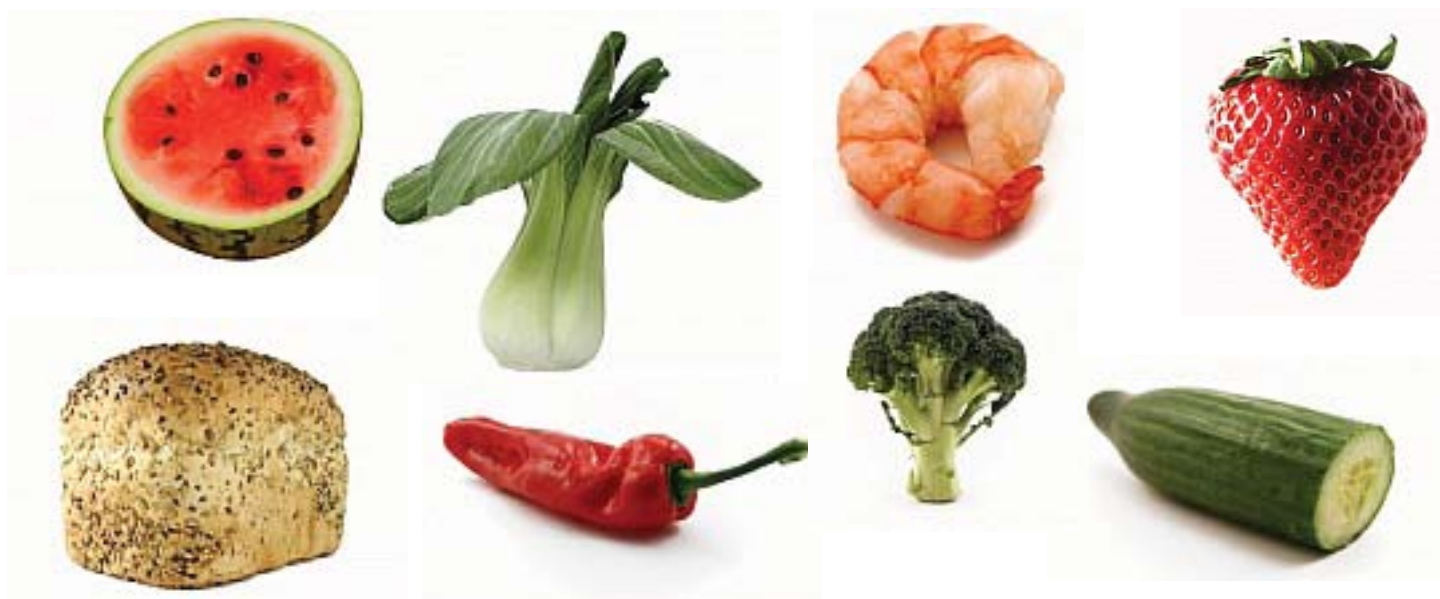




# FAMILY FOOD

A report on the 2009 Family  
Food Module of the Living  
Costs and Food Survey





# Family Food 2009

A National Statistics Publication by Defra

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## Executive Summary

Family Food 2009 is the latest in a series of annual reports published by Defra on food and drink purchases by households in the United Kingdom. It is based on data collected continuously throughout the year. The report presents trends in expenditure and purchases by type of food and demographic characteristics and converts purchases into estimates of average energy and nutrient intakes.

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### Key messages

Data for 2009 shows:

- Food prices were on average 5% higher in 2009 than in 2008 and consumers responded by spending 3.6% more on food and drink;
- In 2009 food was less of a burden on low income households than in 2008, with expenditure on food and non-alcoholic drinks dropping from 16.8% to 15.8% of total expenditure for lowest income quintile households;
- Consumers purchased 1.2% more food when measured by calorie content;
- Consumers purchased 3.1% less fruit and vegetables in 2009;
- Consumers purchased more alcoholic drinks in 2009 resulting in 7.7% higher alcohol intake;
- Indicators of dietary nutrition moved slightly negatively in 2009 with very small rises in percentage of energy from non-milk extrinsic sugars (NMES) and percentage of energy from fat.

The Retail Price Index (RPI) shows that food prices rose over 2009 but all items RPI fell making food relatively more expensive. These continued food price rises since 2007 affect purchasing behaviours and are examined throughout the report.

The strength of the report is its indication on trends. Much of the report describes trend data from January 2006 to December 2009. New data covers the period January to December 2009 but is generally insufficient on its own to show statistically significant changes in purchasing patterns.

## Amount of food purchased and amount spent (Chapter 1)

Food prices rose 5% on average over 2009. The foods that have had the biggest rises between 2008 and 2009 are: sugar and preserves, tea, coffee and hot drinks, beef and lamb. Smallest price increases are in: soft drinks, poultry, bread and eating out.

In 2009 the amount that an average household spent on all food and drink, including alcoholic drinks, went up by 3% to £38.08 per person per week. Household food purchases formed the largest share at £23.86 per person per week. Expenditure on household food and non-alcoholic drink rose by 3.7% in 2009, a little less than food inflation of 5%.

- About 3% of fruit and vegetables entering the household in 2009 came from free sources, mainly **gardens and allotments**. This has been relatively constant across the last four years.
- ↘ Household purchases of **fruit and vegetables** fell by 3.1% in 2009 and are now 8.5% lower than 2006.
- ↘ There is a continuing move away from 'reduced and low fat spreads' which fell by 16% since 2006. Purchases of **butter** dropped 3.6% although the price rises that had been seen in 2008 were slightly reversed.
- ↘ The long term downward trend in purchases of **whole milk** continues with a fall of 14% since 2006.
- ↘ Purchases of both white **bread** and brown and wholemeal bread are continuing their downward trend having fallen 4.4% and 7.9% respectively since 2006. Brown and wholemeal bread showed a slight increase in 2009 compared to 2008.
- ↘ Purchases of raw carcass **meat** have fluctuated since 2006 falling overall by 10.7%. Between 2008 and 2009 purchases rose by 0.8%.
- ↗ Household purchases of **alcoholic drinks** rose by 5.5% in 2009 but are 2% lower than in 2006. This rise in 2009 reverses a previous fall in 2008.
- ↘ There are downward trends in purchases of most categories of **eating out** food and drink since 2006.

