



Public Health  
England

Protecting and improving the nation's health

## **Healthier and more sustainable catering: Nutrition principles**

The scientific principles for developing nutrient-based standards for planning nutritionally balanced menus

## About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

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# 1. Executive summary

1.1 These nutrition principles for healthier catering underpin the development of a framework for food and nutrient standards and evidence-based guidance for the provision of healthier food and drink options. Maintaining consistency with government dietary advice is important and therefore these principles use the “Eatwell Guide” to frame the food and drink-based guidance.

1.2 These principles, last published in August 2014, have been updated to reflect changes to government dietary advice. These include:

- the Eatwell Guide<sup>1</sup>
- lower sugar recommendations in response to the Scientific Advisory Committee’s (SACN’s) Carbohydrates and Health report published in July 2015<sup>2</sup>
- higher recommendations for fibre in response to the SACN’s Carbohydrates and Health report<sup>2</sup>
- revised advice for intakes of vitamin and SACN’s Vitamin D and Health report published in July 2016<sup>3</sup>

1.3 The main population dietary recommendations are set out and the nutrients we currently eat too much of and those that we do not eat in sufficient amounts are identified. The principles cover issues to consider when planning menus and how, through establishing food and nutrient-based standards, we can help people get the nutrients they need. The application of these principles is illustrated through example nutrient standards for adults and an explanation of some of the specific nutritional requirements for this population group.

1.4 This document is primarily aimed at those who need to understand the principles which underpin PHE’s toolkits for adults and older people and those involved in the development of nutritionally balanced menus.

## 2. Introduction

2.1 Large sections of the population rely on others to buy, prepare and serve food on their behalf for a significant number of their meals. For some people this may be all the food that they eat. These individuals rely on the providers of their food to plan menus in such a way that it is possible for them to meet dietary recommendations. Using food and nutrient-based standards as a framework on which to base menus will help to ensure that people can achieve dietary recommendations.

2.2 On average, the population consumes too much saturated fat, salt and sugar and eats too little fibre, fruit and vegetables and oily fish than recommended<sup>4,5</sup>. We also know that some sections of the population have intakes of some vitamins and minerals below recommended levels<sup>4</sup>.

2.3 Planning menus, based on food and nutrient standards for the specific population group being catered for, is a clear and objective way of helping to reduce intakes of saturated fat, free sugars<sup>i</sup> and salt. It also helps to increase the amount of foods and nutrients in the diet where intakes are lower than government recommendations (such as fibre, fruit and vegetables and oily fish).

2.4 This document sets out the principles behind establishing nutrient-based standards for specific population groups. These principles underpin PHE's toolkits for serving food to adults and older people in residential care and will be of particular interest to those involved in the development of nutritionally balanced menus.

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<sup>i</sup> 'Free sugars' includes all monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and unsweetened fruit juices. Under this definition, lactose (milk sugar), when naturally present in milk and milk products and sugars contained within the cellular structure of foods (particularly fruits and vegetables), are excluded.

## 3. Food-based healthy eating advice

### 3.1 The government recommends that everyone:

- eats at least five portions of a variety of fruit and vegetables every day
- base meals on potatoes, bread, rice, pasta or other starchy carbohydrates; choosing wholegrain versions where possible
- have some dairy or dairy alternatives (such as calcium fortified soya drinks); choosing lower fat and lower sugar options
- eats some beans, pulses, fish, eggs, meat and other proteins. This includes two portions of fish every week, one of which should be oily. If consuming more than 90g of red or processed meat per day, try to cut down to no more than 70g on average
- choose unsaturated oils and spreads and eat in small amounts
- drink six to eight cups/glasses of fluid every day

If consuming foods and drinks high in fat, salt or sugar have these less often and in small amounts.

