nervosa both require specialist help. The first point of contact is the GP who can refer the young person on to a specialist.

What carers can do

- Encourage physical activity rather than dieting among young people who are concerned about their body shape.
- Children and young people with eating disorders may find it difficult to communicate with those around them and may find an independent helpline useful. Carers could tell young people about the specialist helpline for young people, run by the Eating Disorders Association. For details of this and other sources of help and advice see page 83.

Bulimia nervosa

Bulimia nervosa is characterised by episodes of out-of-control bingeing, often followed by self-purging to try and reduce weight. This usually involves self-induced vomiting, use of laxatives and diuretics, strict dieting, fasting or vigorous exercise. Regular vomiting may cause severe tooth erosion as self-induced vomiting brings the acidic contents of the stomach into the mouth where they dissolve the hard tissue from the teeth. Bulimia nervosa requires specialist treatment.

Dental health

Dental decay is one of the most common childhood diseases in the UK. In a study of young people in Britain aged 4-18 years, overall half had evidence of tooth decay in either their first or adult teeth.[19] The proportion of young people affected was higher among older age groups: 37% of 4-6 year olds, 55% of 7-10 year olds, 51% of 11-14 year olds and 67% of 15-18 year olds had dental decay. On average among the 7-10 year olds 1.1 teeth had dental decay compared to 2.7 teeth in 11-14 year olds.[19]

Dental decay can occur at any age but those at greatest risk include children and adolescents. The most important source of dental decay is non-milk extrinsic sugars – the sugars found in foods such as confectionery, cakes, biscuits, soft drinks and fruit juices (see page 25).

The development of tooth decay is directly related to how often a person consumes sugary foods and drinks, and to the total amount of sugars consumed. This is particularly so when sugar is eaten both at and between meals.[20] A report by the World Health

Organization suggested that the development of dental decay is more directly related to *how often* a person consumes sugary foods or drinks rather than to the *total amount* of sugars they consume.[21]

Reducing the frequency of consuming sugar and sugary drinks and foods, and brushing teeth regularly twice a day with a pea-sized amount of a **fluoride** toothpaste, are the most effective ways of preventing decay.

Dental erosion is a progressive, irreversible loss of dental enamel usually by acids other than those produced by plaque bacteria. Erosion can lead to a reduction in the size of teeth and to tooth destruction. Evidence shows that the incidence of tooth erosion is increasing in children, with as many as half of 5-6 year olds showing signs of tooth erosion.[22] One of the main causes of tooth erosion is frequent consumption of soft drinks (for example squashes, fruit drinks and fizzy drinks – including those which claim to be sugar-free).

Good teeth are important not only for biting and chewing but also for speaking clearly and having a nice appearance. Children and young people with crooked teeth may be self-conscious about their appearance and should visit an orthodontist for advice. For this they will need a referral from their dentist.

KEY MESSAGES

Brushing teeth regularly – twice a day – with a pea-sized amount of a fluoride toothpaste is essential. Fluoride in toothpastes is the main reason why dental health has improved in the 1980s and 90s.

It is important to reduce the frequency of exposure of the teeth to sugar. Children and young people should therefore be encouraged to make sure that the snacks and drinks they have between meals have a low sugar content (see page 56).

Some soft drinks which claim to have 'no added sugar' still contain sugars which are harmful to the teeth. Diet drinks, both fizzy and still, can also be harmful to the teeth. This is because they may be acidic and erode the dental enamel, especially if sipped frequently.

What carers can do

- Ensure that children and young people brush their teeth twice a day with a pea-sized amount of fluoride toothpaste.
- Make sure that children and young people visit the dentist for a check-up at least once a year. Dental treatment is free up to the age of 18, or up to 19 for those still in education.
- Encourage children and young people to reduce the total amount and especially the frequency of sugary foods and drinks that they have. This also applies to drinks which claim to have 'no added sugar', and diet drinks.
- If children and young people are having sugary foods and drinks, these should be given with meals rather than between meals.
- Discourage children and young people from drinking soft drinks, fruit juices or squashes before bedtime or during the night as this may be particularly harmful to teeth. If they do have these drinks before bedtime, they should brush their teeth afterwards.
- Children and young people who have crooked teeth may need to be referred to an orthodontist for advice and treatment. Ask their dentist about this.

Iron deficiency

There is considerable evidence that iron deficiency (not getting enough iron) has serious health consequences. It is particularly common in young children, adolescents and pregnant women and it is the most common nutritional deficiency in young people in the UK.

Iron deficiency during the first two years of life can significantly impair mental and motor development (developing the ability to walk, and body coordination).[23] Among older children iron deficiency is associated with impaired educational performance[24] and with reduced levels of activity.[25] Iron deficiency is also related to loss of appetite and increased infection.

Adolescent boys have a high requirement of iron for the rapid growth spurt they have at this time. Adolescent girls have a high requirement of iron both for growth and to replace menstrual losses. Low intakes of iron are commonly observed among teenage girls, and those who are also attempting to lose weight by dieting are likely to have particularly low intakes.[26]

To ensure that growing children and young people get enough iron, a varied diet – one which contains meat and fish, a variety of cereal foods, as well as fruits and vegetables – is most likely to provide adequate amounts. Vegetarians will need to make sure they have a varied food intake. It may be sensible for them to include fortified foods such as breakfast cereals in order to make sure they get enough iron.

For more information about iron in foods and how iron is absorbed by the body, see page 35.

KEY MESSAGES

Iron deficiency is common among children and young people in the UK. Children and young people should therefore eat a diet that is high in iron-rich foods such as meat, poultry and fish, as well as fruits and vegetables. Those who do not eat meat should have a varied diet containing foods such as cereals, pulses (peas, lentils, and beans such as baked beans or kidney beans), vegetables and fruits.

Iron deficiency can lead to tiredness, lack of enthusiasm for activity, poorer educational performance, loss of appetite and increased infection.

What carers can do

- Encourage children and young people to eat a variety of foods that are high in iron (see Appendix 1).
- Girls with small appetites, those who do not eat a variety of foods regularly and those trying to lose weight should ensure that they include iron-rich foods in their diets.
- Girls who appear pale, listless, tired and unenthusiastic about exercise, or who report heavy periods, or periods which last for many days, should have their iron status assessed. Depending on the results of the assessment, the GP may recommend an iron supplement. Treatment is generally with iron tablets*, which are best taken with a glass of fruit juice containing vitamin C as this helps the body to absorb the iron. Iron supplements should only be given to children and young people if they have been prescribed by a doctor. Carers should contact the GP for further advice.

* All iron supplements, including both pills and tonics, should be kept safely out of reach of children as iron overdose can lead to serious poisoning.

Bone health

The two nutrients that are particularly related to bone health are vitamin D and calcium.[27]

Most people over the age of 5 years make vitamin D in their skin when it is exposed to summer sunlight, and vitamin D deficiency in children and young adults who spend time outdoors is rare. However, black skins make vitamin D more slowly than white skins, so black children are more vulnerable to vitamin D deficiency, particularly if there are other cultural factors such as wearing concealing clothing, not spending time outdoors, or excluding meat and fish from the diet. Making sure that children and young people spend time safely in the sun – protecting their skin from sunburn but allowing access to UV light – should ensure that sufficient vitamin D is made.

Children and young people who are still growing need calcium for growth and bone mineralisation (hardening of the bone structure). During adolescence, bone growth is considerable, particularly for boys. It is important that the increased requirements for calcium are met in order that young people can achieve an optimum peak bone mass. This means that they will have a bone mass which, when they get older, is less likely to decrease to a low point where fractures of the bone become common. It is also possible that insufficient calcium intakes during rapid growth might affect actual growth performance. There is some evidence that higher intakes of milk (which is a good source of both calcium and protein) may be beneficial in preventing bone problems in later life.[27]

Physical activity is also important in maintaining bone health. This is particularly true of 'weight-bearing' exercise – exercise which involves carrying your own body weight or extra weight (for example walking or running rather than cycling or swimming).

Being underweight is detrimental to bone health.[27] In particular, girls who have low body weight, low calcium intakes and who take part in little physical activity are likely to be at risk of bone-related problems such as osteoporosis when they get older. There is also evidence to suggest that fizzy drinks, particularly cola drinks are associated with an increased risk of bone fracture among teenage girls.[28] The high consumption of fizzy drinks and the declining consumption of milk may make these teenagers more prone to osteoporosis in later life.[29]

KEY MESSAGES

To ensure healthy bones in later life, children and young people should:

- be physically active
- have a diet which provides sufficient calcium (see Appendix 1 for good sources of calcium), and
- get regular exposure to summer sunlight on the skin, taking care to avoid sunburn.

What carers can do

- If you are concerned about a child or young person who rarely goes outside, who does not expose their skin, or who is a strict vegetarian, seek advice from a GP or State Registered Dietitian (see *Health professionals* on page 85).
- Encourage children and young people to drink milk – preferably semi-skimmed. Milk is a good drink for children and young people as it provides calcium and does not damage teeth, and carers should encourage it as a suitable drink between meals. Discourage children and young people from having large amounts of fizzy drinks as they can erode teeth and may contribute to poorer bone health.

Alcohol and health

Most young people have had experience of alcohol by the time they are 16 years of age. In one study carried out by the Health Education Authority (HEA), 27% of 16 year old girls and 35% of 16 year old boys claimed to be regular drinkers.[30] More recent data suggest that 59% of girls and 57% of boys aged 15-18 years in Britain report drinking alcohol, with 10% of boys and 8% of girls in this age group reporting intakes greater than the recommended daily maximum number of units for adults[31] (see below). Beer, lager and cider are the most commonly consumed drinks among young people, although 40% of those who reported drinking mentioned that they drank spirits, 35% wine and 28% 'alcopops'. Young people from ethnic minorities are less likely to drink alcohol than their white peers. Young people in the HEA study[30] generally underestimated the alcoholic strength of beer and found it difficult to identify the number of units in specific drinks.

It is currently recommended that:

- **adult women should have no more than 14 units of alcohol a week**, and
- **adult men should have no more than 21 units of alcohol a week.**

The box on the right summarises the number of units of alcohol in some common alcoholic drinks.

Increasing alcohol intakes are an issue for all young people. Carers should explain the risks associated with drinking alcohol and discourage young people from experimenting with drink. Carers themselves need to demonstrate a responsible attitude to alcohol: for example by not glamourising alcohol and by showing young people that alcohol is not a pre-requisite for enjoyment or relaxation in the adult world.

Alcohol-related accidents are the leading cause of death in the 15-24 age group. Heavy drinking is

How much alcohol is there in a drink?

Drink	Approximate number of units of alcohol
1 can (440ml) low strength beer or lager (3.5%-4.5% alcohol)	1.8
1 can (440ml) medium strength beer or lager (4.6%-5.5% alcohol)	2.2
1 can (440ml) high strength beer or lager (more than 5.5% alcohol)	2.6
1 bottle (330ml) speciality lager	1.6
1 small bottle Belgian lager (250ml)	1
1 pint average draught beer	2
1 pint average draught lager	2
Guinness type beers, per 440ml can	2
Guinness type beers, per pint	2.5
Cider, per 440ml can	2.6
Strong cider, per 440ml can	3.6
Alcopops (spirits mixed with fruit juice/mixers), per 330ml bottle	1.7
Wine, small glass	1
Wine, large glass	2
Fortified wine (eg sherry), 1 small glass	2
Spirits (eg gin, whisky, brandy, rum, vodka)	
1 pub measure	1
per half bottle (350ml)	11

KEY MESSAGES

Alcohol is an increasing problem among young people. As well as causing long-term health problems, misuse can lead to violence and alcohol poisoning.

What carers can do

- Carers should explain the risks associated with alcohol. They also need to make sure that looked after young people know the alcohol content of different drinks, particularly different strength beers.
- Carers themselves should demonstrate a responsible attitude to alcohol: for example by not glamourising alcohol and by showing young people that alcohol is not a pre-requisite for enjoyment or relaxation in the adult world.
- Make sure that information about confidential helplines for alcohol problems is available to teenagers. They may wish to call a helpline if they are worried about their own drinking or that of someone close to them. See *Alcohol* in Appendix 4.
- Talk with the children and young people about what, where and when (if ever) alcoholic drinks are appropriate while children and young people are looked after, and agree on a policy on alcohol.
- For further advice and help on alcohol education and helping avoid alcohol abuse, see *Alcohol* in Appendix 4.

harmful not only to individuals but to other people around them and to the wider community. As well as directly causing illnesses such as cirrhosis of the liver, alcohol contributes to certain cancers and stroke.[32] Misuse can also result in violence. It has been reported that around a quarter of 13-17 year olds get into fights or arguments after drinking and that around 1,000 people aged 15 years and under are taken to hospital each year with alcohol poisoning which might need intensive care.[33]

Alcohol affects all the parts of the body it comes into contact with: the stomach, gut, brain and especially the liver. Alcohol affects the way the brain works by depressing certain parts of it. The first thing to be switched off are our inhibitions, which can make people behave in a way they would not normally, for example by having unprotected sex, picking fights or saying things which might hurt other people's feelings.

Alcohol consumed in large amounts during pregnancy can also have serious effects on the growing baby, and pregnant teenagers should be encouraged to replace alcoholic drinks with those that will provide better nutrients for their baby – for example milkshakes, fruit juices and smoothies (a combination of fruit and fruit juices – and sometimes yoghurt – liquidised into a thick fruit drink).

Being unwell after excessive alcoholic drinking also depresses the appetite for food the next day, so regular binges are likely to have an effect on nutrient intakes.

Smoking and drinking alcohol are highly related practices, and smoking should always be discouraged among young people.

Pregnancy

There are some important nutritional and health messages associated with pregnancy at any age.

- Women who are planning a pregnancy or who may become pregnant should ensure they have a diet which provides sufficient folic acid (see *Folate* on page 32). Folic acid is essential for the early development of the foetus (during the first 12-14 weeks) and women who do not eat good sources of folate regularly probably need to take a supplement. (See Appendix 1 for good sources of folate.)
- Women who are pregnant may also have increased requirements for iron (see page 35).
- Alcohol consumption is best avoided during pregnancy (see left).
- Smoking is strongly discouraged during pregnancy.

For sources of information and advice about healthy eating in pregnancy see Appendix 4.

There are significant nutritional implications for the health of a teenage mother and her child. Girls who become pregnant under the age of 16 years are likely to be still growing and therefore there will be a greater demand for food energy and nutrients to support both their own and the baby's growth. During pregnancy the nutritional needs of the foetus are met before those of the mother and this creates a health risk for younger mothers who may have increased needs themselves for some important nutrients such as calcium and iron. It is important that teenagers who are pregnant eat a good varied diet, including good sources of iron, calcium and folate every day.