## Energy and nutrient intakes (Chapter 2)

Energy intake per person had been falling since 2006 and total energy intake for 2009 was 2303 Kcal per person per day, 1.2% higher than 2008. Energy from household food and drink has fallen 1% since 2006 but rose 1.3% from 2008. Energy from eating out has fallen more sharply with a drop of 9.6% since 2006 but it did show a rise of 0.5% in 2009.

There has been a steady reduction in the percentage of food energy from non-milk extrinsic sugars (NMES) over several years but 2009 saw a slight rise.

Alcohol intake from all food and drink in 2009 was 7.7% higher than in 2008 but it was 4.3% lower than it was in 2006. Eating out intake has shown a large drop of 18.1% since 2006 but rose 4.1% in 2009 and accounts for 27% of all alcohol intake.

Compared to the reference nutrient intakes, all average intakes are at least 100% of the requirement, where one is set, before food waste is considered.

### Geographic patterns in food purchases and nutrient intakes (Chapter 3)

Examining purchases data from January 2007 to December 2009 shows that across the countries of the UK:

England	had the highest purchases of fruit and fish for household consumption.
Scotland	had the highest purchases of soft drinks and confectionery for household consumption.
Wales	had the highest purchases of alcoholic drinks, cheese and vegetables, excluding potatoes, for household consumption and highest purchases of alcoholic drinks for both household and eating out.
Northern Ireland	had the highest purchases of potatoes and carcass meat for household consumption, and the highest purchases of soft drinks, including milk drinks, and confectionery for consumption outside the home.

Across the regions of England household purchases of fruit were highest in London and lowest in the North East.

In general, people living in rural areas spent more on food than those living in urban areas.

### Demographic patterns in key dietary indicators (Chapter 4)

Since correlations between the demographic characteristics are common, and make simple tables difficult to interpret, multiple regression is used to isolate the pattern in one demographic characteristic while controlling for differences in the others.

Purchases of fruit increase with income - with the average purchases per person varying between highest and lowest income deciles by 116 grams per day which is almost 1.5 portions. Purchases of fruit also increase with age.

Income is an important factor in determining percentage of energy intake from NMES. In general the higher the income the lower the intake of NMES. The one exception is the lowest income decile where intake of NMES is relatively low.

Sodium intake (excluding table salt) is lowest in London and highest in Northern Ireland. The difference in intake between the two regions is estimated at 0.52 grams of sodium per person per day.



The percentage of energy intake derived from saturated fatty acids rises in line with the age of the HRP. In terms of ethnic origin, households with a White British Household Reference Person (HRP) are the group with the highest percentage of their energy intake derived from saturated fatty acids.

## Price rise effect on spending (Chapter 5)

Table 5.2 in the main report shows that for commodities where price rises were most marked, people made different choices depending on the product:

Trading down	Buying less	Spending more
<ul style="list-style-type: none"> <li>• Lamb</li> <li>• Sugars &amp; preserves</li> <li>• Cereals</li> <li>• Pork</li> <li>• Potatoes</li> <li>• Bacon</li> </ul>	<ul style="list-style-type: none"> <li>• Fruit (fresh/processed)</li> <li>• Potatoes</li> <li>• Butter</li> <li>• Fish</li> <li>• Tea</li> </ul>	<ul style="list-style-type: none"> <li>• Tea</li> <li>• Coffee &amp; hot drinks</li> <li>• Milk</li> <li>• Bacon</li> <li>• Sweets/chocolate</li> <li>• Cheese</li> </ul>

For most food categories as food prices went up so did the amount people spent on that category to varying degrees. Two categories where an increase in price saw a decrease in expenditure were potatoes and fruit (including fresh fruit).

This analysis implies that for some products (those traded down or where purchases have not shown any adverse reaction to price rises) consumers see these as an essential part of their food shopping and will continue to buy them in some form or other. Other products are more sensitive to price changes, fruit being a good example of this.

## Healthy eating trends (Chapter 5)

The Government has set various nutrient recommendations and dietary guidelines. Estimates of average intakes from this survey indicate that these guidelines are not being met. A significant proportion of the population consumes less than the recommended amount of fibre, and of fruit and vegetables but more than the recommended amount of saturated fatty acids, salt and non-milk extrinsic sugars (NMES).

In 2009 the most significant developments are a reduction in 5 A DAY purchases of fruit and vegetables, and that there are no indications in recent years of trends towards better diet.

Purchases of fruit and vegetables were an average of 2246 grams per person per week in 2009. This is equivalent to 4 portions purchased per person per day. However as we estimate that a third of all fruit and vegetable purchases are not eaten, either because they are not edible or because edible food is wasted, then this 4 portions as purchased is reduced to 2 and two thirds (2.6) of a portion per person per day. The fruit and vegetable content of mixed dishes such as vegetable soups and fruit pies is not included, and there are other approximations described in the main report.

## Introduction

Family Food provides detailed statistical information on the purchases, expenditure and nutrient intakes derived from a survey of household food and drink purchases and eating out in the United Kingdom. This report presents trends in amount of money spent and quantity of food purchased by type of food and demographic characteristics, mostly over the last 4 years and with data on some types of purchases going back to the 1940s.

Headline findings cover:

- The average quantities and spend per person per week on types of food and drink in 2009 (Chapter 1);
- Percentage of food and drink energy from eating out (Chapter 2);
- Comparison of amounts of different foods purchased in different English regions and UK countries (Chapter 3);
- Examination of how estimated daily intakes of nutrients and energy compare with nutritional guidelines (Chapters 4 and 5);
- Impact of food price rises on purchasing habits (Chapter 5).

Data in Family Food conforms fully to National Statistics standards. The term 'National Statistics' is an accreditation quality mark which stands for a range of qualities such as relevance, integrity, quality, accessibility, value for money and freedom from political influence.

[www.ons.gov.uk/about-statistics/ns-standard/index.html](http://www.ons.gov.uk/about-statistics/ns-standard/index.html)

The Family Food module measures all food that is brought into the household, including fruit and vegetables grown in gardens and allotments. It also covers all food bought and eaten away from the home such as restaurant meals, school meals and snacks.