3.2 The Eatwell Guide (see Figure 1) is a pictorial representation of government healthy eating advice and is helpful for planning healthier menus for everyone over five years of age. Younger children have different nutritional needs. For this reason the Eatwell Guide doesn't apply to children under two. Between the ages of two and five, children should gradually move to eating the same foods as the rest of the family, in the proportions shown on the Eatwell Guide. Anyone with special dietary requirements or medical needs might want to check with a registered dietitian for advice on how to adapt the Eatwell Guide to meet their individual needs. More information about the Eatwell Guide is available at: [www.gov.uk/government/publications/the-eatwell-guide](http://www.gov.uk/government/publications/the-eatwell-guide)

3.3 Diets high in salt, saturated fat and red and processed meat, but low in fish, fruit, vegetables and fibre increase the risk of high blood pressure, cardiovascular disease, type 2 diabetes and some cancers<sup>2,6,7,8,9,10,11</sup>. Consuming foods and drinks that are high in fat and free sugars too frequently can contribute to excess energy intake and, therefore, may lead to weight gain. Obesity carries with it many negative effects on health. Consuming too many foods and drinks high in sugar can also lead to tooth decay and consumption of sugars-sweetened drinks has been associated with an increased risk of type 2 diabetes<sup>2</sup>.

**Figure 1: The Eatwell Guide**



Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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## 4. Nutrient-based recommendations for the population

- 4.1 Recommendations for nutrient intakes for the general public are based on advice from the Committee on Medical Aspects of Food and Nutrition Policy (COMA) and the Scientific Advisory Committee on Nutrition (SACN). In 1991, the Department of Health published Dietary Reference Values (DRVs) which cover a range of intakes for most nutrients<sup>12</sup>. DRVs for total fat, fatty acids, starch and sugars were set as a percentage of daily energy intake for adults in addition to those for energy, protein, fibre (as non-starch polysaccharides [NSP]) and some vitamins and minerals. DRVs for energy were subsequently revised in 2011<sup>13</sup> and recommendations for sugars and for fibre were revised in 2015<sup>2</sup>. Population targets for average salt intake were published in 2003<sup>11</sup> DRVs for vitamin D were published in July 2016<sup>3</sup>. Tables 1 and 2 show the current DRVs, and Table 3 shows the recommended maximum daily salt intakes for children and adults.
- 4.2 DRVs for children have not been set for some of these nutrients and, in particular, children below the age of five with small appetites, who need energy-dense diets, should not have their fat intake restricted.

**Table 1: Current recommendations for fat (including fatty acids) and carbohydrates (including free sugars and fibre) for the population**

	Population average % of food energy*
Saturated fatty acids	Not more than 11
Polyunsaturated fatty acids	6.5
Monounsaturated fatty acids	13
Trans fatty acids	Not more than 2
Total fat	Not more than 35
Free sugars	Not more than 5**
Starches, sugars contained within the cellular structure of foods and lactose naturally present in milk and milk products	45
Total carbohydrate	50
Fibre (AOAC) <sup>ii</sup> (g/day)	30***

\* Excluding energy from alcohol.

\*\* For age groups from two years upwards. The SACN recommendation for free sugars is based on total dietary energy (including energy from alcohol)<sup>2</sup>. This equates to 5% food energy (ie excluding energy from alcohol) assuming a population average of 5% energy from alcohol based on current NDNS data.<sup>4</sup>

\*\*\* For adults. It is recommended that the average population intake of dietary fibre for children aged two to five years should approximate 15g/day, for children aged five to 11 years 20g/ day, for children aged 11 to 16 years 25 g/day, and for adolescents aged 16 to 18 years about 30g/day.

4.3 Recommendations for protein, vitamins and minerals vary by age. Average protein recommendations for adults are provided in Table 2. For vitamins and minerals, where different intakes are recommended for males and females, the higher value is identified in Table 2 to ensure that the greatest needs of the group are met.

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<sup>ii</sup> SACN's Carbohydrates and Health report (2015)<sup>2</sup> states that dietary fibre should be defined as all carbohydrates that are neither digested nor absorbed in the small intestine and have a degree of polymerisation of three or more monomeric units, plus lignin. For extracted natural carbohydrate components or synthetic carbohydrate products to be defined as dietary fibre, beneficial physiological effects, similar to those demonstrated for the naturally integrated dietary fibre component of foods, must be demonstrated by accepted scientific evidence. Dietary fibre is to be chemically determined using the prevailing AOAC methods agreed by regulatory authorities.