The foetus is most susceptible to nutritional imbalance during the first trimester (approximately the first 12-14 weeks) since this is the time when the baby's organs develop. Looked after girls who are sexually active should be given effective advice about contraception. If the teenager does become pregnant it is important that her child is protected against spina bifida and other disorders by ensuring an adequate intake of folic acid and other nutrients.

It is also important that pregnant girls receive advice about the nutritional needs of their infant from an early stage of their pregnancy and are informed about the benefits of breastfeeding both for themselves and their baby, as well as receiving information about suitable alternative infant feeds from their Health Visitor.

KEY MESSAGES

Folates are an important nutrient in all stages of pregnancy. If a teenager becomes pregnant, she should be encouraged to eat plenty of foods rich in folate, calcium and iron, and avoid alcohol and smoking.

Behavioural problems linked to diet

Many different terms are used to describe what is commonly known as 'hyperactive' behaviour. It is also known as hyperkinesis, attention deficit hyperactivity disorder or overactivity, or it may be classed more generally as learning difficulties. This syndrome is characterised by symptoms which may include short attention span, impulsive behaviour, explosive outbursts, learning problems, aggression, poor eating and sleeping habits, thirst, anxiety and temper tantrums.[34]

The syndrome is thought to occur in about 1%-5% of children,[35] although it is not always easy to diagnose it. There is much controversy about whether changing the diet can alleviate some of the symptoms associated with the syndrome.

Some children have a combination of overactivity and physical symptoms such as rashes, headaches and runny nose which are suggestive of a food sensitivity. Such children have improved on diets which eliminate particular foods. Foods containing the yellow colour tartrazine (E102) and the preservative benzoic acid (E210) have been found to cause most sensitivities.[36]

If a child or young person shows symptoms of hyperactivity, it may be beneficial to give them a diet free from food additives and colours for one month to see if there is any improvement. This may just involve changing brands of foods rather than making major changes to the foods eaten, since all fresh foods and many purchased foods are now available without artificial colours and other additives. The added attention given to the child in making the changes to the foods eaten may in itself cause an improvement in behaviour.[37]

More restrictive diets should not be attempted without expert help from a State Registered Dietitian (see *Health professionals* on page 85).

Does diet affect spots and acne?

There is a popular belief that chocolate, fatty foods, soft drinks and beer can all aggravate spots and acne. Attempts to look at the impact of these foods on spots and acne scientifically have not been very successful but individual cases appear to respond to cutting down on sweets and chocolate, fatty food and alcohol.[38]

Zinc, polyunsaturated fats and vitamin A are reported to improve acne.[38] Increasing the consumption of foods which are good sources of these nutrients – such as meat and wholemeal bread, polyunsaturated margarines and carrots and green leafy vegetables – may be helpful. (See Appendix 1 for good sources of these nutrients.)

Healthy hair and nails

It is important to get all the nutrients we need to ensure that all body tissues are healthy. Poor hair and nails can reflect poor diet, as well as poor care in general. There is no evidence that taking more of any particular vitamin or mineral will make hair thicker or nails stronger. However, eating a good variety of foods, with plenty of fruits and vegetables, meat, fish and dairy foods will help ensure that young people have all the nutrients needed to produce healthy hair and nails.

White spots on the nails are usually caused by damage to the nail, and not by a deficiency of calcium as often suggested, and eating cubes of jelly to give you strong nails is an old wives' tale!

Preventing diseases of later life: coronary heart disease, stroke and cancer

Current evidence suggests that the type of diet which is most likely to prevent disease in later life is one which includes:

- plenty of bread, other cereals and potatoes
- at least five servings of fruit and vegetables a day
- moderate amounts of meat, fish and alternatives (such as beans and pulses)
- moderate amounts of milk and dairy foods, using lower fat versions whenever possible, and
- only small amounts of foods containing fat and foods containing sugar.

Not smoking and being fit and active are also important for long-term health.

Communication between carers and health professionals about nutrition-related issues

Local authority Social Services Departments should ensure that there is regular contact between the health professionals involved in the health care of looked after children and young people, and those responsible for their day-to-day care.

Local authorities should ensure that carers have a named health professional whom the carers can consult about nutritionally-related health issues.

Following the example of some areas in the UK, each health authority should appoint a community consultant paediatrician and paediatric nurses (or special health advisers) with responsibility for advising on the health of looked after children and young people.

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Chapter 6

Encouraging eating well

Eating a variety of foods

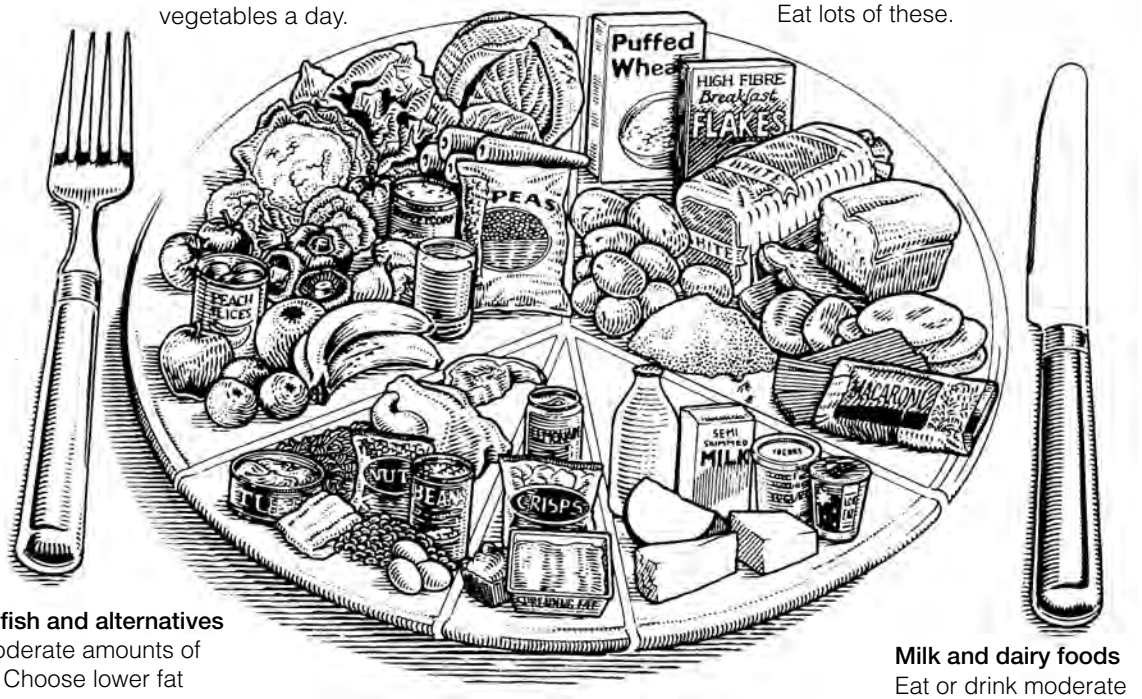
Food is an important part of our lives. In order to get all the nutrients needed for good health (see chapter 4) it is essential to eat a variety of different foods every day. It is difficult to achieve adequate intakes of vitamins and minerals when diets are monotonous and based on few foods.[1] Also, evidence shows that people who eat a varied diet are more likely to have better health.[2]

The Government's *Balance of good health* plate below shows the five food groups and the balance to aim for.

Balance of good health

Fruit and vegetables
Eat at least five portions of fruit and vegetables a day.

Bread, other cereals and potatoes
Eat lots of these.



Meat, fish and alternatives
Eat moderate amounts of these. Choose lower fat versions whenever you can.

Foods containing fat and foods containing sugar
Eat only small amounts of foods containing fat.
Look out for lower fat alternatives.
Don't eat foods containing sugar too often.

Milk and dairy foods
Eat or drink moderate amounts of these. Choose lower fat versions whenever you can.

Snacks as well as meals count towards the healthy balance.

Diets which have little variety are often particularly low in fruit and vegetables. These foods can help prevent diseases of later life. The antioxidant nutrients they contain probably protect against chronic diseases in adulthood such as coronary heart disease and certain forms of cancer. Everyone is encouraged to eat at least five portions of fruit and vegetables a day. Some examples of how this can be achieved are given below.

Five a day

Everyone is encouraged to eat at least five portions of fruit and vegetables a day. Here are some examples of how to achieve 'five a day'.

- glass of orange juice
- apple
- baked beans
- sweetcorn
- handful of raisins

- glass of cranberry juice
- apple
- vegetable curry *(counts as 2 portions)*
- tomato salad

- bowl of fruit salad *(counts as 2 portions)*
- raw carrots snack
- glass of fruit juice
- satsuma

- banana chopped onto breakfast cereal
- vegetable stir-fry *(counts as 2 portions)*
- baked apple
- fresh fruit smoothie*

- rice and peas *(peas counts as 1 portion)*
- tinned pineapple
- callaloo
- glass of mango juice
- side salad

- glass of apple juice
- coleslaw
- dried apricot snack
- frozen mixed vegetables
- pear

Potatoes, yam, plantain and other starchy vegetables are not included in the 'five a day advice' but are an important contributor to the 'bread, potatoes and other cereals' food group.

* A smoothie is a combination of fruit and fruit juices – and sometimes yoghurt – liquidised into a thick fruit drink.

KEY MESSAGES

Looked after children and young people should be encouraged to eat a varied diet. This means:

- following the Government's *Balance of good health* advice (see opposite)
- eating at least five portions of fruit and vegetables a day
- eating a good variety of foods to ensure that adequate amounts of iron, calcium, zinc and vitamins A and C are consumed (see Appendix 1 for information on good sources of these nutrients), and
- reducing the frequency and amount of the sorts of sugars that can damage teeth.

Breakfast

Breakfast is an important meal for two main reasons. Firstly, many breakfast foods are a very good source of fibre and other important nutrients. Secondly, children and young people who skip breakfast may be tempted to eat high fat, high sugar snack foods on their way to school or later in the day.

There is evidence that breakfast cereals in particular can make an important contribution to the nutrient intake of teenagers.[3] The best breakfast cereals are those which are a good source of fibre, and which are fortified with vitamins and minerals (particularly iron) – for example cornflakes, crisped rice, puffed wheat, bran flakes and wheat flakes. Breakfast cereals served with milk are also a good source of calcium. Children and young people who do not like milk can have breakfast cereal with yoghurt or fruit, and cereals can be sweetened with fresh or dried fruit. Drinking fruit juice, which is a good source of vitamin C, with breakfast will increase the amount of iron absorbed.

KEY MESSAGES

Breakfast is an important meal. Many breakfast foods are a good source of fibre as well as vitamins and minerals. Also, children and young people who skip breakfast may be tempted to eat high fat, high sugar snack foods later in the day.

Snacks offered between meals should be varied, and children and young people should be encouraged to choose lower fat and lower sugar alternatives to biscuits and crisps.

What carers can do

- Encourage children and young people to get up early enough to have breakfast every day.
- It is important that carers have breakfast themselves. If the young people see carers having breakfast, they may be more likely to have breakfast too.
- Allow children and young people access to breads, sandwich fillings and fruit. However, it is not unreasonable to place restrictions on other foods between meals such as sweets, crisps and fizzy drinks.
- Use the ideas for healthy snacks shown on the next page, and act as role models when choosing appropriate snacks for yourselves.

Snacks

Children and young people who are active or who are going through a growth spurt may have big appetites and want snacks between meals. Children and young people should always have access to breads, sandwich fillings and fruit. However, it is not unreasonable to place restrictions on other snacks between meals such as sweets, crisps and fizzy drinks (see *Food agreement* on page 65).

It is important that snacks as well as meals are varied.

Evidence suggests that children and young people are most likely to snack on crisps and biscuits.[4] Crisps and biscuits can be included in the diet, but carers should encourage children and young people to choose more nutritious snack foods which provide a variety of cereals and cereal products, vegetables and fruits without large additions of sugar and salt. For examples of snacks that could be offered see *Ideas for healthy snacks* below and the sample menus on pages 75-77.

Children and young people can be particularly ravenous when they return from school so this can be a good time to have a snack before the evening meal and to sit together and talk about the day's events. It can also be a good time for food-making activities. For example, making yeast-risen bread and fruit buns and kneading dough can be a good communal activity. Those involved can make different shapes and use different toppings and decorations to personalise their creations.

Providing tasty late night snacks can encourage young people who stay out later to return home earlier.

Ideas for healthy snacks

- Any type of bread including white, brown or wholemeal bread, fruit bread, crumpets, teacakes, muffins, fruit buns, malt loaf, bagels, pitta bread, raisin toast, cheese scones, toast.
- Sandwiches made with any type of bread. Suitable spreads and fillings include: cheese, cheese spread, hard boiled egg, yeast extract, fish paste, peanut butter, banana, houmous, tahini, mashed avocado, any meat or meat paste, tinned fish, any vegetable or salad such as tomatoes, lettuce, cucumber, beetroot, peppers, watercress and combinations of any of these. Toasted sandwiches can also be made.
- Plain biscuits such as rich tea, oatcakes, breadsticks, cream crackers, matzos, rice waffles, melba toast, crispbread.
- Home-made plain popcorn, home-made oven baked potato crisps or sweet potato crisps. (To make potato crisps, put thin slices of potato on a greased baking tray and bake in a hot oven.)
- Raw vegetables such as carrots, celery, cucumber, peppers or tomato can be served with dips made from fromage frais and soft cheese, houmous, yoghurt and cucumber, taramasalata, avocado, salsa and olive paste.
- Any fresh fruit and dried fruit such as raisins, sultanas, apricots, dates and figs.
- Dairy foods such as yoghurts, cheese cubes, frozen yoghurt and home-made rice pudding.
- Breakfast cereals.

Drinks

The best drinks to offer are water, sparkling water, milk, milkshakes, smoothies (a combination of fruit and fruit juices – and sometimes yoghurt – liquidised into a thick fruit drink). Tea and coffee are best avoided in younger children's diets. If young people do drink tea and coffee, these drinks should be encouraged between rather than with meals, as the tannic acid in them interferes with iron absorption from food.

It is best to avoid drinking fizzy drinks, squashes and fruit drinks throughout the day as these can be harmful to teeth, particularly by causing tooth erosion. Low sugar drinks can still be harmful to teeth as they may contain some sugars. Diet drinks can also be harmful as they may be acidic and erode the dental enamel (see page 48). Drinks advertised as 'sports drinks' can also be high in sugars. Fruit drinks are often mistaken for fresh fruit juices but are usually predominantly water and sugar with small amounts of fruit juice and added vitamin C and sometimes other vitamins. These drinks are as harmful to teeth as many other sweetened drinks.

KEY MESSAGES

Frequent consumption of sweetened or 'diet' drinks can contribute to tooth decay and tooth erosion.