Defra is the main user of the statistics in its co-ordinating role on food policy across Government. The statistics feature in high level indicators on healthy diet and food security. In Scotland the statistics are used to monitor the health of the Scottish diet. More generally, Government use the statistics to assess the market value of specific types of foods as and when issues arise. The underlying data is currently being used to make official estimates of price and income elasticities of types of food, and has been used to estimate percentages of food purchases that are wasted. The data is placed on the National Data Archive and is accessed by academics and used in research.

Annex B provides background about the survey, its history and terms that are used throughout the report. It provides links to other Government surveys in the UK related to health, diet and food, along with where to find details of consumption in European Union countries.

# Chapter 1 UK trends in purchases and expenditure

## 1.1 Overview

In 2009 the amount that an average household spent on all food and drink, including alcoholic drinks, went up by 3% to £38.08 per person per week. Household food purchases formed the largest share at £23.86 per person per week. When inflation is taken into account the rise in the amount spent is 4% more than 2008, but a fall of 1.4% since 2006. The amount of food eaten out is on a long term downward trend.

## 1.2 Headlines

Within an overall rise in money spent on food, there are changes in some food categories which are examined in more detail in this chapter.

- Dairy product purchases for household supplies rise.
- Fruit purchases continue to fall.
- Breakfast cereal purchases rise.
- Alcohol purchases rise both for household consumption and eating out

## 1.3 In this chapter

This chapter sets the context for 2009 – food price changes and the economic recession. It looks at purchased quantities and trends in expenditure on food and drink for household consumption. Takeaway food and the proportion of home-grown fruit and vegetables are detailed.

The amount and types of food eaten away from home are examined. Expenditure on food and drink after taking into account the effect of food price inflation is introduced.

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## 1.4 2009 in context

For the first three quarters of 2009 the economy was in recession, moving out in the fourth quarter. Details of the price rises between 2007 and 2009 are introduced in this chapter, and [Chapter 5](#) investigates the effects these rises may have had on purchasing and spending behaviours.

**Table 1.1: Average annual price rises between 2007 and 2009**

	2007 to 2008	2008 to 2009		2007 to 2008	2008 to 2009
<i>Average percentage change in prices</i>					
All items	4%	-1%	Butter	23%	-2%
All items except food	3%	-1%	Cheese	15%	4%
Food	9%	5%	Eggs	27%	4%
Bread	15%	3%	Milk	14%	7%
Cereals	13%	8%	Soft drinks	2%	3%
Biscuits & cakes	11%	4%	Sugar & preserves	6%	13%
Beef	15%	8%	Potatoes	11%	5%
Pork	15%	8%	Vegetables	8%	7%

Table 1.1 continues on next page

Table 1.1 Average annual price rises between 2007 and 2009 continued

	2007 to 2008	2008 to 2009		2007 to 2008	2008 to 2009
<i>Average percentage change in prices</i>					
Poultry	13%	2%	Fruit	7%	5%
Lamb	9%	12%	Tea	6%	11%
Catering: Restaurant meals	4%	3%	Coffee and hot drinks	4%	8%

Source: ONS/RPI

The foods that have had the biggest rises between 2008 and 2009 are: sugar and preserves; tea; coffee and hot drinks; beef; and lamb. Smallest price increases are in: soft drinks; poultry; bread; and eating out. There was only one category that saw a price drop between 2008 and 2009: butter. (see also Figure 1.2).

The Retail Price Index (RPI) measures prices on a monthly basis of a selection of goods and services purchased by a 'typical consumer'. The inflation rate is the percentage rate of change of the RPI over time. Within the RPI there are price indexes for food, fruit and vegetables. Table 1.2 shows that the Food Price Index has risen by 20.3% between 2006 and 2009 and by 5.3% between 2008 and 2009.

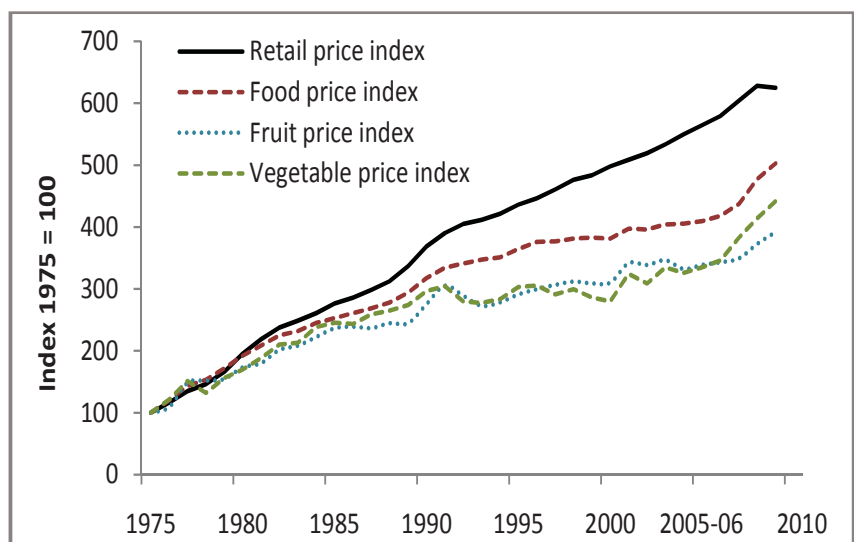
Table 1.2 Price indices since 1975

	Retail price index	Food price index	Fruit price index	Vegetable price index
<i>(1975 = 100)</i>				
1975	100	100	100	100
1985	277	253	236	245
1995	436	364	291	303
2000	498	381	310	280
2005-06	565	410	339	335
2006	579	418	343	346
2007	604	437	349	383
2008	628	478	373	414
2009	625	503	392	442
% change in 2009	-0	5	5	7

Source: ONS/RPI

Despite the sharp rise in food prices in 2008 and continuing rises in 2009, food prices have risen more slowly than the RPI since 1975 and foods are significantly cheaper in real terms than they were in 1975. Figure 1.1 also shows that the prices of fruit and vegetables have been rising more slowly than food overall. Fruit and vegetables have become relatively cheaper since 1975, although vegetable prices have risen more steeply since 2006.

Figure 1.1: Price changes since 1975



## 1.5 Household purchases (trends 2006 to 2009)

In this section year on year comparisons are made for the main food groups that make up people's diets in the UK. Trends going back to 1940 can be identified from the datasets on the website. Greater detail of the types of foods purchased can be found in the Excel spreadsheets, and Figure 1.2 and Table 1.3 and Table 1.4 provide examples of the level of detail available.