**Table 2: Current recommendations for protein, vitamins and minerals for the population**

Nutrient (unit) per day	1-3 years	4-6 years	7-10 years	11-14 years	15-18 years	Adults 19-50 years	Adults 51-74 years	Adults 75 years and above
Protein (g)	15	20	28	42	50	50	50	50
Vitamin A* (µg)	400	400	500	600	700	700	700	700
Thiamin (mg) <sup>α</sup>	0.4	0.6	0.7	1.0	1.0	1.0	1.0	0.9
Riboflavin (mg)	0.6	0.8	1.0	1.2	1.3	1.3	1.3	1.3
Niacin equivalent** (mg) <sup>α</sup>	6.5	9.8	12.0	16.5	16.5	16.5	16.5	15.1
Vitamin B6 (mg)	0.7	0.9	1.0	1.2	1.5	1.4	1.4	1.4
Vitamin B12 (µg)	0.5	0.8	1.0	1.2	1.5	1.5	1.5	1.5
Folate (µg)	70	100	150	200	200	200	200	200
Vitamin C (mg)	30	30	30	35	40	40	40	40
Vitamin D (µg)	10 <sup>Y</sup>							
Calcium (mg)	350	450	550	1000	1000	700	700	700
Magnesium (mg)	85	120	200	280	300	300	300	300
Potassium (mg)	800	1100	2000	3100	3500	3500	3500	3500
Iron (mg)	6.9	6.1	8.7	14.8	14.8	14.8	8.7	8.7
Zinc (mg)	5.0	6.5	7.0	9.0	9.5	9.5	9.5	9.5
Copper (mg/d)	0.4	0.6	0.7	0.8	1.0	1.2	1.2	1.2
Selenium (µg)	15	20	30	45	70	75	75	75
Iodine (µg)	70	100	110	130	140	140	140	140

µg = micrograms. 1000 micrograms = 1 milligram (mg).

\* Retinol equivalents = Retinol + (beta-carotene divided by 6).

\*\* Niacin equivalent = niacin + (tryptophan divided by 60).

<sup>α</sup> Thiamin and niacin equivalent Dietary Reference Values are linked to energy requirements. Thiamin and niacin equivalent recommendations have been re-calculated based on revised Dietary Reference Values for energy published by SACN in 2011.<sup>13</sup>

<sup>Y</sup> Some population groups may not be able to obtain enough vitamin D from sunlight and are advised to take a dietary supplement containing 10µg per day. See para 6.13 for further details.

**Table 3: Recommended maximum daily salt intakes for infants, children and adults<sup>11</sup>**

<b>Age</b>	<b>Target average salt intake (g/d)</b>
0-6 months	Less than 1
7-12 months	1
1-3 years	2
4-6 years	3
7-10 years	5
11 years and over	6
Adults	6

## 5. How the population's intakes compare with these recommendations

- 5.1 We know from the National Diet and Nutrition Survey (NDNS) that, while on average the population intake of total fat is about the right amount, those with the highest intakes of total fat are obtaining around 40-50% of their food energy from fat, far greater than recommended amounts (no more than 35%)<sup>4</sup>.
- 5.2 These surveys also tell us that on average the population consumes too much saturated fat, salt and sugar and not enough fibre<sup>4,5</sup>. We also know that for different sections of the population, some people have intakes of vitamins and minerals below recommended levels<sup>4</sup>.

## 6. Nutrient standards – principles to plan menus to help people move towards recommendations

- 6.1 Planning menus to meet nutrient-based standards for a given population will contribute to helping reduce intakes of saturated fat, free sugars and salt and increase intakes of fibre, vitamins and minerals where intakes are lower than government recommendations.
- 6.2 When planning menus it is useful to consider how people consume food and how to apportion nutrient intake throughout the day. For the purposes of developing menus, these principles reflect the convention that people usually divide their intakes across four eating occasions; breakfast, lunch, evening meal and food and drinks consumed between meals (snacks).
- 6.3 Using this approach, you can estimate the proportion that each eating occasion makes to intake. Since most people usually consume a wider range of food and drinks at lunch and evening meals, these principles acknowledge that lunch and evening meals can account for a greater proportion of intake. As such, it is assumed that breakfast contributes 20% of daily intake, with lunch and evening meals contributing 30% each. The remaining 20% is for food and drinks consumed between meals (snacks).
- 6.4 To help shift nutrient intakes towards government recommendations it is necessary to consider measures to tackle those nutrients that we know people do not consume enough of (that is, at risk of insufficiency for fibre and certain vitamins and minerals for example), and those that people consume too much of (that is, in excess for saturated fat, free sugars and salt for example).
- 6.5 For saturated fat we have based 'target recommendations' (see Table 4) on the dietary reference value as a percentage of daily energy<sup>12</sup>. For fibre we have used the recommended intake published in SACN's Carbohydrates and Health report<sup>2</sup> and for salt we have used the target reduction for population average intake of salt per day<sup>11</sup>.
- 6.6 For vitamins and minerals, where more than 5% of a stated population group have intakes below the Lower Reference Nutrient Intake (LRNI) there is a risk of insufficiency within that group. The LRNI is the amount of a nutrient that is only sufficient for those people who have the lowest requirements. Most people