What carers can do

- Encourage children and young people to drink water if they are thirsty. Many will be happy to drink water once they get used to the idea.
- Milk is an excellent source of nutrients, particularly calcium. Semi-skimmed milk can be encouraged as a drink between meals. A hot milky drink at bedtime (before teeth cleaning) might also be useful, particularly if children are in a growth spurt or need to gain weight.
- Having a drink of unsweetened fresh fruit juice, which contains vitamin C, at mealtimes can help the body to absorb the iron in foods.
- Fizzy drinks are for occasional use and it is not unreasonable for carers to restrict access to these. Sparkling water added to fruit juice is a good alternative to fizzy drinks. If fruit squashes are given, they should be diluted as much as possible.
- Set a good example in the drinks you choose for yourselves.

Packed lunches

Many children and young people take a packed lunch to school rather than have cooked school lunches. It is recommended that lunch should provide at least a third of the daily nutrient intakes for school-children.[5] Therefore care needs to be taken to ensure that packed lunches are varied – it is difficult to ensure a balance of nutrients if the same lunch is consumed every day.

A packed lunch should contain:

- a starchy-based food – for example any sort of bread (white, brown or wholemeal), pitta bread, chapati, crispbreads or rice cakes
- a meat, fish or alternative ('alternatives' include cheese, cheese spread, egg, peanut butter and houmous), and
- two portions of fruit and/or vegetables – for example raw vegetables, salad, fresh fruit or dried fruit.

Crisps are often included in packed lunches but these are high in fat and salt. These could be alternated with other snacks such as plain popcorn, breadsticks, unsalted nuts, pumpkin or sunflower seeds, rice crackers or pretzels. Yoghurt or fromage frais provides a good source of calcium. Children and young people with large appetites may also need a high energy snack such as a bun or biscuit.

Many children and young people are happy with water to quench their thirst. Drinks in cartons are both expensive and often high in sugars. Children and young people who refuse to drink water should be encouraged to drink fresh fruit juices or low sugar alternatives (see *Drinks* opposite).

Children and young people may not always eat their packed lunch, or may choose to swap or trade foods with others. It is therefore important to ensure that they have an opportunity to eat a good variety of food at other meals.

Some children and young people may have school lunches. These should provide a nutritionally balanced meal in the middle of the day and new nutritional guidelines for school meals being introduced from April 2001 should encourage caterers to provide an appropriate balance of nutrients and greater variety of foods, particularly fruits and vegetables. However, many children and young people use a cafeteria system which means that their choices may not provide a healthy balance, or they may prefer to use their dinner money outside the school. It is therefore essential to ensure that meals eaten within the care environment provide a healthy balance.

KEY MESSAGES

A packed lunch should contain:

– a starchy-based food such as bread

– a meat, fish or alternative such as cheese or egg, and

– two portions of fruit and/or vegetables.

What carers can do

- Encourage children and young people to vary the food in their packed lunches. It is difficult to obtain all the nutrients needed if the same food is eaten every day.

Young people and food

Irregular eating habits are often associated with the adolescent years as young people become more independent. Teenage is often seen as a time of rebellion and experimentation with food[6] as the newly emerging adult tries to forge their own identity and might choose to express this in the food habits they choose.[7]

It is suggested that teenagers have lifestyles which generally involve greater risk-taking behaviour.[8] Snacking, grazing, missed meals and unconventional meals as well as frequent consumption of soft drinks and an increased fast food consumption are particularly associated with this age group.[9] Girls generally have healthier eating habits than boys, but there is evidence that teenagers with low self-esteem and less hope for their own future are more likely to lead lifestyles which put their health at risk.[10]

The dominance of the 'fast food' culture among young people should not be underestimated. There is a suggestion that this is often endorsed for looked after children and young people by treats and outings to fast food outlets.[11] It is important that children and young people experience a variety of different foods and ways of eating and that, when they eat outside their place of residence, they are exposed to a wide variety of foods rather than just fast foods. Dependency by carers on fast food outlets as treats should be discouraged by managers.

KEY MESSAGES

What carers can do

- There is much that those who care for children and young people can do to encourage eating well – by choosing foods and drinks to buy, prepare and keep in the fridge which follow the advice given in this report.
- It is important to keep young people's eating habits in perspective – some unusual habits may be just a passing phase or fad.
- Use strategies for encouraging eating well including:
  - encouraging and helping young people to take responsibility for their health
  - reminding them of the importance of good nutrition for sporting performance, good teeth, hair, nails and skin (see page 52)
  - providing access to information about eating well, and
  - carers providing a good example of personal eating habits.

Social aspects of mealtimes

Carers should sit with the children and young people at mealtimes, eat the same food as them, and encourage appropriate social skills at table, to help them develop confidence in eating with other people.

Children and young people who are new to a children's home may find it intimidating to eat with everyone at first. In this case, eating together should be encouraged over a period of time. It may be better to have several small tables in the same room rather than one large one.

It is important that there is an encouraging and pleasant environment at mealtimes. Carers can provide positive role models. In the same way as carers would not smoke in front of children and young people, they can also set a good example in the foods and drinks they choose for themselves.

Mealtimes provide an opportunity for conversation and interaction, so distractions such as television and radio are best avoided during mealtimes. General encouragement can be given to eat appropriately at the table, to try any new foods offered, for children and young people to serve themselves from serving dishes, and to take time over eating and to talk to each other during mealtimes.

The layout of the dining room and the way the tables are set – for example using tablecloths and napkins – can all help make mealtimes more enjoyable. Children and young people can be encouraged to lay the table.

Children and young people should be allowed to make their own food choices and should not be forced to eat food they do not like. Food refusal can be stressful for carers. It is essential that refusing food is not dramatised or rewarded. If a child or young person refuses a food, the carer may wish to offer options from similar food groups. For example, someone refusing their main course could be offered bread or savoury sandwiches, or an omelette for example, but might reasonably be expected to eat this before being offered dessert. Agreeing a policy on how these issues might be tackled among all those involved can help to provide a structure for dealing with food-related issues (see the *Food agreement* on page 65).

The eating patterns of some children and young people may be unpredictable. It is therefore important that children and young people have access to snacks between meals. Suitable snacks to have available throughout the day include breakfast cereals and milk, bread for sandwiches or toast, sandwich fillings and fruit.

Carers will need to negotiate on:

- what sort of food is available for snacks, and
- when it is acceptable for children and young people to help themselves to these.

It is not unreasonable to restrict access to some food items – for example ones that are expensive, or foods such as crisps or biscuits which are for occasional use.

KEY MESSAGES

Eating together at mealtimes should be encouraged.

What carers can do

- Sit with the children and young people at mealtimes, eat the same food as them, and encourage appropriate social skills at table, to help them develop confidence in eating with other people.
- Set an example by your own healthy choices and eating behaviour.
- View the food choices made by children and young people positively, and encourage them to take responsibility for eating well.
- Aim to make the atmosphere at mealtimes as pleasant as possible and avoid distractions.
- Carers and young people could agree a policy on how to handle food refusal and which foods are available as snacks between meals (see page 65).

Food for all: culture and diversity

Eating together, having special foods or avoiding particular foods are all intimately related to aspects of people's family life, cultural and religious beliefs. All that children and young people bring with them to their place of care – their race, gender, family background, language, culture and religion – should be valued in order that children and young people feel accepted and accepting of themselves. It is therefore important to value the contributions which different cultures and nationalities make to the variety of foods eaten in the UK today.

While many people who have settled in the UK still try and preserve many of their traditional food patterns, their children and grandchildren do not necessarily follow all their parents' food practices. For example they may eat fewer ethnic foods and more pre-prepared food or soft drinks. It is therefore essential to treat each child and young person as an individual. Appendix 3 outlines some of the food-related customs commonly observed among ethnic and religious minority groups. However, each family or individual may interpret these in different ways.

Food also plays an important role in the transmission of cultural values and social patterns of behaviour. The way we eat food at the table – for example using cutlery or hands or chopsticks, or using one main serving dish or individual dishes – and the way people interact at the table can be very variable. It is important that different ways of eating are not negatively viewed and that appropriate advice is sought on how food can be presented and eaten in the most appropriate way.

For children and young people who have limited English language or experience of food commonly served in the UK, the use of a picture food dictionary may be helpful. Children can use this to identify foods they recognise and enjoy as well as to introduce new foods that they may want to try. Help and advice on appropriate

KEY MESSAGES

All that children and young people bring with them to their place of care – their race, gender, language, culture and religion – should be valued in order that children and young people feel accepted and accepting of themselves.

What carers can do

- Be aware of the needs of different cultural groups and of the needs of individual children and young people. It is important not to assume that all people within one ethnic, cultural or religious group are the same. There can be great variations in food choices within a country – for example within China or India. Also, remember that not everyone from a black and ethnic minority group wants to follow a traditional diet.
- Encourage children and young people to talk about their food preferences and how they interpret any food restrictions their religion may encompass.
- Carers may need to seek help in order to communicate effectively with some children and young people about the different foods they eat and the ways they might be presented, served and eaten. Previous carers or family members may have useful information about the foods a child particularly enjoys or accepts.
- Encourage the same healthy eating principles in food choice when preparing food from other cultures.
- Talking about and experiencing food from around the world provides an opportunity for carers to emphasise that the UK is a multi-racial and multi-cultural country.

eating patterns for children who have recently arrived in the UK might be usefully sought from people from the same area who have settled in the UK. Contact could be attempted through religious centres, community centres, local restaurants and shops, parents at local schools, or social activities. (See also Appendix 3.)

In larger towns and cities it is now relatively easy to obtain foods appropriate to different diets, but it may be more difficult in smaller communities and rural areas. Some specific foods may also be more expensive than equivalent foods commonly consumed in the UK. Planning ahead, making visits to markets where foods may be cheaper, and preparing food in bulk for freezing when fresh food can be obtained, will enable carers to offer these foods more frequently to children and young people in these areas. It may also be possible to make some simple changes to cooking practices to make them acceptable to the majority of cultures. For example, vegetable oils are acceptable to all minority groups, while pork and pork products are avoided by almost all minority religious and ethnic groups.

Encouraging children and young people to talk about and be involved in food choice and preparation of foods specific to their ethnic or religious background may also help to encourage positive self-image and provide useful skills for later life.

Food from many cultures outside the UK has more flavour and spiciness and some children and young people may find the food offered to them bland and tasteless. Having sauces such as chilli sauce, soy sauces, Worcester sauce or mustard available at the table can help children to add flavour to the food they are served.

Vegetarianism

Vegetarian diets can be varied in the foods restricted. They usually exclude meat and fish and their products, but allow the consumption of dairy products and eggs. There is a wide variation in vegetarian practices so it is important to find out from the individual concerned which foods they do not eat.

Vegetarian diets have traditionally been eaten by many people throughout the world, particularly in Asia. Vegetarianism is common among Hindus and some Sikhs, Rastafarians and Seventh Day Adventists. Some young people may choose to become vegetarian because they believe the diet is healthier, or because they are concerned about world resources, animal welfare or food safety. Approximately 5% of girls and 1% of boys aged 4-18 years in Britain choose a vegetarian diet, although this figure rises to a reported 10% among girls aged 15-18 years.[12]

A vegetarian diet which provides a good variety of foods can supply all the necessary nutrients. It has been shown that vegetarians have diets which are lower in fat and saturated fat and higher in complex carbohydrates and dietary fibre.[13] Research has shown that vegetarian adolescents have lower blood cholesterol levels (which may contribute to lower rates of heart disease) and a lower risk of obesity than non-vegetarians.[14]

Two nutrients which vegetarian diets sometimes do not provide enough of are iron and zinc.

The body absorbs iron more easily from animal sources – such as meat – than from non-animal sources such as cereals or bread (see page 36). This means that vegetarians have to take extra care to make sure that they get enough iron. There is some evidence that vegetarian women in particular have low levels of iron.[15] For advice on how to make sure there is enough iron in the diet and how to improve absorption of iron, see page 36.

Zinc intakes may also be lower among vegetarians. Vegetarian diets usually have a high proportion of cereals. The higher levels of fibre and phytates in such foods make it harder for the body to use the zinc in foods. Eating a good variety of foods ensures that vegetarians get enough zinc. Sources of zinc include fortified breakfast cereals, tofu, nuts, peas, beans and lentils, sesame seeds and milk and cheese.

Children and young people who adopt a vegetarian diet should be supported to ensure that they have

KEY MESSAGES

Vegetarian diets can be very variable and individuals may choose to avoid a variety of different foods.

Children and young people who choose to be vegetarian or vegan should make sure they eat a wide variety of foods every day, and in particular should make sure that they include good sources of iron, zinc and calcium in their diet.

What carers can do

- Find out about the vegetarian diets that looked after children and young people are following and ensure that the diet is as varied as possible.
- When cooking food for vegetarians or vegans it is important not to compromise the food in any way. For example, do not use gravy made with meat juices for vegetarian dishes. When cooking the same basic dish for vegetarians and non-vegetarians, cook the dish first and then add the meat to the portions for non-vegetarians (rather than making the dish with meat and picking the meat out for the vegetarians).

appropriate substitutes for main meal items if the other people they eat with are omnivorous. It is important that their desire for a vegetarian diet is respected and that food is prepared considering their needs. For example, when cooking food for vegetarians, it is important not to compromise the food in any way, for example by using the same cooking oil and utensils for meat and non-meat foods. Meat should be added to a dish for the non-vegetarians rather than being picked out for those who choose not to eat it. Also, care should be taken not to serve for example gravy made with meat juices, or soup made with meat stock, to vegetarian children and young people.

For help and advice on vegetarian diets contact the Vegetarian Society (see page 84).

Vegans

Vegans generally adopt a diet which excludes all foods of animal origin and which therefore also excludes dairy products and eggs. A vegan diet of sufficient variety (for example including cereal foods, nuts, peas, beans and lentils, fruits and vegetables) should provide sufficient energy and protein, but it may be a very bulky diet for a younger person to eat.

Vegan diets are unlikely to provide sufficient vitamin B12 unless fortified foods – such as breakfast cereals – are included in the diet or a supplement is taken.

Vegans may also have diets lower in riboflavin since dairy products are a good source of this vitamin (see page 31).

Teenagers have a high requirement for calcium while they are growing. If they do not eat dairy foods it may be particularly difficult for them to obtain enough calcium. Good non-animal sources of calcium are: spinach and green leafy vegetables, tofu, soya drinks (only those fortified with calcium), white bread and flour, peas, beans and lentils, dried fruit, oranges and sesame products.

Anyone adopting a vegan diet, or caring for someone who has chosen to become a vegan, is advised to seek advice and support from the Vegan Society (see page 84).