In this section commentary is given for the following major parts of the diet:

- Fruit and vegetables
- Fats (including oils)
- Milk and cream
- Bread
- Cheese
- Meat
- Confectionery and soft drinks
- Alcoholic drinks

### Fruit & vegetables

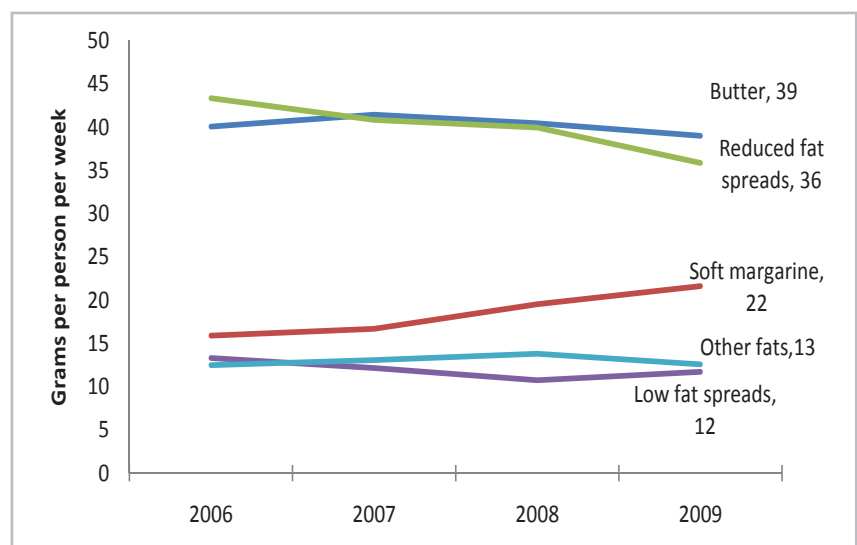
Household purchases of fruit and vegetables fell by 3.1% in 2009 and are now 8.5% lower than 2006. Since 2008, purchases of fresh fruit fell by 3.6%, fresh green vegetables fell by 1.1% and fruit juices fell by 7.1%. Faced with the 2009 price rises of 7% and 8% in fruit and vegetables respectively, consumers spent almost the same amount as before on fruit and slightly more on vegetables. [Chapter 5](#) has detailed analysis of fruit and vegetable purchasing over time compared to 5 A DAY portions and [Chapter 4](#) examines how fruit and vegetable purchases vary by demographic groups.

About 3% of all the fruit and vegetables entering the household in 2009 came from free sources, mainly gardens and allotments. See Table 1.5 Percentage of household food home-grown in gardens or allotments.

### Fats (including oils)

Household purchases of fats have remained stable since 2006. Although the rate has slowed, there is a continuing move away from 'reduced and low fat spreads' which fell by 16% since 2006. Purchases of butter dropped 3.6% though the price rises that had been seen in 2008 were slightly reversed. 'Other fats' in the chart, include: other margarine; lard; cooking fat; suet and dripping; and imitation cream.

Figure 1.2: Purchases grams per person per week of fats



The FSA have published guidelines on how spreadable animal and/or vegetable fats are labelled<sup>1</sup> depending on their fat content according to UK and EU regulations:

'Margarine' is the product obtained from vegetable and/or animal fats with a fat content of not less than 80% but less than 90%. In the UK, all margarines must be fortified with vitamins A and D;

The term 'reduced fat' can only be used for 'spreadable fats' with a fat content of more than 41% but not more than 62%;

The terms 'low fat' / 'light' can only be used for spreadable fats with a fat content of 41% or below.

### Milk and cream

Household purchases of whole, semi and fully skimmed milks have fluctuated since 2006. There is a significant long term downward trend in purchases of whole milk with a decrease of 14.1% since 2006.

### Bread

Total bread purchases are 5.2% lower in 2009 than 2006. Purchases of both white bread and 'brown and wholemeal bread' are continuing their downward trend, having fallen 4.4% and 7.9% respectively since 2006. 'Brown and wholemeal bread' showed a slight increase in 2009 compared to 2008 – up 2.6%. Purchases of 'other breads' which includes continental and specialty breads had increased from 2006 to 2007 but by 2009 purchases are below 2006 levels.

### Cheese

Household purchases of cheese dropped in 2008 but have risen 4.9% in 2009 to be at the same level as 2006. The amount spent on cheese has risen 6.5%.

Within this category natural cheese has consistently made up around 90% of the total purchased and processed cheese the remaining 10%. Cheddar type cheeses amount for over half of all cheese purchases by weight. Table 1.3 is an example of the level of detail available in the datasets on the Family Food web pages.

Table 1.3 Trends in cheese purchases, 2006 to 2009

	2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006
	<i>Grams per person per week</i>						
<b>Cheese</b>	<b>116</b>	<b>119</b>	<b>111</b>	<b>116</b>	✓✓✓	<b>+5</b>	<b>+1</b>
Natural cheese	103	106	99	105	✓✓✓	+6	+2
Hard cheese - cheddar type	65	67	62	68	✓✓✓	+9	+4
Hard cheese - other UK or foreign equivalent	10	11	11	10	✓✓	-9	-8
Hard cheese - edam or other foreign	7	8	7	8	✓	+17	+12
Cottage cheese	5	5	4	4	✓	-6	-24
Soft natural cheese	15	16	15	16	✓✓	+6	+8
Processed cheese	13	12	12	11	✓✓	-8	-14

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available

<sup>1</sup> [www.food.gov.uk/multimedia/pdfs/yellowfatguidance0610.pdf](http://www.food.gov.uk/multimedia/pdfs/yellowfatguidance0610.pdf) Responsibility for Food Standards and Authenticity in England transferred to Defra in 2010

## Meat

Purchases of raw carcass meat have fluctuated since 2006 falling overall by 10.7%. Between 2008 and 2009 purchases rose by 0.8%. 'Beef and veal', and 'lamb and mutton' purchased quantities both rose in 2009 but pork purchases fell. Processed meat and poultry purchases in the 'non-carcass meat and meat products' category have dropped 2.1% since 2006. Overall purchases in this category remained constant between 2008 and 2009. Within this category 'meat based ready meals and convenience meat products' purchases have risen 4% in 2009 and 'all other meat products' dropped 4.4%. Poultry purchases at 246 grams per person per week are slightly more than all types of carcass meat which total 212 grams per person per week.