require an intake greater than the LRNI to meet their requirements and reduce the risk of insufficiency.

6.7 Where people's intakes of certain nutrients in excess of recommended amounts (saturated fat, salt and free sugars for example); these underlying principles can help to plan menus that provide these in lower amounts relative to the energy content of meals and help prevent excess intake. To achieve dietary recommendations, where excesses are apparent, the target recommendations within this document are set equivalent to 98% of the dietary reference value for saturated fat, and 98% of the population target for average salt intake per day provided from all meals and snacks. A target for free sugars has not been set as the recommendation for free sugars is substantially lower than previous recommendations and current intakes. It is, therefore, considered to be a stringent target recommendation in itself.

6.8 For fibre, where current population intakes are insufficient, the target recommendation has been set equivalent to 102% of current recommendations. For vitamins and minerals where insufficiencies are apparent, target recommendations are set so that, in general, 100% of the reference nutrient intake<sup>iii</sup> is provided from breakfast, lunch and evening meals. Any food and drink eaten outside of these eating occasions would further contribute to intakes. The target recommendations are summarised in Table 4.

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<sup>iii</sup> The Reference Nutrient Intake (RNI) for a vitamin or mineral is the amount of the nutrient that is enough, or more than enough, for about 97% of the people in a group. If average intake of a group is at the RNI, then the risk of deficiency in the group is very small.

**Table 4. Target recommendations**

	Energy Protein Total fat Free sugars <sup>∞</sup>	Percentage of daily intake					
		Saturated fat, salt		Fibre		Vitamins and minerals (where insufficiencies are apparent)	
		Population requirement	Target <sup>#</sup>	Population requirement	Target <sup>#</sup>	Population requirement	Target #
Breakfast	20	20	No target	20	No target	20	No target
Lunch	30	30	29	30	31	30	35-40
Evening meal	30	30	29	30	31	30	35-40
Snacks	20	20	No target	20	No target	*	No target
Total	100	100	98 or less	100	102 or more	100	100 or more

<sup>∞</sup>A target for free sugars not been set. The Dietary Reference Value for free sugars is substantially lower than previous recommendations and current intakes and is therefore considered to be a stringent target recommendation in itself.

<sup>#</sup> Target for nutrients where excess or insufficiencies are apparent.

\* Snacks will provide additional vitamins and minerals to contribute to the target of 100% or more over the day. You should take care not to encroach upon maximum safe levels of intake.

6.9 Table 5 gives an example of nutrient-based standards for adults aged 19 to 74 years, including the recommended targets for nutrients that this group may consume in excess or in insufficient amounts, using the principles in this document. Similarly, these principles can be used to identify nutrient standards for other population groups.

6.10 In 2011, SACN published revised energy reference values which set the energy intake required to maintain a healthy body weight, in otherwise healthy people based on estimates of physical activity levels considered to be representative of the UK population at that time <sup>13</sup>. The updated SACN energy requirements for men and women are slightly higher than previously recommended. However, in light of the high levels of overweight and obesity in the UK population, the government continues to advise that, as a guide, men and

women should consume 10.5MJ (2500 kcal) per day and 8.4MJ (2000 kcal) per day, respectively. These values are readily understood, are not meaningfully different to SACN's updated recommendations and are the basis of the average population energy requirement provided in Table 5 (9.4MJ/2250kcal per day).