Food allergy and intolerance

A minority of people experience adverse effects to some foods or food ingredients. Between 4% and 10% of children are estimated to have intolerance to one or more foods,[16] but this is most predominant in the first three years of life. Among adults it is estimated that about 2% of people have true food sensitivity.[17]

Food intolerance is defined as a reproducible and unpleasant reaction to a specific food or ingredient.

A **food allergy** is a form of food intolerance where there is evidence of an abnormal immunological reaction (a reaction of the immune system).[18] Foods that can cause severe reactions include peanuts, nuts, shellfish, sesame seeds, cow's milk, eggs, citrus fruits, soya beans, wheat and other cereals. Food allergies are more likely to occur in children with a family history of allergies such as hay fever, eczema or asthma. True food allergy should always be taken seriously and expert advice sought from a GP.

Some people may also have a **food aversion** which causes an unpleasant bodily reaction due to emotions associated with a food. People may become convinced that they are sensitive to certain foods and this can be encouraged by some popular books and unorthodox practitioners.[9] Children and young people should be discouraged from attempting to restrict their diets due to a perceived allergy or intolerance as this may make it difficult for them to get all the nutrients that they need. This is particularly true if they avoid foods such as dairy products or wheat products.

It is not easy to diagnose food intolerance and allergy, and investigations are generally only undertaken when the side effects observed are very severe or if many different foods are involved.

Migraine headaches may be triggered by a number of factors including some foods. Alcoholic drinks, chocolate, cheese and citrus fruits have been reported to bring on migraine.[9] Among children it has been reported that cow's milk, eggs, chocolate, oranges and wheat were

KEY MESSAGES

Food intolerance is a reproducible and unpleasant reaction to a specific food or ingredient. Food allergy is a form of food intolerance and can cause severe reactions to foods.

If a single food causes reactions, it is sensible to avoid it. However, advice should be sought before excluding a large number of foods.

The true incidence of food intolerance is much lower than commonly suggested.

Food allergies, for example allergies to peanuts or eggs, can cause a serious reaction such as anaphylactic shock. Carers should be trained in how to deal with this in case it happens.

What carers can do

- If you are caring for a child with a medically diagnosed true food allergy, seek appropriate advice and guidance from a State Registered Dietitian.
- Highlight the presence of any such allergies in the child's or young person's care plan.

the foods most likely to provoke an attack among chronic migraine sufferers.[9] However, diets excluding these foods should only be attempted under medical supervision.

For information on possible links between diet and hyperactivity see page 52.

Diets for specific medical conditions

There are a number of special diets which may be required by children and young people. Special diets are the foods recommended by a State Registered Dietitian or doctor for a specific medical condition and expert advice should always be sought. Some of the most common special diets are:

- dairy-free diets for lactose intolerance, and
- gluten-free diets for coeliac disease.

Children and young people with diabetes mellitus also have specific dietary needs.

Advice on all special diets can be obtained from a State Registered Dietitian (see *Health professionals* on page 85).

Dairy-free diets for lactose intolerance

Lactose is the sugar naturally occurring in milk and milk products and milk-based foods. A deficiency of the enzyme lactase which is needed to digest lactose causes unpleasant digestive symptoms, including diarrhoea, when dairy products are eaten. Some people may be able to have small amounts of dairy foods without any distress, while others may not tolerate any lactose-containing foods.

People with lactose intolerance should avoid dairy products and care needs to be taken to make sure they get sufficient calcium from other food items. The best option is to use fortified soya milk in place of cow's milk. Other soya foods, tinned fish eaten with the bones, egg yolk, bread, breakfast cereals, pulses, dark green leafy vegetables and dried fruit also provide calcium.

Gluten-free diets for coeliac disease

Coeliac disease is a sensitivity to gluten, the protein found in wheat and rye and often to similar proteins found in oats and barley. In people with coeliac disease these proteins damage the gut wall and prevent the absorption of nutrients from the small intestine. This can cause diarrhoea, abdominal bloating, discomfort, and tiredness and fatigue caused by deficiency of iron and folate. The condition is probably more common than once thought and is often not diagnosed until adulthood.

Coeliac disease can often be suspected by the presence of pale bulky stools which are difficult to flush away, caused by the body not properly absorbing the fat in the diet. However, a person can have coeliac disease without having these symptoms.

The only treatment is to have a gluten-free diet and care has to be taken that all sources of gluten are avoided for the rest of the person's life.

The Coeliac Society (see page 84) offers help and advice for all those with coeliac disease and provides lists of foods which are gluten-free. Gluten-free breads, biscuits and other foods can be obtained on prescription.

Children who have grown up with a gluten-free diet may rebel against it when they become teenagers and stray off the diet to join in with their peers eating hamburgers, pizza, or fish and chips (all of which contain some gluten). Some will have adverse reactions which are sufficiently off-putting to make them want to return to their diet, but others may have fewer symptoms and therefore not be persuaded to keep to the diet. Unfortunately, damage to the gut will still occur whether there are symptoms or not and this could potentially lead to more serious ill health in later life. Where possible, carers need to encourage adherence to the diet without becoming obsessional.

Diets for children and young people with diabetes

Children and young people with diabetes are insulin dependent and therefore should be seen regularly by health professionals who can advise on appropriate diets.

Diabetics are generally encouraged to eat a healthy diet in line with that recommended for the population as a whole, but it is particularly important that they eat regular meals and snacks. Large amounts of sweets and soft drinks are not encouraged but occasional sweets can be included, preferably as part of a meal.

Older children and young people may have rapidly changing growth patterns and should be encouraged to take full control of their diabetes and learn to adjust the amount of food and insulin they need.

Young people with diabetes need to be advised about alcohol intake. Young diabetics in particular should

KEY MESSAGES

Some children and young people may require special diets recommended by a State Registered Dietitian and specialist help is needed to ensure that the food served is appropriate.

What carers can do

- Discuss any concerns about special diets with a State Registered Dietitian. (See *Health professionals* on page 85.)
- Encourage children and young people to take an active interest in, and responsibility for their special dietary needs.

not drink too much as alcohol can increase the risk of hypoglycaemia (low blood sugar). Alcoholic drinks can be a rich source of simple sugars and the physical effects of hypoglycaemia can sometimes be mistaken for drunkenness, with the result that emergency treatment may not be given quickly enough.

Specific medical care is needed in the management of diabetics who become pregnant.

For more advice on all aspects of diabetes, contact Diabetes UK (see page 84).

Children and young people with special needs

Children and young people with disabilities may have particular problems associated with eating. It is important that anyone involved in caring for children and young people with eating difficulties is trained to ensure that they can give the best and most appropriate assistance. Cerebral palsy, muscular dystrophy and cleft palate in particular can lead to eating and swallowing difficulties. These problems, where they exist, should not be a barrier to enjoyment and participation in meals and food choice or to learning about healthy eating.

Encouraging independence in eating might require special aids such as non-slip mats, dishes with wide bases and high walls, adapted cutlery and special drinking straws and beakers. Occupational Therapists can advise on the most suitable equipment (see *Health professionals* on page 85).

Swallowing difficulties can be particularly frightening. Aspirating food into the airways (breathing it in) can cause coughing and choking and lead to respiratory infections. Carers need training to ensure they provide food that is of an appropriate consistency, in the most appropriate way. A Speech and Language Therapist can advise on swallowing difficulties (see *Health professionals* on page 85).

Carers should try to make food look and taste as attractive as possible. When food needs to be pureed or liquidised, each part of the meal should be pureed separately so that the different flavours and colours can be appreciated. There are many ways in which the texture of food can be altered to enable those with eating difficulties to eat well and it is essential that carers seek advice from a State Registered Dietitian or Speech and Language Therapist (through the GP or hospital doctor).

Some children and young people with special needs may well need to be helped to eat. It is particularly important to position a child or young person correctly when helping them to eat, so that they are well supported in an upright position.

Consistency of care can be important when helping someone to eat. Regular contact means that communication skills are developed and carers will be more empathetic to a person's needs and better able to read non-verbal cues. Helping a disabled child or young person to eat can be tiring and stressful as well as time-consuming. Carers should be aware of these demands and support each other. They should also be appropriately trained and supported by their local managers. The care plans of children and young people with special needs should include information about their food preferences and any eating difficulties they may have.

Children and young people who are disabled may be particularly prone to health problems such as underweight or obesity, and constipation. Advice on how to deal with these issues can be sought from a State Registered Dietitian (see *Health professionals* on page 85). Problems of overweight are commonly seen among children and young people who are more immobile, and there may be many reasons why children and young people with both physical and learning disabilities gain weight. It is therefore important to ensure that the food and drinks served both at meals and as snacks are the most appropriate to the needs of each individual child. Training on eating well is therefore essential.

Children and young people with special needs also need the opportunity to talk about and express their food preferences, and carers should be creative in making opportunities for individuals to express their choices.

The Caroline Walker Trust Expert Working Group recommends that a report looking in detail at the practical and nutritional requirements of children and young people with special needs should be produced.

For sources of further information and advice about children and young people with special needs see page 85.

KEY MESSAGES

Some children with special needs may have difficulty with eating. Their carers should have training to ensure that they can give the best and most appropriate assistance.

What carers can do

- Seek specialist help if you are concerned about whether a child or young person with special needs is eating well or having difficulties eating.
- Encourage the same healthy eating principles among children and young people with special needs as for all children and young people.
- Be pro-active in encouraging children and young people with special needs to become involved in their own food choices.

Food safety and hygiene

The Food Safety Act (1990) requires everyone involved in the food chain – from production to preparation – to ensure that food is safe. Some carers may need to complete a Food Hygiene Certificate course.

Children and young people should also be taught basic food hygiene, for example:

- how to re-heat food safely
- how to recognise whether food is safe to eat
- the importance of hand-washing, and
- the importance of washing dishes and utensils thoroughly.

Several useful publications on food safety and hygiene are available from the Food Standards Agency (see page 84).

KEY MESSAGES

What carers can do

- Always wash hands before handling food and after going to the toilet or using a handkerchief.
- Make sure that cuts and sores are covered with waterproof dressings.
- Do not smoke where food is being prepared.
- Keep equipment and surfaces clean.
- Prepare raw and cooked food separately.
- Keep food covered.
- Cool leftover food quickly and refrigerate.
- Understand how to store, prepare and cook food safely.
- Do not allow pets to walk on food preparation surfaces or near food.
- Follow the use by dates on foods. This includes fresh, canned and dried foods.
- Keep cooking and eating utensils clean, and encourage children and young people to clear up after themselves if they cook or make snacks.

Listening to children and young people

Young people are faced with numerous choices as they become increasingly responsible for themselves. Eating is one activity that all looked after children and young people must do every day and that largely remains communal. Planning, preparing and eating meals and snacks can provide a useful framework for communication. It has the added benefit of helping young people to learn essential cooking and planning skills.

It is essential to allow children and young people to voice their feelings and concerns over food and food-related issues. Encouraging eating well does not mean that any foods are forbidden or that people should be faced with foods they do not like. Often, eating a healthier diet is about eating more of some foods as well as eating less of others.

Asking children and young people about their preferences should be an integral part of everyday care. Encourage children and young people to talk about or draw pictures of the foods they like to eat and to plan menus themselves. If children and young people have access to a range of cookery books, they can point out foods that they would like to try. Cutting out pictures of food, or recipes, from magazines can stimulate discussion. Looking at food labels can help to explain the differences between foods and to compare similar products.

It can help if carers and the children and young people in their care mutually agree boundaries around eating. This can be an effective way of avoiding conflicts when foods are rejected or demanded. An agreement could also be reached about which snacks are freely available, which foods and drinks might be saved for special occasions, and who takes the lead on menu planning each day or each week.

These issues form part of a 'food agreement' that carers negotiate with the children and young people in their care. A sample food agreement is shown opposite.

KEY MESSAGES

Communication between carers, children and young people about food preferences and food practices is essential.

Asking children and young people their views on food and food-related issues should be an integral part of daily practice.

What carers can do

- Actively encourage the involvement of looked after children and young people in planning menus and in preparing and cooking food.
- You may find it helpful to negotiate a *Food agreement* with the children and young people in your care. This can be an effective way of avoiding conflicts over food issues. A sample food agreement is shown opposite.

Food agreement

- We will all have the opportunity to comment on and contribute to the weekly menu.
- Anyone with special requirements will have suitable food available to them.
- Breakfast is an important meal. Everyone is expected to get up in time to eat breakfast.
- There will always be access to an 'open pantry' with bread, sandwich fillings, cereals, milk and fruit.
- We will all sit together at mealtimes.
- We will all respect other people's choice of food and manner of eating.
- We will encourage good social skills during meals.
- Everyone will be given enough time to eat.
- Food will never be withheld as a form of punishment.
- If someone refuses a meal, they will be offered a suitable alternative or food from the open pantry.
- Everyone will be encouraged to eat five portions of fruit and vegetables a day.
- Everyone will be encouraged to take some exercise every day.

Carers may find it helpful to negotiate a 'Food agreement' with the young people in their care. This can be an effective way of avoiding conflicts over food issues. A sample food agreement is shown above. Agreements will vary in different settings and will change and evolve: listening to what children and young people have to say about eating well, and reaching an agreement together, are essential.

Management and training

Those responsible for the management of carers of looked after children and young people should demonstrate a commitment to the principles of healthy eating and to recognise the need for looked after children and young people to develop their food skills. This commitment should be reflected in management action plans for all care facilities, and in the skills development plans for carers.

A detailed nutrition information record should be kept for each child or young person. This should include essential information on: the individual's food preferences, eating patterns, dietary or food-related concerns, cultural or religious requirements, special dietary needs, any food intolerances or allergies, eating problems or eating disorders. This information should accompany the child if he or she moves from one placement or care situation to another. If possible and appropriate, the record could be held by the child or young person. The nutrition information record could form part of the records kept for all looked after children and young people. A sample nutrition information record sheet is given in Appendix 5.

In residential homes, healthy eating and food policy should be regular agenda items at management and staff meetings.

Within each residential home, there should one staff member with a specific responsibility:

- for good nutrition, and
- for enabling and encouraging children and young people to take adequate physical activity, and to develop their interest, and confidence, in taking part in exercise and sporting activities.

Information about nutrition should be made available to foster carers through their supervising social worker.

Training for carers

Training for carers is a crucial factor in encouraging looked after children and young people to eat well. Carers should receive training on nutrition and menu planning as part of their skills development plan. Even if carers do not directly cook and plan meals for looked after children and young people, they act as an important source of information and advice and as an influential role model (see *Carers as role models* on page 66). *All* carers should therefore be encouraged to attend training on healthy eating. Local authorities and other care providers should ensure that this training takes place at local level and is made available to all carers.