Table 1.4: Trends in raw carcass meat and non-carcass meat purchases, 2006 to 2009

	2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006
	<i>Grams per person per week</i>						
<b>Carcass meat</b>	<b>238</b>	<b>235</b>	<b>211</b>	<b>212</b>	✓✓	+0.8	-10.7
Beef and veal	128	126	111	112	✓✓✓	+0.6	-12.8
Mutton and lamb	54	55	45	46		+4.4	-14.0
Pork	55	54	55	54	✓✓	-1.7	-2.4
<b>Non-carcass meat and meat products</b>	<b>804</b>	<b>795</b>	<b>787</b>	<b>787</b>	✓✓✓	<b>0.0</b>	<b>-2.1</b>
Bacon and ham	111	109	108	111	✓✓	+2.4	-0.7
Poultry	255	251	250	246	✓	-1.6	-3.6
Meat based ready meals	146	148	145	151	✓✓✓	+4.2	+4.0
All other meat products	292	287	284	279	×	-1.7	-4.4

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available

## Confectionery and soft drinks

Purchases of confectionery increased in 2008 and in 2009 and are showing clear evidence of a long term rising trend. Purchases of soft drinks are on a downward trend but dropped only slightly in 2009, despite being affected by price rises.

## Alcoholic drinks

Household purchases of alcoholic drinks rose by 5.5% in 2009 but are 2% lower than in 2006. This rise in 2009 reverses a previous fall in 2008. Spend on alcoholic drinks rose by 10.2%. Intakes of alcohol are examined in Chapters 2 and 5.

## 1.6 Home-grown fruit and vegetables

About 3% of fruit and vegetables entering the household in 2009 came from free sources, mainly gardens and allotments. Fresh beans has the highest proportion with 41% being home grown, but at 6 grams per person per week beans represent less than a tenth of all home grown fruit and vegetables. Included in the beans category are broad, runner, and French varieties. In terms of percentage of all fruit and vegetables, home grown have been relatively constant across the four years at about 3% of the total.

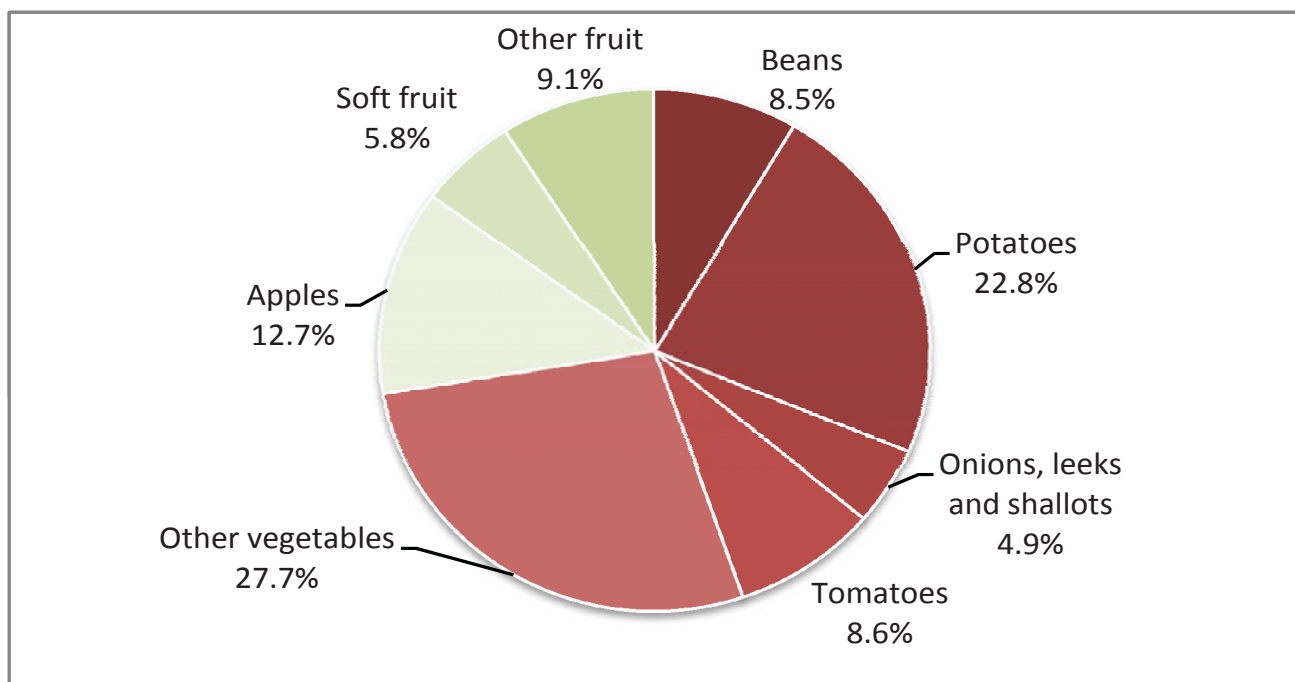


Table 1.5: Percentage of household food home-grown in gardens or allotments, 2006 to 2009

	2006	2007	2008	2009
Beans	31	42	39	41
Potatoes	3	3	2	3
Onions, leeks and shallots	4	4	4	3
Tomatoes	9	6	5	7
All other vegetables	3	4	3	4
Apples	7	6	7	5
Soft fruit	10	14	15	9
All other fruit	1	1	1	1
<b>Overall percentage</b>	<b>3.3</b>	<b>3.5</b>	<b>3.0</b>	<b>3.4</b>

The total amount of home-grown fruit and vegetables is 66 grams per person per week in 2009 compared to total purchases of fresh fruit and vegetables at 1962 grams per person per week. Processed fruit and vegetables e.g. frozen chips and canned baked beans are excluded from the totals. However non-indigenous fruits and vegetables that are not grown in quantity in the UK such as bananas and melons are included. Beans grown in a garden or allotment account for 41% of all beans entering the household in 2009 but they only make up 8% of all home-grown fruit and vegetables as shown in Figure 1.3.