- 6.11 Data from the National Diet and Nutrition Survey<sup>4</sup> has been used in Table 5 to set the recommended targets for areas of excess or insufficiency to ensure the needs of adults aged 19 to 74 are met. However, it is important to bear in mind that low intake of a nutrient does not necessarily indicate deficiency. Low intake is only considered a problem if it is sustained over a long period of time. The survey data used may not represent nutrient intakes over the longer term (and may provide an underestimation of intakes for those nutrients not widely distributed in foods such as vitamin A). In addition, the reference values used to assess sufficient intake for some nutrients (such as magnesium, potassium, selenium and zinc) are based on very limited data. Measurements of nutrient status (that is, levels in body tissue or stores) used to assess deficiency are not available for all nutrients. Where status measurements are possible, a value indicating low status does not necessarily indicate clinical deficiency, rather an individual is at risk of becoming deficient. For these reasons, the recommended targets for areas of insufficiency set out in Table 5 are based on a precautionary principle.
- 6.12 You should take care not to encroach upon maximum safe levels of intake for vitamins and minerals (for example guidance suggests that an average of 1500 micrograms ( $\mu\text{g}$ ) per day or less of pre-formed vitamin A (ie retinol) from food and supplements combined is unlikely to cause harm).

**Table 5. Nutrient-based standards for adults aged 19 to 74 years**

<b>Nutrient</b>	<b>Population requirement (provided as daily averages over seven days)</b>	<b>Recommended target for areas of excess or insufficiency (provided as daily averages over seven days)</b>
<b>Energy* (MJ/kcal)</b>	9.4/2250	
<b>Total fat** (g)</b>	Max 87.5	
<b>Saturated fat** (g)</b>	Max 27.5	Less than 27.0
<b>Carbohydrate** (g)</b>	Min 300	
<b>Free sugars** (g)</b>	Max 30	
<b>Fibre (as AOAC) (g)</b>	30	More than 31
<b>Protein (g)</b>	Min 50	
<b>Sodium (mg)</b>	Max 2400	Less than 2352
<b>Salt (equivalent g)</b>	Max 6.0	Less than 5.9
<b>Calcium (mg)</b>	700	More than 700
<b>Copper (mg)</b>	1.2	
<b>Iodine (µg)</b>	140	More than 140
<b>Iron (mg)</b>	14.8	More than 14.8
<b>Magnesium (mg)</b>	300	More than 300
<b>Potassium (mg)</b>	3500	More than 3500
<b>Selenium (µg)</b>	75	More than 75
<b>Zinc (mg)</b>	9.5	More than 9.5
<b>Vitamin A*** (µg)</b>	700	More than 700
<b>Thiamin (mg) <sup>α</sup></b>	1.0	
<b>Riboflavin (mg)</b>	1.3	More than 1.3
<b>Niacin equivalent**** (mg) <sup>α</sup></b>	16.5	
<b>Vitamin B6 (mg)</b>	1.4	
<b>Vitamin B12 (µg)</b>	1.5	
<b>Folate (µg) <sup>β</sup></b>	Min 200	
<b>Vitamin C (mg)</b>	40	
<b>Vitamin D (µg) <sup>γ</sup></b>	10 <sup>γ</sup>	

µg = micrograms. 1000 micrograms = 1 milligram (mg).

\* If only considering adults aged 60 to 74 years average energy requirement is lower.

\*\*Calculated as a percentage of energy requirement (ie 9.4MJ/2250kcal) assuming no energy contribution from alcohol.

\*\*\*Retinol equivalents = Retinol + (beta-carotene divided by 6).

\*\*\*\* Niacin equivalent = niacin + (tryptophan divided by 60).

<sup>α</sup> Thiamin and niacin equivalent Dietary Reference Values are linked to energy requirements. Thiamin and niacin equivalent recommendations have been re-calculated based on revised Dietary Reference Values for energy published by SACN in 2011.<sup>13</sup>

<sup>β</sup>Women who could become pregnant, or who are planning a pregnancy, are advised to take an additional 400µg of folic acid per day as a supplement from before conception until the 12<sup>th</sup> week of pregnancy to help prevent a pregnancy affected by a neural tube defect. Women who have an increased risk of having a pregnancy affected by a neural tube defect are advised to take a higher dose of 5mg of folic acid each day until they are 12 weeks pregnant. See para 6.13 for further details.

<sup>γ</sup> Some population groups may not be able to obtain enough vitamin D from sunlight and are advised to take a dietary supplement containing 10µg per day. See para 6.13 for further details.