The training should ensure that carers:

- have sufficient nutritional knowledge and commitment to healthy eating to understand the

importance of, and be able to provide, interesting and varied menus which fulfil the nutritional requirements of the children and young people in their care

- can help looked after children and young people acquire information about healthy eating, and skills and practical experience of preparing and cooking food (see chapter 7), and
- recognise the importance of encouraging looked after children and young people to talk about their likes, dislikes and concerns about food, and of getting them interested in meal planning and food preparation.

The Caroline Walker Trust has produced a set of training materials, called *Eating Well for Looked After Children and Young People Training Materials*. Based on this report, these training materials contain clear information about health and good nutrition for looked after children and young people, as well as practical ideas for putting the theory into practice and for helping children and young people to learn food skills. The materials can be used by trainers or by individual carers. (For more information see page 83.)

Carers of children and young people with special needs should receive specific training and support with assisting those who may need help with eating.

Those responsible for providing training for foster carers should introduce a module on healthy eating into existing training courses. This can be provided through use of the training materials referred to above.

A module on nutrition should be added to NVQ *Caring for children and young people - Level 3*, and to the equivalent SVQ.

A CD-ROM or Internet resource should be produced to help carers, children and young people produce nutritionally balanced menus (as has been done for other vulnerable groups). The resource should also be a means for children and young people themselves to learn more about good nutrition.

KEY MESSAGES

Managers involved in the care of looked after children and young people should demonstrate a commitment to the principles of healthy eating. They should also recognise the need for looked after children and young people to develop their practical food skills so that they are better able to look after themselves when they have left care.

A detailed nutrition information record should be kept for each looked after child or young person. If possible and appropriate, the record could be held by the child or young person. A sample nutrition information record sheet is shown in Appendix 5.

In residential homes, healthy eating and food policy should be regular agenda items at management and staff meetings.

All carers should receive training on good nutrition and menu planning. This could be part of their skills development plans. Local authorities and other care providers should ensure that this training takes place at local level and is also made available to managers, inspectors and other relevant staff. Government should support this work. (See page 83 for details of training materials currently available.)

Carers should be trained to enable all looked after children and young people to acquire information on healthy eating, and practical experience in cooking, budgeting for food, shopping, menu planning, food storage and handling, so that they are better able to look after themselves when they have left care.

Carers as role models

Carers should not underestimate the influence they have with the children and young people they look after – for example in their own attitude to foods and drinks, body weight and body image, drinking alcohol and being physically active. Carers act as important sources of information and advice and as influential role models for looked after children and young people.

Carers can provide a positive role model for the children and young people in their care, for example in the snacks and drinks they choose for themselves, in choosing to eat breakfast, and in being physically active. When taking children and young people out for treats and outings, carers could consider venues other than just fast food outlets – for example Italian or Chinese restaurants. Treats can also take the form of trips which encourage physical activity – such as ice skating or roller skating.

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Chapter 7

Developing food skills for life

Most children and young people gain knowledge and skills about food shopping and cooking from watching others in their household throughout their younger years. When looked after young people leave care, they may have to become responsible for their own food budgeting and menu planning straight away, so they have a particular need for skills and information. Also, young people who leave care may have limited food equipment and facilities, so knowing how to cook simple, wholesome and inexpensive food should be a priority.

The Caroline Walker Trust Expert Working Group recommends that, before young people leave care, they should have the opportunity to work through the following areas:

- understanding healthy eating
- budgeting
- shopping
- menu planning
- cooking – both for themselves and for others
- clearing away, and
- food storage and handling.

Skills need to be learnt throughout a young person's life and experience in these areas should be integrated into everyday care.

This chapter describes the basic skills, knowledge and equipment young people will need when they leave care. (More detailed advice on menu planning for carers is given in chapter 8.)

Budgeting

Young people should have practice at budgeting for food before they leave care. They will need to practise eating on a budget over quite a long period – for example a month at a time. It is relatively easy to eat a varied diet on a budget for a shorter period of a few days for example, but more difficult to achieve this over a month. It is important not to leave the 'practice month' until shortly before the young person is due to leave care: all the skills outlined in this chapter should be encouraged, practised and integrated into everyday life.

The weekly menu

Sunday is a roast lunch,
Chicken, mash potatoes and broccoli by the bunch.
Monday is the favourite meal of my mate Keith,
We all get dumplings and stew with beef.
Tuesday means it's soup and butties,
We can all be out quick to play with our footies.
Wednesday is my favourite, poached fish,
It honestly is a tasteless dish.
Thursday's are spaghetti bolognaise,
I'd rather eat plain mayonnaise.
Friday holds a real treat,
Fish and chips and then something sweet.
Saturday's the best for my friend Tash,
We get sausage and loadsa mash.
Sunday is the veggies and roast again,
The cycle comes around for yet another reign.

Poem
By Marc

Cooking for one person can be wasteful. It is not always easy to buy small quantities of food or to store food which is bought in larger (and often cheaper) packs. Being able to create a one-month menu which is interesting, varied and cheap is an important skill. All young people should be encouraged to think about the importance of planning meals around simple staples that can be kept in a store cupboard.

It will be very tempting for young people to think of other ways of using their disposable income when they first leave care. So it is essential for young people to work out for themselves the minimum amount they need to eat properly.

Useful basic items to keep in a store cupboard

breakfast cereals

pasta
rice
salt

pepper
sugar
cooking oil
flour
milk powder

canned fruit such as peaches and mandarins

tomato puree
dried/instant potato
packet or canned soup

jam or honey
peanut butter

canned tuna, sardines, pilchards
baked beans
canned beans
canned sweetcorn
canned tomatoes
canned carrots

If a freezer compartment is available, other useful stand-bys are:

frozen peas
frozen beans
frozen sweetcorn
fish fingers
fish cakes
frozen pizza

Shopping

Young people should have experience of comparing the cost of foods from different outlets. Local markets can be cheaper than supermarkets, and supermarkets themselves vary greatly in price. Special offers may be a good buy, but care needs to be taken if items are perishable (see *Food storage and handling* on page 70). Pre-packed fruit and vegetables are usually more expensive than ones you put in a bag yourself. Pre-prepared food is often very expensive so it is essential for young people to know how to prepare meals from basic ingredients (see *Cooking* below).

Young people also need to think about how much fuel their cooking will use. For example, food which needs to be heated or cooked in an oven for a long time can be expensive to prepare.

Menu planning

The importance of eating a varied diet has been stressed in this report. Menu planning is all about choosing foods which will provide all the nutrients needed for good health.

Young people leaving care should be encouraged to plan menus and food choices for themselves. They should then have the opportunity to discuss, with a carer who has had training in nutrition, how they can improve their menus nutritionally as well as making them cost-effective.

Cooking

Basic food preparation and cooking skills are essential. In order for looked after children and young people to develop their food skills, they need access to a kitchen and domestic cooking equipment (rather than large-scale catering equipment). Where local interpretation of health and safety regulations makes access to a home's main kitchen difficult, separate kitchen facilities – which include a gas or electric ring, a toaster and a grill – should be provided.

Young people who are about to leave care should all be able to:

- prepare potatoes, or other starchy food such as yams, and cook them by boiling, baking or microwaving
- cook rice, pasta or noodles in the right quantities
- boil, scramble and fry eggs
- prepare and cook vegetables such as carrots, beans, cabbage or broccoli on a gas or electric ring or in a microwave oven
- grill, oven bake or fry foods such as sausages, fish fingers or bacon
- make a simple dish of something on toast
- make a simple pasta sauce
- make fillings for sandwiches or jacket potatoes
- make a simple stir-fry.

It is also useful to know how to make simple soups and stews, cook with pulses and beans, make crumble, dumplings or pancakes, make omelettes, and prepare a variety of salads and vegetable dishes.

Safety in the kitchen is also important. For example, cooking oven chips might be a safer option than deep frying chips.

Children and young people should be taught and encouraged to cook for others. This is an important skill to have for after they have left care. Being able to cook simple meals for friends can be a cheap and enjoyable social activity and can help reduce isolation and boost confidence.

Clearing away

Young people should be encouraged to wash up cutlery, crockery and cooking equipment after use and store leftover food appropriately (see *Food storage and handling* on next page).

Food storage and handling

Young people should be given clear advice on how to store and handle foods safely. This should include:

- basic food hygiene and personal hygiene
- reading the instructions on a wide variety of food types
- how to use 'sell by' and 'use by' dates on foods
- information on which products are particularly vulnerable to spoilage
- how to safely re-heat leftovers
- how to cook food previously frozen, and
- the importance of not re-freezing previously frozen food.

For more information on food safety see page 64.

Kitchen equipment

When they leave care, young people may find themselves living in accommodation that does not provide kitchen equipment or has a limited supply. The following items are very useful:

- crockery: plates, bowls, mugs, glasses
- cutlery: knives, spoons, forks, teaspoons, tablespoon
- frying pan, large saucepan, small saucepan
- measuring jug
- wooden spoon
- fish slice
- small sharp knife, bread knife, potato peeler
- chopping board
- grater
- metal steamer
- sieve or colander
- can opener
- baking tray/grill pan
- heatproof bowl/casserole dish
- toaster
- kettle
- oven gloves
- tea cloths
- a basic cook book.

Aftercare support

Food skills should be an important part of the aftercare support for young people who have left care. Strategies to acquire them should be part of every Pathway Plan.

When visiting young people who have left a care environment, find out:

- what they ate the day before
- who they ate with
- what food they have in the cupboard/fridge
- whether they have lost any weight.

KEY MESSAGES

Carers should ensure that all looked after young people acquire knowledge, skills and practical experience in the following areas, so that they are better able to look after themselves when they have left care:

- understanding healthy eating
- budgeting
- shopping
- menu planning
- cooking skills
- clearing away, and
- food storage and handling.

Learning these skills should be seen as an integral part of care for all looked after children and young people.

Local authority Social Services Departments (or, in the case of private and voluntary sector provision, the person with overall responsibility) should ensure that looked after children and young people have access to kitchen and cooking facilities, so that they can develop their food skills. Where local interpretation of health and safety regulations makes access to a home's main kitchen difficult, separate kitchen facilities – which include a gas or electric ring, a grill and a toaster – should be provided.

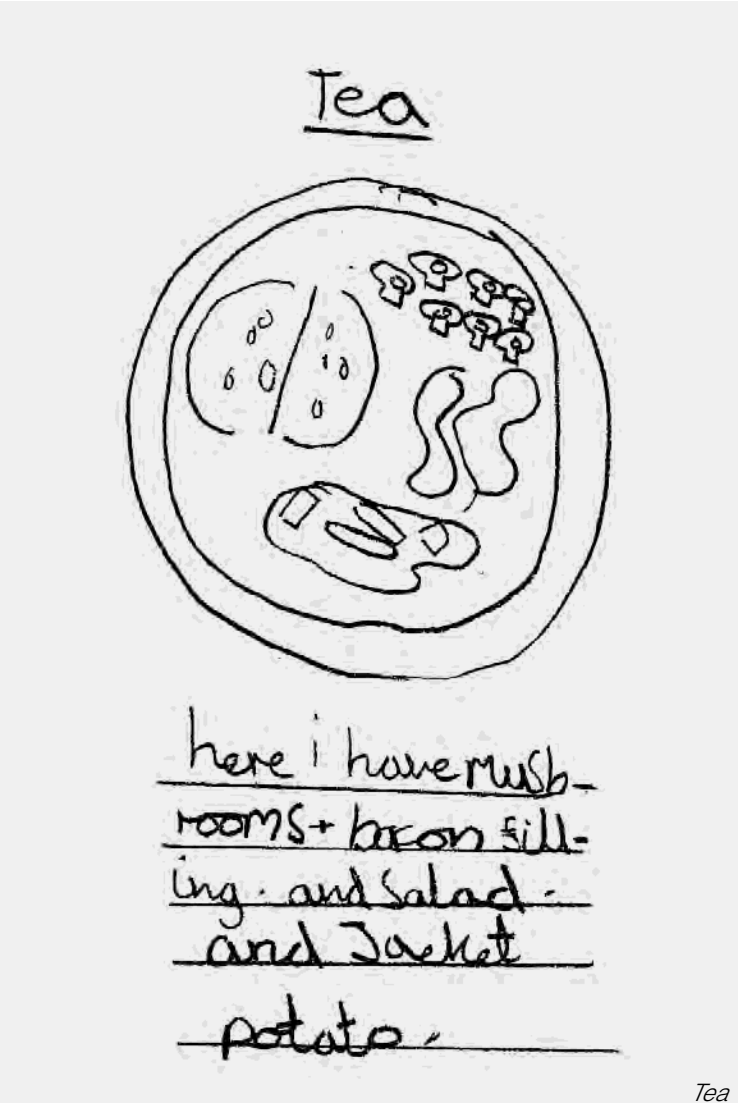
Looked after young people should be taught and encouraged to cook for others. This is an important skill to have for after they have left care. Being able to cook simple meals for friends can be a cheap and enjoyable social activity and can help reduce isolation and boost confidence.

Young people should be helped to obtain basic kitchen and cooking equipment when they establish themselves independently.

Food skills should be an important part of aftercare support for young people. Strategies to acquire them should be part of every Pathway Plan.

Chapter 8

Nutritional guidelines for looked after children and young people



Tea
By Nikita

Quantified nutritional guidelines

The amounts of energy and nutrients estimated as the 'dietary reference values' for planning the diets of groups of people were published by the Department of Health in 1991 (see Appendix 2).[1] These dietary reference values are the benchmarks which can be used to ensure that the needs of all the individuals in a population group are likely to be met.

If menus achieve these minimum guidelines, and offer a wide variety of foods including five portions of fruit and vegetables a day, then they are likely to provide all the nutrients needed for good health, including those that are not given specific recommendations in this report.

Dietary reference values are given for children and young people by age and gender. This report gives quantified guidelines for younger groups (5-10 years) and older groups (11-18 years) of children and young people of mixed gender (see page 72). Menus which can be shown to provide these amounts of nutrients, on average, over a period of one week or more, are likely to provide all the nutrients required. The one nutrient that may be required in greater quantities by some teenage girls is iron (see page 48) and specific advice on iron is given on page 72.

Menu planners may be concerned that if they have a population of 'younger' children in the age range, they will be offering too much food and the children will gain too much weight. However, children will choose to eat more, or less, of the food offered depending on their appetite. Generally individuals choose amounts appropriate to their needs so, if enough food is provided, those with the bigger appetites will eat more and those with the smaller appetites will eat less. Children are more likely to become overweight if they snack on high energy foods between meals and/or have low energy expenditures (ie if they do not take enough exercise). For more information about overweight see page 45.