Figure 1.3: Breakdown of home-grown fruit and vegetables by weight



'Other vegetables' account for over a quarter of the total volume of home-grown fruit and vegetables. In this category are marrow, courgettes, aubergine, pumpkin (8%); cabbages (3%), lettuces (3%), carrots (3%) other fresh root vegetables (parsnips, beetroot, radishes, sweet potatoes, yams) (4%).

## 1.7 Household spending

The average weekly expenditure on all household food and drink in 2009 was £26.75 per person. Total expenditure on household food and non-alcoholic drink rose by 3.7% since 2008 and is now 10.7% higher than in 2006 (2.1% higher when adjusted for the effects of inflation). Table 1.10 shows that there have been significant upward trends in household expenditure on:

- eggs, with spending increasing 42% between 2006 and 2009;
- butter, with spending increasing 20% between 2006 and 2009;
- bread, with spending increasing 15% between 2006 and 2009;
- sugar and preserves, with spending increasing 18% between 2006 and 2009.

There is a significant 4 year downward trend on the amount spent on pure fruit juices.

## 1.8 Takeaway food and drink

Takeaway purchases for consumption within the home are classed as household purchases (see Annex B).

The takeaway part of the major food groups is reported in Table 1.6. This data indicates a downward trend in all major groups since 2006. Expenditure on takeaway food brought home has remained relatively constant over the 4 year period at between £1.61 and £1.63 on average per person per week. Although the amount of fish purchased has decreased the amount spent has increased.

Table 1.6: UK household purchased quantities and expenditure on takeaway food brought home

Purchases	2006	2007	2008	2009	RSE (a)	%change since 2008	%change since 2006	trend since 2006 (b)
<i>average grams per person per week</i>								
Total Meat	63	64	58	57	✓✓	-2	-11	↘
Total Fish	13	12	11	11	✓✓	+2	-10	↘
Total Vegetables	52	50	47	47	✓✓	-2	-10	↘
Total Bread	5	5	4	4	✓	-9	-20	↘
Total Other cereals (c)	44	45	40	38	✓✓	-5	-15	↘
Total Miscellaneous	3	3	3	2	✓	-20	-29	↘

Table 1.6 continues on next page

Table 1.6: UK household purchased quantities and expenditure on takeaway food brought home (continued)

Expenditure	2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006
<i>average pence per person per week</i>							
Total Meat	68	71	67	67	✓✓	-0.2	-2.1
Total Fish	18	19	18	19	✓✓	8.3	6.0
Total Vegetables	26	27	27	27	✓✓	1.2	5.5
Total Bread	7	7	7	6	✓	-8.3	-6.9
Total Other cereals <sup>(c)</sup>	41	45	40	39	✓✓	-3.3	-5.8
Total Miscellaneous	3	3	3	3	✓	-6.5	-8.4

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available

(b) an arrow indicates a statistically significant linear trend since 2006, see website for more details

(c) Other cereals includes pastries, rice, pasta and noodles, pizza and savoury snacks such as popcorn, popadoms and prawn crackers

## 1.9 Eating out purchases

The amount of food eaten out is on a long term downward trend. Measured in grams, the amount of eating out was 15% lower in 2009 than in 2006. In terms of money spent in actual prices (not adjusted for inflation) it was 1.8% lower at £11.33 per person per week for all food and alcoholic drinks. Food and non-alcoholic drinks spending was £8.26. See table 1.10.

There are downward trends in purchases of most categories of eating out food and drink since 2006. The most significant reductions in amounts bought include confectionery down 20.4%, alcoholic drinks down 20.5%, 'crisps, nuts and snacks' down 18.1% and soft drinks (including milk drinks) down 17.5%. There are no categories with a significant upward trend since 2006. See Table 1.9.

## 1.10 Trends in spending in real terms

Table 1.7 shows expenditure at constant 2009 prices, which means that the values are adjusted for the effect of food price inflation. The figures have been derived by deflating expenditure at current prices by the Retail Price Index (all items). In 1975 households spent the equivalent of £25.20 on household food and drink. This is not directly comparable with the 2009 figure of £23.86 as it does not include spending on confectionery and soft drinks, and excludes Northern Ireland households. It does show that spending in real terms is lower in 2009 than in 1975. Expenditure on alcoholic drinks for consumption out of the home fell by 19.5% in real terms since 2006 (a fall of 13% in actual prices).

Table 1.7: UK expenditure on food and drink at constant 2009 prices

	1975 (a) (c)	1985 (a) (c)	1995 (a) (b)	2006	2007	2008	2009	% change since 2008	% change since 2006
Retail price index (1975 = 100)	100	277	436	579	604	628	625	-0.5	7.9
<i>£ per person per week</i>									
Food and alcoholic drinks									
Household			26.42	26.19	25.81	25.49	26.75	4.9	2.1
Eaten out			8.36	12.45	11.76	11.14	11.33	1.7	-8.9
All food and drink			34.78	38.64	37.57	36.63	38.08	4.0	-1.4
Food and drink excluding alcohol									
Household	25.20	22.38	23.85	23.24	22.90	22.88	23.86	4.3	2.7
Eaten out			6.18	8.63	8.24	8.12	8.26	1.7	-4.3
All food and drink exc. alcohol			30.02	31.87	31.14	31.00	32.12	3.6	0.8
% eaten out			21%	27%	26%	26%	26%		
Alcoholic drink									
Household			2.57	2.95	2.91	2.61	2.89	10.8	-2.0
Eaten out			2.18	3.82	3.52	3.02	3.08	1.8	-19.5
All alcoholic drinks			4.75	6.77	6.43	5.63	5.96	6.0	-11.9
% of alcoholic drinks eaten out			46%	56%	55%	54%	52%		

(a) Great Britain only

(b) Estimates on eating out in 1995 are based on National Food Survey which was considered less reliable

(c) Excludes confectionery, soft and alcoholic drinks

(d) Whilst National Food Survey food purchases were adjusted, eating out figures were not

The Retail Price Index (RPI) (a measure of inflation) rose by 8.4% between 2006 and 2008 and fell by 0.5% between 2008 and 2009. Removing this overall rise in prices of 7.9% from the changes in expenditure on food and drink shows how expenditure in real terms changed since 2006:

- household spending on food and drink up by 2.1%;
- eating out spending down by 8.9%;
- all alcoholic drinks spending down by 11.9%;
- spend on alcoholic drinks bought outside the home down by 19.5%

## 1.11 Chapter 1 Reference Tables

These tables cover high level food groups, show the relative standard error of the estimates, and give percentage change since 2008 and 2006 along with an indication of significance of the change.