6.13 Certain groups within the population may have particular dietary requirements that are not easily met within a planned menu. In some settings, targeted advice to these groups may be possible or appropriate. Caterers need to ensure that they cater for people with specific medical needs as they may have different requirements – these should be met on an individual basis. Some groups may also need to take supplements:

#### Folic Acid:

- women who could become pregnant or who are planning a pregnancy are advised to take an additional 400 micrograms ( $\mu\text{g}$ ) of folic acid per day as a supplement from before conception until the 12th week of pregnancy to help prevent a pregnancy affected by a neural tube defect. In addition to this, they should also eat folate rich foods such as green vegetables, some fruits (oranges for example) and fortified breakfast cereals (making a total of 600 $\mu\text{g}$  of folate per day from both folate rich foods and a folic acid supplement)
- women who have an increased risk of having a pregnancy affected by a neural tube defect<sup>iv</sup> are advised to take a higher dose of 5 milligrams (5mg) of folic acid each day until they are 12 weeks pregnant

#### Vitamin D:

- it is recommended<sup>3</sup> that everyone aged five years and above including pregnant and breastfeeding women should consider taking a supplement containing 10 $\mu\text{g}$  of vitamin D per day. This is due to the fact that vitamin D is only found in a small number of foods and so it might be difficult to get enough from foods that naturally contain vitamin D and/or fortified foods alone. This recommendation refers to the average amount of vitamin D consumed over a period of time (eg a week) and takes account of day to day variations in vitamin D intake. There are separate recommendations for children from birth to four years of age
- between late March/early April and the end of September, the majority of people aged five years and above will probably obtain sufficient vitamin D from sunlight when they are outdoors so they might choose not to take a vitamin D supplement during these months
- however, some groups of people will not obtain enough vitamin D from sunlight because they have very little or no sunshine exposure. People from these groups should take a daily supplement containing 10 $\mu\text{g}$  vitamin D throughout the year. They are:

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<sup>iv</sup> Women are at an increased risk of having a pregnancy affected by a neural tube defect if they or their partner have a neural tube defect, they previously had a pregnancy affected by a neural tube defect, they or their partner have a family history of neural tube defects or if they have diabetes. Women should also consult their GP for advice if they are taking anti-epileptic medication, as they may also need to take a higher dose of folic acid.

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- people who are seldom outdoors such as frail or housebound individuals and those who are confined indoors eg in institutions such as care homes
- people who habitually wear clothes that cover most of their skin while outdoors
- people from minority ethnic groups with dark skin such as those with African, African-Caribbean and South Asian origin might not get enough vitamin D from sunlight in summer. So they should consider taking a daily supplement containing 10µg vitamin D throughout the year

## 7. Menus that meet nutrient-based standards

- 7.1 Once you have established nutrient-based standards for the specific population group, such as those for adults in Table 5, then you can develop and analyse menus to assess how they meet those standards. You will have to use or have access to appropriate UK-relevant nutrient analysis software with up-to-date information (as a minimum the most recent edition of McCance and Widdowson's *The Composition of Foods*<sup>14</sup>) and take into account cooking losses and waste.
- 7.2 You can develop menus that meet nutrient and certain food-based standards. For example, including at least five portions of a variety of fruit and vegetables a day and two portions of fish a week, including one portion of oily fish. If you are responsible for commissioning food provision then this information can be requested, and actual provision checked and monitored, to ensure this meets the menus and standards. This will help ensure that the needs of those using the food and drink provision are met.
- 7.3 If planning menus to nutrient standards in-house then the support of a registered nutritionist or dietitian is advisable. Their experience and training will assist in choosing or establishing appropriate nutrient-based standards. Some catering service providers can offer menu planning to meet nutrient standards as part of their service and employ registered nutritionists or dietitians.
- 7.4 For settings where only one meal is provided (eg a lunch club) menus should be developed to reflect the food-based healthy eating advice set out in section 3 and nutrient requirements following the principles set out in section 6. Nutrient standards should be calculated to reflect both the meal episode being provided and the nutrient population group being catered for. For example, for a lunch club providing lunch to women aged 19 to 50 years of age, the menu (ie food and drink combined) should provide:
- 30% of their requirement for energy and protein
  - no more than 30% of the recommendation for free sugars
  - no more than 30% of the recommendation for nutrients consumed in excess (ie saturated fat and salt) but aim to meet 29% where possible
  - at least 30% of their requirement for fibre but aim to meet 31% where possible
  - at least 30% of their requirement for vitamins and minerals where population intakes are sufficient, and aim for 35 to 40% of their requirement where population intakes are insufficient, taking care not to encroach upon safe levels of intake

Where a choice menu is provided, uptake of different options would need to be considered and weighting applied accordingly.