Nutritional guidelines for looked after children and young people

These guidelines provide figures for the recommended nutrient content of an average day's food and drink for a child aged 5-10 years, or a young person aged 11-18 years, over a period of one week or more.

Nutrient	Children 5-10 years	Young people 11-18 years
Energy MJ/kcal	1,745kcal/7.3MJ	2,235kcal/9.4MJ
(range of Estimated Average Requirements*)	(1,545kcal-1,970kcal) (6.46MJ-8.24MJ)	(1,845kcal-2,755kcal) (7.92MJ-11.51MJ)
Fat (not more than 35% of energy)	Max = 68g a day	Max = 87g a day
Saturated fats (not more than 11% of energy)	Max = 21g a day	Max = 27g a day
Total carbohydrate (about 50% of energy)	Min = 233g a day	Min = 298g a day
Non-milk extrinsic sugars (not more than 11% of energy)	Max = 51g a day	Max = 66g a day
Protein	Min = 25.4g a day	Min = 45.9g a day
Fibre (non-starch polysaccharides) (estimated)	Min = 14g a day	Min = 18g a day
Iron	Min = 7.8mg a day	Min = 13.1mg a day
Calcium	Min = 520mg a day	Min = 900mg a day
Zinc	Min = 7.0mg a day	Min = 9.0mg a day
Vitamin A	Min = 500µg a day	Min = 600µg a day
Thiamin	Min = 0.7mg a day	Min = 1.0 mg a day
Riboflavin	Min = 0.9mg a day	Min = 1.3mg a day
Niacin	Min = 11.5mg a day	Min = 16.5mg a day
Folate	Min = 130µg a day	Min = 200µg a day
Vitamin C	Min = 30mg a day	Min = 37.5mg a day

Estimated Average Requirement = The amount which satisfies 50% of the children in a group (defined by age and sometimes by gender).
kcal = kilocalories
Max = maximum
mg = milligrams
Min = minimum
MJ = megajoules (1 MJ = 1,000 kiloJoules)
µg = micrograms

* These figures are a guide only to the relative proportions different nutrients should have in the diets of looked after children and young people. Menu planners should aim to produce menus which are approximately in line with these figures.

Iron
The figures given for iron are likely to meet the needs of the majority of children and young people, and they are higher than the intakes currently observed in dietary surveys of this age group. However, some individuals – for example some menstruating girls – may need higher iron intakes than those given in the guidelines. Those with particularly high needs may not be able to meet these from the diet alone, even if the RNI is achieved, and may need to take iron supplements. Teenage girls who experience heavy menstrual losses or who appear tired, pale or listless should have their iron status assessed. Depending on the results of the assessment, the GP may prescribe iron supplements.

Implementing the nutritional guidelines

The nutritional guidelines given on the left should become standards for the care of looked after children and young people.

Government departments should include reference to the nutritional guidelines in guidance and regulations on looked after children and young people.

Government should require good nutrition to form part of all Management Action Plans for improving the care of looked after children and young people.

Local authorities should adopt the nutritional guidelines and use them as standards in the residential homes which they provide or contract with, or which they register and inspect.

Local authorities should provide training and information to all relevant staff – including managers, carers and inspectors – to enable them to use the nutritional guidelines effectively.

External line managers and registration and inspection officers should monitor the nutritional standards of the food provided for looked after children and young people in the settings they visit. Inspectors' reports should include comments on food and nutrition. Appropriate expert advice and help should be obtained by any care setting which cannot meet the guidelines.

Putting the nutritional guidelines into practice

Anyone responsible for providing meals and snacks should aim to offer tasty, well cooked, nicely presented foods that will be liked and enjoyed. The fundamental importance of food as an enjoyable social activity should always be remembered. It is however important to realise the importance of eating well to good health. Current recommendations for eating well have been discussed in chapter 4 and the key messages are summarised below.

Practical ways to apply healthy eating messages to cooking practices and food choice

Changes can be made gradually and many may not be noticed directly by those eating the foods served. Small changes to foods eaten every day have the greatest effect on eating well. For example, using lower fat versions of fat spreads, milk and cheese can make a major contribution to reducing our fat intake.

Ways of cooking healthily

- Use vegetables in the main part of the meal as well as accompaniments.
- Add beans, peas and lentils to meat and vegetable dishes.
- Use whole grain cereals and breads where possible. If brown and wholemeal bread are refused, high fibre white bread might be acceptable.
- Use semi-skimmed milk in cooking and on cereals and in drinks.
- Use low fat cheese in cooking or use smaller amounts of strong cheese.
- Use polyunsaturated margarines as spreads and encourage children and young people not to use any margarine or butter in sandwiches that have a moist filling (for example egg mayonnaise, peanut butter or houmous).
- Use low fat yoghurts and fromage frais in cooking.
- Use cooking oils high in monounsaturates such as olive oil or rapeseed oil.
- Use lean meats where possible and skim the fat from stews and casseroles.
- Avoid using stock cubes and salty sauces. Use herbs and spices to add flavour to foods instead.
- Use dried fruit in puddings, cakes and biscuits.
- Thick-cut chips contain less fat than thin chips or crinkle-cut chips. Oven chips usually are lowest in fat.
- In general grill, bake, steam, poach, casserole or boil instead of roasting or frying food, to reduce the fat content.

Details of basic cookery books are given on page 83.

Offering variety

It is important to encourage children and young people to eat a varied diet. This means that carers sometimes need to take 'risks' and buy new foods to try out. Or the same food could be served differently – for example, instead of giving liver, try serving liver pâté. Tasting sessions are also a useful way to get children and young people to try new foods.

Convenience foods which can be usefully included in the diet

- Frozen and tinned vegetables are acceptable alternatives to fresh.
- Dried potato is also useful.
- Pasta, rice and noodles are all convenient starchy bases to a meal.
- Ready-prepared tomato-based pasta sauces make a quick meal and can be used as a base for bolognese sauce or lasagne.
- Baked beans and other tinned beans are nutritious and can be added to lots of recipes.
- Tinned fish can be made into fillings for sandwiches and jacket potatoes.
- Frozen pizzas are often cheaper than chilled ones. Extra toppings can be added to pizzas.
- Frozen, tinned and dried fruit are acceptable alternatives to fresh.
- Low fat yoghurts are good, simple desserts.

Convenience foods which are expensive and are often high in fat, salt or sugar

- Ready-made meat or vegetable pasties, sausage rolls, patties and samosas.
- Frozen potato shapes, waffles, hash browns, battered potatoes. (Boiled, mashed or jacket potatoes are a cheaper and healthier option.)
- Coated chicken and fish products. (Often these contain only 50% meat or fish and work out much more expensive than buying the fish or chicken uncoated.)
- Yoghurt-type desserts which have a very high sugar content, often sold as mousses or fromage frais style desserts and those which are extra creamy.
- Fruit pies and fruit pie fillings. (A simple fruit crumble has a much higher fruit content.)
- Very cheap sausages and burgers and economy mince have a much higher fat content. Smaller amounts of leaner versions are more cost-effective in the long run.

Cost considerations

The Caroline Walker Trust Expert Working Group considered the cost of an adequate diet for children and young people by calculating the cost of the sample menus shown on pages 75-77. It is estimated that the average amount that would need to be spent on food and drink for such menus is £18-£20 per week per child for 4-10 year olds and £22-£24 for 11-18 year olds. (These costs are based on supermarket prices in 2000.) Some additional money might need to be allowed to cover the cost of school lunches. Local authority Social Services Departments, other care providers, care home managers and carers may need to review their budgets in the light of these costings.

Healthy eating need not be expensive. The amount of money available will have some influence on food choice but cost considerations should not override the importance of providing a healthy and varied diet. Using basic cooking skills can be very helpful in saving money on food costs: buying ready-prepared vegetables or fruit, sauces and soups for example is an extremely expensive way of buying these foods. Buying some items in bulk can also be cost-effective – for example a sack of potatoes is often cheaper, per pound, than smaller supermarket packs. However, in some cases products bought in bulk may be of poorer nutritional content and if bought in too large a quantity can lead to waste.

When cooking for larger numbers of children and young people, portion size and wastage can become more important issues. It is not cost-effective to waste food prepared and carers should be realistic in the amounts of food they cook. Keeping an audit of waste over a week might help carers to plan more appropriately.

How to 'buy wisely'

- Offer pasta, bread, rice and potatoes. All types of bread are a good source of nutrients and some white breads and soft grain breads have extra nutrients added.
- Use vegetables and fruits seasonally.
- If some fresh fruits and vegetables are expensive at certain times of the year, use tinned or frozen ones.
- Meat will serve more people if you add vegetables, rice, pasta and pulses.
- Purchased convenience foods are often poor value for money: many coated chicken and fish products contain as much coating as meat or fish, and it may be simple to make them yourself.
- Spending money on cakes, biscuits, squashes and other soft drinks is poor nutritional value. These foods provide energy but few nutrients.

Sample menus

Three sample menus, each for one week, are shown on the next pages. These menus fulfil the nutritional guidelines given on page 72. If children and young people were offered these sorts of foods throughout the week and ate a good variety of the food offered, at portion sizes to match their appetite, they would be very likely to obtain all the nutrients they need. Hungrier, more active children and young people should be encouraged to have larger portions of bread, potatoes, pasta, rice and other starchy food at mealtimes or milky drinks between meals (made with semi-skimmed milk).

The menus also demonstrate how five portions of fruit and vegetables a day can be incorporated into menu plans.

It is currently very difficult for menu planners to evaluate how the menus they compile compare with the nutritional guidelines and expert help from a State Registered Dietitian is required. The Caroline Walker Trust recommends that a CD-ROM or Internet resource should be produced to help carers, children and young people produce nutritionally balanced menus. This resource should also be a means for children and young people to learn more about good nutrition.

References

1 Department of Health. 1991. *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom.* London: HMSO.

Menu 1

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Breakfast cereal (average of bran flakes/rice crispies/frosted flakes/wheat bisks/muesli) Semi-skimmed milk Orange juice Wholemeal toast with polyunsaturated margarine and marmalade/jam/honey						
Mid-morning	Apple/banana/satsuma/pear or other fresh fruit snack						
Lunch	Choice of sandwiches made with brown or white bread and polyunsaturated margarine filled with cheese/tuna fish/marmite/corned beef/ham/cottage cheese/cheese spread/egg mayonnaise and salad items such as tomato/cucumber/cress/watercress Raw carrots/cucumber/pepper slices Currant bun/fruit bread/malt loaf/fortified cereal bar/crunchy muesli bar Fromage frais or yoghurt or dried fruit snack Fresh fruit juice or water					Pizza with choice of toppings Coleslaw Jacket potatoes Ice cream and topping sauce	Roast turkey Stuffing Roast potato Carrots Broccoli Lemon meringue pie
Mid-afternoon / after school	Raisin bread Milk*	Fruit scone Milk*	Raisin bread Milk*	Currant bun Milk*	Malt loaf Milk*	Fruit scone Milk*	Chocolate cake Milk*
Tea	Jacket potato with savoury mince filling Green beans Fruit yoghurt with crunchy topping	Chicken and vegetable stir-fry Egg noodles Summer pudding	Sausages Mashed potato Peas Baked pineapple and custard	Lasagne Crunchy salad Crusty bread Mandarin oranges and ice cream	Fish and chips Baked beans Blackcurrant sorbet	Gammon steaks Sweetcorn Grilled tomatoes Crusty bread Rice and fruit pudding	Savoury flan Bean salad Rice and pepper salad Frozen mousse
Supper	Hot chocolate (made with semi-skimmed milk) Wholemeal/fruit biscuits						

* Milk should be either semi-skimmed or calcium fortified soya milk throughout.

The menu assumes that general healthy eating principles are applied in cooking and preparing food to reduce the amount of fat and saturated fat used.

This menu fulfils the nutritional guidelines for children aged 5-10 and 11-18. Younger children would have smaller portions of the main meal items and may not need a suppertime hot drink and snack.

This menu has been costed at approximately £18.00 per week per child for children aged 5-10 years and £22.00 per week per child for children aged 11-18 years at 2000 prices. The menu assumes that packed lunches have been chosen rather than school lunches.

Menu 2 Vegetarian menu

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Breakfast cereal (average of bran flakes/rice crispies/frosted flakes/wheat bisks/muesli) Semi-skimmed milk Orange juice Wholemeal toast with polyunsaturated margarine and marmalade/jam/honey						
Mid-morning	Fruit snack: apple/pear/satsuma					Packet of crisps	Jaffa cakes Orange slices
Lunch	Choice of sandwiches made with brown or white bread and polyunsaturated margarine filled with cheese/marmite/cottage cheese/cheese spread/egg mayonnaise/houmous/mashed avocado and salad items such as tomato/cucumber/cress/watercress Raw carrots/cucumber/pepper slices Currant bun/fruit bread/malt loaf/fortified cereal bar/crunchy muesli bar Fromage frais or yoghurt or dried fruit snack Fresh fruit juice or water					Vegetable lasagne Peas Italian bread Banana custard	Lentil and hazelnut roast New potatoes Green beans Fresh fruit salad and ice cream
Mid-afternoon / after school	Currant bread with spread Milk*	Malt loaf with spread Milk*	Toast fingers with soft cheese Milk*	Home-made flapjacks Milk*	Sticky prune cake Milk*	Crunchy cereal bar Milk*	Chocolate cake Milk*
Tea	Vegetable risotto Tomato salad Crusty bread Carrot cake	Vegetarian sausages Baked sliced potato Broccoli au gratin Berry fool	Country vegetable flan Crunchy coleslaw Rice salad Baked apples with yoghurt	Sweetcorn and pasta bake Carrots Oven chips Sweet pancakes with lemon	Couscous with sweet and sour vegetables Pineapple upside-down pudding	Vegetable samosa Cucumber and carrot fingers Choc-ice	Cheese, mushroom and pepper pizza Frozen mousse
Supper	Hot chocolate (made with semi-skimmed milk) Wholemeal/fruit biscuits						

* Milk should be either semi-skimmed or calcium fortified soya milk throughout.

The menu assumes that general healthy eating principles are applied in cooking and preparing food to reduce the amount of fat and saturated fat used.

This menu fulfils the nutritional guidelines for children aged 5-10 and 11-18. Younger children would have smaller portions of the main meal items and may not need a suppertime hot drink and snack.

This menu has been costed at approximately £19.00 per week per child for children aged 5-10 years and £23.00 per week per child for children aged 11-18 years at 2000 prices. The menu assumes that packed lunches have been chosen rather than school lunches.