Table 1.8: Quantities of household purchases of food and drink, 2006 to 2009

Table 1.9: UK eating out purchased quantities of food and drink, 2006 to 2009

Table 1.10: Expenditure on food and drink in the UK, 2006 to 2009

Tables of all 250 household food codes and 250 eating out food codes for 2001-02

onwards in Excel format are available at: [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm)

Table 1.8: Quantities of household purchases of food and drink, 2006 to 2009

		2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006	trend since 2006 <sup>(b)</sup>
Number of households in sample		6645	6141	5845	5825				
Number of persons in sample		15848	14647	13890	13760				
<i>grams per person per week unless otherwise stated</i>									
<b>Milk and cream</b>	(ml)	<b>2022</b>	<b>1984</b>	<b>1957</b>	<b>2003</b>	✓✓✓	+2.4	-0.9	
Liquid whole milk (including welfare and school milk)	(ml)	490	432	420	421	✓✓	+0.1	-14.1	↘
Skimmed milks	(ml)	1137	1154	1145	1156	✓✓✓	+1.0	+1.7	
Cream	(ml)	22	21	21	23	✓✓	+11.5	+5.2	
Yoghurt and fromage frais	(ml)	204	196	202	203	✓✓✓	+0.6	-0.4	
Other milks and dairy desserts	(ml)	170	180	169	200	*			↗
<b>Cheese</b>		<b>116</b>	<b>119</b>	<b>111</b>	<b>116</b>	✓✓✓	+4.9	+0.5	
Cheese, natural		103	106	99	105	✓✓✓	+6.4	+2.3	
Cheese, processed		13	12	12	11	✓✓	-7.8	-13.6	↘
<b>Carcase meat</b>		<b>238</b>	<b>235</b>	<b>211</b>	<b>212</b>	✓✓	+0.8	-10.7	↘
Beef and veal		128	126	111	112	✓✓✓	+0.6	-12.8	↘
Mutton and lamb		54	55	45	46		+4.4	-14.0	
Pork		55	54	55	54	✓✓	-1.7	-2.4	
<b>Non-carcase meat and meat products</b>		<b>804</b>	<b>795</b>	<b>787</b>	<b>787</b>	✓✓✓	-0.0	-2.1	
Bacon and ham (cooked or uncooked)		111	109	108	111	✓✓	+2.4	-0.7	
Poultry (cooked or uncooked)		255	251	250	246	✓	-1.6	-3.6	
Meat based ready meals and convenience meat products		146	148	145	151	✓✓✓	+4.2	+4.0	
All other meat and meat products		292	287	284	279	*	-1.7	-4.4	↘
<b>Fish</b>		<b>170</b>	<b>165</b>	<b>161</b>	<b>158</b>	✓✓✓	-2.0	-7.4	↘
White fish, fresh, chilled or frozen		28	24	24	23	✓	-6.2	-17.1	
Herrings and other blue fish, fresh, chilled or frozen		7	8	6	6	✓	-9.2	-22.9	↘
Salmon, fresh, chilled or frozen		12	12	12	13	✓	+4.0	+2.8	
All other fish and fish products		123	122	118	117	*	-1.4	-5.3	↘
<b>Eggs</b>	(no.)	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	✓✓✓	+3.1	+5.7	
<b>Fats</b>		<b>184</b>	<b>181</b>	<b>184</b>	<b>181</b>	✓✓✓	-1.8	-1.6	
Butter		40	41	40	39	✓✓	-3.6	-2.7	
Margarine		18	19	22	24	✓✓	+9.9	+33.4	↗
Reduced and low fat spread		57	53	51	48	✓	-6.2	-16.0	↘
All other fats		69	68	72	71		-1.2	+1.9	
<b>Sugar and preserves</b>		<b>126</b>	<b>125</b>	<b>127</b>	<b>125</b>	✓✓	-1.5	-1.0	
<b>Fresh and processed potatoes</b>		<b>810</b>	<b>781</b>	<b>776</b>	<b>761</b>	✓✓✓	-2.0	-6.1	↘
<b>Fruit and Vegetables</b>		<b>2454</b>	<b>2421</b>	<b>2317</b>	<b>2246</b>	✓✓✓	-3.1	-8.5	↘
<b>Vegetables</b>		<b>1142</b>	<b>1140</b>	<b>1118</b>	<b>1103</b>	✓✓✓	-1.3	-3.4	↘
Fresh green vegetables		221	224	203	201	✓✓✓	-1.1	-9.2	↘
Other fresh vegetables		566	566	557	552	✓✓✓	-0.9	-2.4	↘
Processed vegetables		355	350	358	350	✓✓✓	-2.1	-1.4	↘

Table 1.8: Quantities of household purchases of food and drink, 2006 to 2009 - continued