- 7.5 In settings where meals are provided across the whole day (such as hospitals and residential care), focus can be placed on reflecting food-based healthy eating guidance set out in section 3 and meeting total daily nutrient requirements calculated for the population group catered for (rather than also meeting nutrient requirements for each meal episode within this). Uptake of different options available would need to be considered and weighting applied as necessary.
- 7.6 For those who must, or choose to adopt, Government Buying Standards for Food and Catering Services (GBSF)<sup>v</sup>, meeting these, and following food-based healthy eating guidance, will help ensure menus are developed to meet nutrient requirements. Although, nutrient analysis of menus is necessary to ensure nutrient requirements are met for the population group you are catering for. GBSF best practice criteria include menu analysis. Some settings, such as **hospitals** and **schools**, have national food standards that go beyond GBSF.
- 7.7 Using nutrient-based standards to develop menus can be particularly useful when catering for those in residential settings where those provided for may be unable to obtain food from alternative sources. It also enables information on the nutrient content of the food and drink provided and this is useful for people, including relatives of cared for individuals in residential care and governing/inspection bodies.
- 7.8 Information on specific guidelines for the development of children's menus are not included here.

To support early years settings in England to provide meals and snacks in line with current government dietary recommendations for infants and children aged six months to four years, example menus and guidance have been developed. These documents include two sets of three-week seasonal menus and recipes, additional recipes and useful information to help settings meet the Early Years Foundation Stage welfare requirements for food and drink.

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<sup>v</sup> Government Buying Standards for Food and Catering Services (GBSF) help ensure food is produced to higher sustainability and nutritional standards and more sustainable catering service provision is provided. Central government and their agencies are required to apply GBSF and others are encouraged to follow it. Available at: [www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-food-and-catering-services](http://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-food-and-catering-services) GBSF form part of the toolkit associated with the 'Plan for Public Procurement: Food and Catering' published by the Department for Environment, Food and Rural Affairs (Defra) in July 2014: [www.gov.uk/government/publications/a-plan-for-public-procurement-food-and-catering](http://www.gov.uk/government/publications/a-plan-for-public-procurement-food-and-catering)

Healthier and more sustainable catering: Nutrition principles:  
The scientific principles for developing nutrient-based standards for planning nutritionally balanced menus

Other guidance is available in relation to the provision of food for children and in schools/nurseries. Useful references and links include:

- [www.schoolfoodplan.com/standards/](http://www.schoolfoodplan.com/standards/) links to the school food standards
- Healthy and Sustainable Diets in the Early Years. Implications of current thinking on healthy, sustainable diets for the food and nutrient intakes of children under the age of five in the UK. (2012) First Steps Nutrition Trust [www.firststepsnutrition.org/pdfs/sustainability.pdf](http://www.firststepsnutrition.org/pdfs/sustainability.pdf)
- Voluntary Food and Drink Guidelines for Early Years Settings in England – A Practical Guide. [www.childrensfoodtrust.org.uk/assets/eat-better-start-better/CFT%20Early%20Years%20Guide\\_Interactive\\_Sept%2012.pdf](http://www.childrensfoodtrust.org.uk/assets/eat-better-start-better/CFT%20Early%20Years%20Guide_Interactive_Sept%2012.pdf)

## 8. Healthier and more sustainable catering

8.1 The principles in this document have been used to develop toolkits for serving food to adults and to older people in residential care. These toolkits illustrate the setting of nutrient-based standards for these population groups and help ensure sustainable food options and a more sustainable catering service is provided across a range of settings. They help enable the dietary targets described in this document to be met. The targets will differ according to the specific section of the population provided for and can be adapted by those providing food for individual eating occasions or for the whole day. The toolkits for adults and older people can be found at: [www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults](http://www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults)

## 9. References

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