Menu 3 Including world menu options

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast	Breakfast cereal (average of bran flakes/rice crispies/frosted flakes/wheat bisks/muesli) Semi-skimmed milk Orange juice Wholemeal toast with polyunsaturated margarine and marmalade/jam/honey						
Mid-morning	Fruit snack: apple/pear/satsuma					Papaya and lime	Mango slices
Lunch	Choice of sandwiches made with brown or white bread and polyunsaturated margarine filled with cheese/marmite/cottage cheese/cheese spread/egg mayonnaise/houmous/mashed avocado/spicy chicken/salami and salad items such as tomato/cucumber/cress/watercress Raw carrots/cucumber/pepper slices Currant bun/fruit bread/malt loaf/fortified cereal bar/crunchy muesli bar Fromage frais or yoghurt or dried fruit snack Fresh fruit juice or water					Caribbean chicken stew Dumplings Callaloo Watermelon	Spicy kedgeree Peas Grilled tomatoes Frozen ice cream dessert
Mid-afternoon / after school	Raisin bagels Milk*	Banana Digestive biscuits Milk*	Rice cakes Honey Apple Milk*	Malt loaf Orange slices Milk*	Chocolate biscuit Grapes Milk*	Corn chips Salsa Milk*	Chocolate cake Milk*
Tea	Tanzanian beef stew Potatoes Fried plantain Spiced bread pudding	Chicken and vegetable stir-fry Boiled noodles Lychees and ice cream	Beef kheema Rice Naan bread Courgettes Fruit cocktail in juice with custard	Jamaican curried lamb Okra Brown rice Fresh pineapple	Indonesian fish curry Baby sweetcorn Chapati Tropical fruit kebabs	Egg-fried rice Sweet and sour vegetables Baked bananas with yoghurt	Jamaican pattie Oven chips Curry sauce Apple and nutmeg crumble
Supper	Hot chocolate (made with semi-skimmed milk) Wholemeal/fruit biscuits						

* Milk should be either semi-skimmed or calcium fortified soya milk throughout.

The menu assumes that general healthy eating principles are applied in cooking and preparing food to reduce the amount of fat and saturated fat used.

This menu fulfils the nutritional guidelines for children aged 5-10 and 11-18. Younger children would have smaller portions of the main meal items and may not need a suppertime hot drink and snack.

This menu has been costed at approximately £20.00 per week per child for children aged 5-10 years and £24.00 per week per child for children aged 11-18 years at 2000 prices. The menu assumes that packed lunches have been chosen rather than school lunches.

Appendix 1

Good sources of nutrients

This Appendix shows a number of foods and drinks which are important sources of certain vitamins and minerals. These are based on average servings.

	EXCELLENT	GOOD	USEFUL
VITAMIN A	liver liver sausage/pâté carrots spinach sweet potatoes watercress red peppers mango canteloupe melon dried apricots	nectarine peach blackcurrants fresh/canned apricots watercress tomatoes cabbage (dark) broccoli Brussels sprouts runner beans broad beans margarine butter cheese kidney	canned salmon herrings egg honeydew melon prunes orange sweetcorn peas whole milk
VITAMIN D	fortified breakfast cereals herrings pilchards sardines tuna canned salmon egg	liver (other than chicken liver) liver sausage/pâté margarine	chicken liver
B VITAMINS			
Thiamin	liver liver pâté pork, bacon, ham fortified breakfast cereals malted drinks	wholemeal bread yeast extract oatcakes currant buns nuts potatoes	lean meat chicken and other poultry eggs white or brown bread semi-sweet biscuits
Riboflavin	liver kidney	milk malted drinks fortified breakfast cereals almonds	lean meat or poultry bacon mackerel sardines tuna, salmon, pilchards cheese yoghurt eggs
Niacin	fortified breakfast cereals tuna canned salmon pilchards chicken	lean meat sausages kidneys herrings sardines	wholemeal bread peanut butter yeast extract bacon liver sausage
FOLATE	most fortified breakfast cereals, eg cornflakes, branflakes, crisped rice liver spinach	yeast extract cabbage spinach Brussels sprouts broccoli peas orange melon kidney	wholemeal bread/flour wheat bisks cauliflower beef runner beans tomatoes parsnip potatoes green leafy salads ackee peanuts

	EXCELLENT	GOOD	USEFUL
VITAMIN C	blackcurrants orange (and orange juice) strawberries canned guava spring greens green and red peppers (raw)	broccoli cabbage cauliflower spinach tomato Brussels sprouts watercress kiwi fruit mango grapefruit	potatoes green beans peas satsumas eating apples nectarines peaches raspberries blackberries
IRON	fortified breakfast cereals pig liver kidney chicken liver liver sausage/pâté	wholemeal bread/flour wheat bisks beef beefburger corned beef lamb sardines pilchards soya beans chick peas lentils spinach broccoli spring greens dried apricots raisins	white bread baked beans broad beans black-eyed peas blackcurrants salmon tuna herrings sausage chicken and other poultry egg tofu
CALCIUM	spinach sardines cheese tofu	pilchards yoghurt milk (all types) soya drink fortified with calcium cheese spread	canned salmon muesli white bread/flour peas, beans and lentils dried fruit orange egg yolk
ZINC	liver kidney lean meat corned beef	bacon ham poultry canned sardines shrimps and prawns tofu whole grain breakfast cereals, eg puffed wheat, branflakes, wheat bisks nuts	sausages cold cooked meats canned tuna or pilchards eggs milk cheese beans and lentils brown or wholemeal bread plain popcorn sesame seeds and tahini
FIBRE **(non-starch polysaccharides - NSP)**	whole grain/wholewheat breakfast cereals such as branflakes, wheat bisks, shreddies, shredded wheat, sultana bran wholemeal bread wholemeal pitta bread baked beans chick peas, kidney beans (and most beans) lentils dried apricots dried figs dried prunes	muesli wholemeal spaghetti/pasta brown bread wheatgerm bread rye bread white bread with added fibre baked potato with skin chips sweet potato broad beans fresh and frozen peas sweetcorn broccoli Brussels sprouts okra parsnip quorn avocado blackberries dried dates almonds hazelnuts peanuts twiglets	puffed wheat cereal brown rice white pitta bread pizza potatoes yam houmous canned peas cabbage carrots plantain banana mango raisins sunflower seeds potato crisps

Appendix 2

Dietary reference values for children and young people aged 4-18 years

Dietary reference values

The current dietary reference values for energy and other nutrients for the UK were published by the Department of Health Committee on Medical Aspects of Food Policy (COMA) in 1991.[1] These values define the amounts of energy and nutrients that would meet the daily needs of most people in the UK. The dietary reference values include 'Estimated Average Requirements' and 'Reference Nutrient Intakes'. These terms are explained below.

Dietary reference values (DRVs)

Dietary reference values (DRVs) are benchmark intakes of energy and nutrients. They indicate the amount of energy or individual nutrients needed by a group of people of a certain age range (and sometimes gender) for good health.

Although the DRVs are all given as daily intake benchmarks, in practice the intakes of energy and nutrients need to be averaged over several days to take account of variations in appetite and in the diverse foods in a diet from day to day.

The DRVs for energy are described as the Estimated Average Requirements (EAR). Most other nutrients have an EAR and also a Reference Nutrient Intake (RNI) and a Lower Reference Nutrient Intake (LRNI). These terms are described below.

Estimated Average Requirement (EAR)

This is the average amount of energy or nutrients needed by a group of people.

Reference Nutrient Intake (RNI)

This is the amount of a nutrient which is enough to meet the dietary requirements of about 97% of a group of people.

Lower Reference Nutrient Intake (LRNI)

This is the amount which is sufficient for the 3% of a group of people with the smallest needs. Most people will have needs greater than this.

Energy

The Estimated Average Requirements for energy – that is how many calories they need on average – for children aged 4 -18 years are shown below.

Estimated Average Requirements for energy for children aged 4-18 years

Age	Estimated Average Requirement in kcal (MJ) per day	
	Boys	Girls
4-6 years	1,715kcal (7.16MJ)	1,545kcal (6.46MJ)
7-10 years	1,970kcal (8.24 MJ)	1,740kcal (7.28MJ)
11-14 years	2,200kcal (9.27 MJ)	1,845kcal (7.92MJ)
15-18 years	2,755kcal (11.51 MJ)	2,110kcal (8.83MJ)

The amount of energy or calories we need every day is determined both by a basic level of requirement to keep our bodies functioning (called the Basal Metabolic Rate or BMR) and by the amount of physical activity that we do (for example moving around, walking or exercising). People who are inactive have lower energy needs and will eat less food to maintain their body weight. It becomes much harder to get all the nutrients needed for good health if less food is eaten, so it is important to be active to eat well.

Protein

The Reference Nutrient Intakes for protein for children aged 4-18 years are given below.

Age	Reference Nutrient Intakes in grams per day	
	Boys	Girls
4-6 years	19.7g	19.7g
7-10 years	28.3g	28.3g
11-14 years	42.1g	41.2g
15-18 years	55.2g	45.0g

Fat and carbohydrate

For children over the age of 5 years the dietary reference values for the intake of fat and carbohydrate are expressed as the percentage of energy these contribute to the diet:

Total fat provides no more than 35% of energy, of which saturated fats provide no more than 11% of energy.

Total carbohydrate provides at least 50% of energy, of which:
– intrinsic sugars, milk sugars and starch provide at least 39% of energy, and
– non-milk extrinsic sugars (NMES) provide no more than 11% of energy.

The remaining 15% of energy is typically provided by protein in our diet.

Vitamins and minerals

The Reference Nutrient Intakes (RNI) for vitamins and minerals for children aged 4-18 years are summarised below.

	4-6 years		7-10 years		11-14 years		15-18 years	
Vitamins	**boys**	**girls**	**boys**	**girls**	**boys**	**girls**	**boys**	**girls**
Thiamin *mg/day*	0.7	0.7	0.7	0.7	0.9	0.7	1.1	0.8
Riboflavin *mg/day*	0.8	0.8	1.0	1.0	1.2	1.1	1.3	1.1
Niacin *mg/day*	11	11	12	12	15	12	18	14
Vitamin B_6 *mg/day*	0.9	0.9	1.0	1.0	1.2	1.0	1.5	1.2
Vitamin B_{12} *µg/day*	0.8	0.8	1.0	1.0	1.2	1.2	1.5	1.5
Folate *µg/day*	100	100	150	150	200	200	200	200
Vitamin C *mg/day*	30	30	30	30	35	35	40	40
Vitamin A *µg/day*	500	500	500	500	600	600	700	600
Minerals								
Calcium *mg/day*	450	450	550	550	1,000	800	1,000	800
Phosphorus *mg/day*	350	350	450	450	775	625	775	625
Magnesium *mg/day*	120	120	200	200	280	280	300	300
Potassium *mg/day*	1,100	1,100	2,000	2,000	3,100	3,100	3,500	3,500
Iron *mg/day*	6.1	6.1	8.7	8.7	11.3	14.8	11.3	14.8
Zinc *mg/day*	6.5	6.5	7.0	7.0	9.0	9.0	9.5	7.0
Copper *mg/day*	0.6	0.6	0.7	0.7	0.8	0.8	1.0	1.0
Selenium *µg/day*	20	20	30	30	45	45	70	60
Iodine *µg/day*	100	100	110	110	130	130	140	140

References

1 Department of Health. 1991. *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*. London: HMSO.

Appendix 3

Food-related customs

Below is a guide to some of the differences in food choice commonly observed by those from different religious and cultural groups. It is important to emphasise that there may be individual differences in food choices between families, and carers should not make assumptions about anyone's food preferences. It is important to find out about each child or young person, either from themselves, or from family members or previous carers.

'Some' means that some people within a religious group would find these foods acceptable.

	Jewish	Hindu[1]	Sikh[1]	Muslim	Buddhist	Rastafarian[2]
Eggs	No blood spots	Some	Yes	Yes	Some	Some
Milk/yoghurt	Not with meat	Yes	Yes	Yes	Yes	Some
Cheese	Not with meat	Some	Some	Possibly	Yes	Some
Chicken	Kosher	Some	Some	Halal	No	Some
Mutton/lamb	Kosher	Some	Yes	Halal	No	Some
Beef and beef products	Kosher	No	No	Halal	No	Some
Pork and pork products	No	No	Rarely	No	No	No
Fish	With fins and scales	With fins and scales	Some	Some	Some	Yes
Shellfish	No	Some	Some	Some	No	No
Butter/ghee	Kosher	Some	Some	Some	No	Some
Lard	No	No	No	No	No	No
Cereal foods	Yes	Yes	Yes	Yes	Yes	Yes
Nuts/pulses	Yes	Yes	Yes	Yes	Yes	Yes
Fruits/vegetables	Yes	Yes[3]	Yes	Yes	Yes	Yes
Fasting[4]	Yes	Yes	Yes	Yes	Yes	Yes

1 Strict Hindus and Sikhs will not eat eggs, meat, fish, and some fats.

2 Some Rastafarians are vegan.

3 Jains have restrictions on some vegetable foods. Check with the individuals.

4 Fasting is unlikely to apply to young children.

Appendix 4

Sources of help and advice

Eating well

Training materials for carers

Eating Well for Looked After Children and Young People Training Materials
Training materials containing clear information about health and good nutrition for looked after children and young people, as well as practical ideas for putting the theory into practice. The materials can be used by trainers or by individual carers.

Published by The Caroline Walker Trust. Available, price £50, from:
CWT
22 Kindersley Way
Abbots Langley
Herts WD5 0DQ
See also www.cwt.org.uk

Healthy eating

Food Standards Agency publications
The publications listed below are available from the Food Standards Agency. (For ordering details see *Food Standards Agency* on the right.)

The Balance of Good Health FSA0008

Catering for Health FSA0010

Dine Out, Eat Well FSA0004

Eight Guidelines for a Healthy Diet. Poster FSA0244

Enjoy Fruit and Veg FSA0291

Enjoy Healthy Eating FSA0290

Healthy Diets for Infants and Young Children FSA0249

Contact the Food Standards Agency at the address on the right for details of new publications on food labelling currently in preparation.

Food Standards Agency
Publications can be ordered from:
Food Standards Agency
PO Box 369
Hayes
Middlesex UB3 1UT
Tel: 0845 606 0667
Fax: 020 8867 3225
Minicom (for people with hearing disabilities):
0845 606 0678
E-mail:
foodstandards@eclogistics.co.uk

The Food Standards Agency is currently reviewing some of the booklets and leaflets previously published by the Department of Health, Ministry of Agriculture, Fisheries and Food, and the Health Education Authority. Some items may be temporarily out of stock or replaced with new publications. Contact the Food Standards Agency at the address above for details of availability.

Health Education Board for Scotland publications
Health Education Board for Scotland
Woodburn House
Canaan Lane
Edinburgh EH10 4SG
Tel: 0131 536 5500

Websites
Information on nutrition and healthy eating can be found on the British Nutrition Foundation website:
www.nutrition.org.uk

Government websites

These may provide information about new reports and press releases about nutrition, health and food:
www.doh.gov.uk
www.maff.gov.uk
www.food.gov.uk

The American website www.dole5aday.com has all sorts of useful information about fruits and vegetables aimed at children.

Cookery skills

Easy Cooking for One or Two
By L Davies.
Published by Penguin Books, London, 1988.

How to Boil an Egg (and 184 Other Simple Recipes for One)
By J Arkless.
Published by Elliot Right Way Books, Surrey, 1997.

The New Cook
By M Berry.
Published by Dorling Kindersley, London, 1997.

Eating disorders

Eating Disorders Association
First Floor
Wensum House
103 Price of Wales Road
Norwich NR1 1DW
Tel: 01603 619090
E-mail: info@edauk.com
www.edauk.com

Youth Helpline
(18 years and under):
Tel: 01603 765050
(Monday-Friday 4pm-6pm)

Main Helpline:
01603 621414
(Monday to Friday 9am-6.30pm)

Recorded message about anorexia and bulimia nervosa (about 8 minutes long):
Tel: 0906 302 0012

The Eating Disorders Association also publishes a wide range of leaflets, some for young people. They are available from the above address. Please ask for a current price list.

Eating Disorders in Young People

Helping a Friend or Relative

Booklist for Young People

Confidentiality and Your Rights

Talkback. A youth newsletter

Finding out about food

The Book of Ingredients
By P Dowell and A Bailey.
Published by Michael Joseph, London, 1980.
ISBN 0 7181 3043 X
A picture book naming all the main food varieties.

Food allergy and food intolerance

Food Standards Agency publications
The publication listed below is available from the Food Standards Agency. (For ordering details see *Food Standards Agency* on the left.)

Be Allergy Aware. Advice for catering establishments. Booklet FSA0002

Food customs

Celebration!
Barnabas and Annabel Kindersley
Published by Dorling Kindersley, London
ISBN 0 7513 5650 6

Festival Booklets Pack
Published by NES Arnold.
NB3888/1

Festivals and Celebrations
Jim Fitzsimmons and Rhona Whiteford
Published by Scholastic Educational Books
ISBN 0 590 53083 6

'SHAP' calendar of religious festivals
A calendar of festivals for the current year. Available from:
SHAP Working Party
c/o National Society
Religious Education Centre
36 Causton Street
London SW1P 4AU
Tel: 020 7932 1194

Food safety and hygiene

Chartered Institute of Environmental Health
Chadwick Court
15 Hatfields
London SE1 8DJ
Tel: 020 7928 6006
www.cieh.org.uk
For training and resources e-mail:
centresupport@chgl.com

Royal Institute of Public Health and Hygiene
28 Portland Place
London W1B 1DE
Tel: 020 7580 2731

Food Standards Agency publications
The publications listed below are available from the Food Standards Agency. (For ordering details see *Food Standards Agency* on page 83.)

Ten Tips for Food Safety. FSA0006

The Food Safety Act 1990 and You. Booklet summarising the Food Safety Act. FSA0238

Contact the Food Standards Agency for details of new publications on food safety and hygiene currently in preparation.

Department of Health publications
Available from:
Department of Health
PO Box 777
London SE1 6XH
Tel: 0800 555777
Fax: 01623 724524

Practical Food Hygiene. Poster in A3 or A2 sizes.

Pregnancy and infant feeding

Maternity Alliance
45 Beech Street
London EC2P 2LX
Tel: 020 7588 8582

National Childbirth Trust
Alexandra House
Oldham Terrace
London W3 6NH
Tel: 08704 448707

Health Education Authority publications
The following publications of the former Health Education Authority may be available from:
Customer Services
Marston Book Services
PO Box 269
Abingdon
Oxon OX14 4YN
Tel: 01235 465565

Some publications are priced but may be available free from your local Health Promotion Unit (in the phone book under the name of your local health authority). If you live in Scotland contact your local health board or the Health Education Board for Scotland (address on page 83) for these or similar publications.

Pregnancy Book
A guide to becoming pregnant, being pregnant and caring for a newborn baby.

Birth to Five
A complete guide to the first five years of being a parent.
Book available free to all first time parents through health promotion units.

Weaning Your Baby
Leaflet.

Feeding Your Children from 1 to 3
Leaflet.

Department of Health publications
The following publications are available from:
Department of Health
PO Box 777
London SE1 6XH
Tel: 0800 555777
www.doh.gov.uk

Breastfeeding – You and Your Baby. Leaflet

Welfare Milk and Vitamins: A Guide for Families.
Leaflet

Food Standards Agency publications
The following publication is available from the Food Standards Agency. (For ordering details see *Food Standards Agency* on page 83.)

Healthy Diets for Infants and Young Children. FSA0249

Special diets

British Dietetic Association (Paediatric Group)
5th Floor
Elizabeth House
22 Suffolk Street
Queensway
Birmingham B1 1LS
Tel: 0121 616 4900
Email: info@bda.uk.com
www.bda.org.com

Coeliac Society
PO Box 220
High Wycombe
Bucks HP11 2HY
Tel: 01494 437278

Diabetes UK (formerly British Diabetic Association)
10 Queen Anne Street
London W1G 9LH
Tel: 020 7323 1531

Vegetarianism

Vegan Society
Donald Watson House
7 Battle Road
St Leonard's on Sea
East Sussex TN37 7AA
Tel: 01424 427393

Vegetarian Society
Parkdale
Dunham Road
Altrincham
Cheshire WA14 4QG
Tel: 0161 928 0793

Alcohol

Alcohol Concern
Waterbridge House
32-36 Loman Street
London SE1 0EE
Tel: 020 7928 7377
Fax: 020 7928 4644
Email:
contact@alcoholconcern.org.uk
www.alcoholconcern.org.uk

Operates an information service from Monday to Friday, 1pm to 5pm on 0207 922 8667. (This is not a helpline for individuals.)

Also produces *Enough Bottle – Can You Handle Booze?*, a leaflet for teenagers, price 50p.

Drinkline Youth
Tel: 0345 320 202 (6pm-11pm).
Calls are charged at local rates.
A helpline giving confidential advice to young people with alcohol problems and their families.

Al-Ateen
Tel: 020 7403 0888
A help group for teenage family members of alcoholics.

Children and young people with special needs

The Children's Trust
Tadworth Court
Tadworth
Surrey KT20 5RU
Tel: 01737 357171

Offers care, therapy, education and rehabilitation to children with profound disabilities and very complex medical needs.

Council for Disabled Children
8 Wakley Street
London EC1V 7QE
Tel: 020 7843 6334

Working together for disabled children and their families. Offers a forum for discussion and dissemination of policy and good practice.

Disabled Living Foundation
380 Harrow Road
London W9 2HU
Tel: 0870 603 9177
Helpline open Monday to Friday 10.00am –4.00pm

Dental health

British Dental Association
64 Wimpole Street
London W1G 8YF
Tel: 020 7935 0875
www.bda-dentistry.org.uk

Health Education Authority publications
Caring for Your Children's Teeth: Tooth Care for 3-11 Year Olds
Booklet.
ISBN 0 752 107 16 X.
Available from Marston Book Services (address on page 84).

Exercise and activity

Sport England
16 Upper Woburn Place
London WC1H 0QP
Tel: 020 7273 1500
www.sportengland.org

Sports Council for Northern Ireland
House of Sport
Upper Malone Road
Belfast BT9 5LA
Tel: 02890 381 222
www.sportni.org

Sport Scotland
Caledonia House
1 Redheughs Rigg
South Gyle
Edinburgh EH12 9DQ
Tel: 0131 317 7200
www.sportscotland.org.uk

Sports Council for Wales
Sophia Gardens
Cardiff CF11 9SW
Tel: 02920 300 500
www.sports-council-wales.co.uk

Cycling proficiency tests
For details ask your local authority.

Health professionals

State Registered Dietitians
State Registered Dietitians can provide advice on all aspects of eating and diet including special therapeutic diets for medical conditions. An individual referral to a dietitian is usually through a GP but carers may be able to access community dietitians directly (through the Health Authority or local Health Promotion Unit). More information about dietitians can be found on the website www.bda.org.uk, or from the British Dietetic Association (address on the right).

Registered nutritionists
Registered nutritionists are qualified in providing information about food and healthy eating, but not special therapeutic diets. A list of registered nutritionists can be found on the Nutrition Society website: www.nutsoc.org.uk

Speech and language therapists and occupational therapists
An individual referral to a dietitian is usually through a GP.

British Association for Community Child Health
50 Hallam Street
London W1W 6DE
Tel: 020 7307 5600
www.rcpch.ac.uk

British Dietetic Association (Paediatric Group)
5th Floor
Elizabeth House
22 Suffolk Street
Queensway
Birmingham B1 1LS
Tel: 0121 616 4900
E-mail: info@bda.uk.com
www.bda.uk.com

College of Occupational Therapists
106-114 Borough High Street
London SE1 1LB
Tel: 020 7357 6480
www.cot.co.uk

Royal College of Paediatrics and Child Health
50 Hallam Street
London W1W 6DE
Tel: 020 7307 5600
www.rcpch.ac.uk

Royal College of Speech and Language Therapists
2 White Hart Yard
London SE1 1NX
Tel: 020 7378 1200
www.RCSLT.org.uk

Support for carers

British Agencies for Adoption and Fostering
Skyline House
200 Union Street
London SE1 0LX
Tel: 020 7593 2000
www.baaf.org.uk

First Key
LVSRC
356 Holloway Road
London N7 6PA
Tel: 020 7700 8130
www.first-key.co.uk
or
Oxford Chambers
Oxford Place
Leeds LS1 3AX
Tel: 0113 244 3898
www.first-key.co.uk

Offers support for adults and organisations working with care leavers, with the aim of improving the life chances of young people who have been in care.

National Children's Bureau
8 Wakley Street
London EC1V 7QE
Tel: 020 7843 6070
www.ncb.org.uk

The National Children's Bureau produces *Improving the Health of Children and Young People in Public Care – A Manual for Training Residential Social Workers and Foster Carers*. By Helen Lewis. (Published by National Children's Bureau and the Department of Health.) Available from National Children's Bureau Publications Unit on 0207 843 6029.

National Foster Care Association
87 Blackfriars Road
London SE1 8HA
Tel: 0207 620 6400
Helpline: 020 7620 2100, Monday, Tuesday, Thursday and Friday 12.30pm – 4pm
www.fosteringnetwork.co.uk

Young People's Health Network
Health Development Agency
Trevelyan House
30 Great Peter Street
London SW1P 2HW
Tel: 020 7222 5300

Voluntary organisations and organisations for young people

Childline (freephone)
Tel: 0800 1111
Operates a free, 24-hour helpline for children who need counselling, advice or help with any kind of problem.

Kidscape
2 Grosvenor Gardens
London SW1W 0DH
Tel: 020 7730 3300 (Monday to Friday 10.00am-4.00pm)
www.kidscape.org.uk
A national group that works to prevent bullying and to help people who are being bullied. For a free information pack send a stamped addressed envelope.

National Council of Voluntary Child Care Organisations
Unit 4
Pride Court
80-82 White Lion Street
London N1 9PF
Tel: 020 7833 3319
www.ncvcco.org

A National Voice
23 New Mount Street
Manchester M4 4DE
Tel: 0161 953 4011

An organisation set up to represent all children and young people who are, or have been, in care.

National Youth Advocacy Service
1 Downham Road South
Heswall
Wirral CH60 5RG
Tel: 0151 342 7852
www.nyas.net

Offers someone who will listen and speak up for young people.

Save the Children
17 Grove Lane
London SE5 8RD
Tel: 020 7703 5400
www.savethechildren.org.uk

UK Youth
Kirby House
20-24 Kirby Street
London EC1N 8TS
Tel: 020 7242 4045
www.ukyouth.org.uk

Promotes young people's participation and learning opportunities through programmes and projects dealing with a wide range of issues including health, personal safety, the environment and information technology.

Voice for the Child in Care
Unit 4
Pride Court
80-82 White Lion Street
London N1 9PF
Tel: 020 7833 5792
E-mail: info@vcc_uk.org

A national charity which aims to empower looked after children and young people and campaigns for changes to improve their lives. Provides direct advocacy services for looked after children and young people as well as visiting advocacy services to residential homes and secure units.

Voices from Care (Cymru)
25 Windsor Place
Cardiff CF10 3BZ
Tel: 02920 398 214

Offers advice and support for looked after children and young people in Wales.

The Who Cares? Trust
Kemp House
152-160 City Road
London EC1V 2NP
Tel: 020 7251 3117
E-mail:
mailbox@thewhocarestrust.org.uk
www.thewhocarestrust.org.uk

A charity working to improve the care of looked after children and young people.

Who Cares? Linkline
Freecall 0500 564570
(Monday, Wednesday and Thursday 3.30pm-6.00pm)

Offers support and information, in confidence, to looked after children and young people.

Appendix 5

Sample nutrition information record

It is recommended that a nutrition information record should be kept for each looked after child or young person. This could form a separate sheet, or it could be included in the main records. A sample nutrition information record is shown on the next page.

NUTRITION INFORMATION RECORD

Name

Food preferences

Likes	Dislikes

Special dietary needs

Food intolerances or allergies

History of eating problems or eating disorders

Dietary needs in relation to culture or religion

People spoken to about this child's/young person's food requirements

Healthy eating and physical activity are crucial to the health and well-being of children and young people. However, there is evidence that the diets of children and young people in Britain are often low in iron, zinc and calcium, and vitamins A and C. Their diets also contain too much of the type of sugars that most contribute to tooth damage, too much salt, and not enough fruit and vegetables.

There are approximately 54,500 looked after children and young people in the UK. Of these, about 9,000 are cared for in children's homes and 45,500 are looked after by foster carers. Looked after children and young people are, nutritionally, a particularly vulnerable group. Their diets are a cause for concern because many of them will already have experienced deprivation and poor health care before they arrived in care.

This report, by an Expert Working Group convened by The Caroline Walker Trust, sets out nutritional and practical guidelines for the food provided for looked after children and young people. Based on current dietary recommendations, the guidelines are intended for use by all those involved in the care of looked after children and young people, including:

– directors, managers and senior staff in local authority Social Services Departments responsible for running children's homes, contracting with care providers, and recruiting and training foster carers, and

– directors, managers and senior staff in voluntary and private sector organisations which provide care for looked after children and young people.

The report also contains a wealth of practical advice on ways of encouraging healthy eating among looked after children and young people.

This report was published by The Caroline Walker Trust with funding from the British Heart Foundation, the Department of Health and the Food Standards Agency.

THE CAROLINE WALKER TRUST

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