	2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006	trend since 2006 <sup>(b)</sup>
<b>Fruit</b>	<b>1313</b>	<b>1281</b>	<b>1199</b>	<b>1143</b>	✓✓✓	-4.7	-12.9	↘
Fresh fruit	855	855	790	762	✓✓✓	-3.6	-10.9	↘
Processed fruit and fruit products	458	426	409	381	✓✓	-6.8	-16.8	↘
Pure fruit juices (ml)	366	340	325	302	✓✓	-7.1	-17.5	↘
<b>Bread</b>	<b>692</b>	<b>677</b>	<b>659</b>	<b>656</b>	✓✓✓	-0.4	-5.2	↘
White bread	310	304	301	297	✓✓✓	-1.4	-4.4	↘
Brown and wholemeal bread	188	176	168	173	✓✓✓	+2.6	-7.9	↘
Other bread	194	197	190	186	✓✓✓	-1.6	-4.1	↘
<b>Flour</b>	<b>54</b>	<b>54</b>	<b>63</b>	<b>58</b>	✓	-7.5	+8.2	
<b>Cakes, buns and pastries</b>	<b>165</b>	<b>159</b>	<b>153</b>	<b>158</b>	✓✓✓	+3.1	-4.0	↘
<b>Biscuits and crispbreads</b>	<b>165</b>	<b>163</b>	<b>170</b>	<b>169</b>	✓✓✓	-0.4	+2.3	
<b>Other cereals and cereal products</b>	<b>530</b>	<b>536</b>	<b>535</b>	<b>548</b>	✓✓✓	+2.3	+3.3	
High fibre breakfast cereals	60	56	54	55	✓✓	+2.4	-6.8	↘
Sweetened breakfast cereals	30	29	33	35	✓✓	+7.0	+19.3	↗
Pasta	87	92	91	91	✓✓	-0.2	+5.0	
Other cereal convenience foods	76	71	75	79	✓✓✓	+5.7	+4.1	
All other cereal and cereal products	279	288	282	287	*	+1.6	+2.9	
<b>Beverages</b>	<b>55</b>	<b>56</b>	<b>55</b>	<b>54</b>	✓✓✓	-0.3	-1.4	
<b>Soft drinks<sup>(c)</sup></b> (ml)	<b>1807</b>	<b>1686</b>	<b>1682</b>	<b>1678</b>	✓✓✓	-0.3	-7.2	↘
Not low calorie (ml)	1273	1178	1192	1208	✓✓✓	+1.3	-5.1	
Low calorie (ml)	534	508	490	469	✓✓	-4.2	-12.1	↘
<b>Confectionery</b>	<b>123</b>	<b>129</b>	<b>131</b>	<b>134</b>	✓✓✓	+2.4	+9.0	↗
<b>Alcoholic drinks</b> (ml)	<b>760</b>	<b>772</b>	<b>706</b>	<b>744</b>	✓✓	+5.5	-2.0	

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.

(b) an arrow indicates a statistically significant linear trend since 2006, see website for more details.

(c) converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Table 1.9: UK eating out purchased quantities of food and drink, 2006 to 2009

		2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006	trend since 2006 <sup>(b)</sup>
Number of households in sample		6645	6141	5845	5825				
Number of persons in sample		15848	14647	13890	13760				
<i>grams per person per week unless otherwise stated</i>									
Alcoholic drinks									
average across whole population	ml	561	503	443	446	✓✓	+0.5	-20.5	↘
average excluding under 14's	ml	675	604	532	535	✓✓	+0.6	-20.7	↘
Soft drinks inc. milk drinks	ml	347	312	291	286	✓✓✓	-1.7	-17.5	↘
Beverages	ml	129	133	124	120	✓✓	-2.9	-6.8	↘
Other food products <sup>(c)</sup>	ml	137	132	116	127	✓	+9.6	-6.9	
Meat and meat products		81	77	78	76	✓✓✓	-2.6	-7.1	↘
Fresh and processed potatoes		72	67	66	65	✓✓✓	-2.3	-10.4	↘
Sandwiches		78	76	73	67	✓✓✓	-8.6	-14.2	↘
Vegetables		30	29	29	28	✓✓	-4.1	-7.1	
Ice cream, desserts and cakes		28	26	26	26	✓✓	+3.2	-5.5	
Indian, Chinese or Thai food		29	34	31	28	✓✓	-9.6	-3.7	
Cheese and egg dishes or pizza		23	22	23	21	✓✓	-8.0	-7.6	
Salads		19	17	19	17	✓✓	-12.2	-12.2	
Rice, pasta or noodles		15	14	14	14	✓✓	+2.5	-5.0	
Fresh and processed fruit		15	14	13	12	✓✓	-5.4	-20.0	↘
Confectionery		14	13	12	11	✓✓	-8.5	-20.4	↘
Fish and fish products		14	13	13	14	✓✓	+4.1	-5.0	
Soups		10	10	10	9	✓	-12.9	-15.3	↘
Crisps, nuts and snacks		9	8.3	7.9	7.3	✓✓	-7.6	-18.1	↘
Bread		8	8.0	7.8	7.5	✓✓	-4.2	-4.7	
Biscuits and chocolate		3	2.8	2.7	2.8	✓	+2.8	-18.6	↘
Yoghurt and fromage frais		3	2.8	2.1	2.3		+9.0	-15.5	
Breakfast cereals		0.4	0.6	0.5	0.6		+27.7	+47.6	

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.

(b) an arrow indicates a statistically significant linear trend since 2006, see website for more details.

(c) Other food products mostly contains unspecified meals such as free school meals and free meals through work.

Table 1.10: Expenditure on food and drink in the UK, 2006 to 2009

	2006	2007	2008	2009	RSE <sup>(a)</sup>	% change since 2008	% change since 2006	sig <sup>(b)</sup>
Number of households in sample	6645	6141	5845	5825				
Number of persons in sample	15848	14647	13890	13760				
Food Price Inflation	2.1	4.5	9.2	5.3				
<b>Household Expenditure</b>	<i>pence per person per week</i>							
Milk and cream	167	171	187	200	✓✓✓	+7.1	+19.9	yes
Liquid whole milk	27	25	27	28	✓✓	+3.9	+6.3	
Cheese	64	68	70	75	✓✓✓	+6.5	+16.7	yes
Carcase meat	120	121	122	127	✓✓✓	+3.5	+5.5	
Other meat and meat products	385	393	406	423	✓✓✓	+4.2	+10.0	yes
Fish	111	116	115	117	✓✓✓	+1.5	+5.0	
Eggs	19	23	26	27	✓✓✓	+2.5	+42.4	
Fats	40	41	49	47	✓✓✓	-3.4	+18.4	
Butter	12	14	16	15	✓✓	-7.1	+19.7	
Sugar and preserves	17	17	19	20	✓✓✓	+5.9	+17.9	
Fresh and processed potatoes	103	108	109	111	✓✓✓	+1.1	+7.4	
Fruit and vegetables excluding potatoes	401	411	411	419	✓✓✓	+1.8	+4.5	
Vegetables excluding potatoes	200	209	210	218	✓✓✓	+3.8	+9.1	yes
Fruit	201	202	201	200	✓✓✓	-0.4	-0.1	
Fresh apples	22	23	22	23	✓✓✓	+3.0	+3.5	
Pure fruit juices	36	36	35	32	✓✓	-7.7	-11.0	yes
Cereals	399	409	439	452	✓✓✓	+3.1	+13.4	yes
Bread	102	108	117	118	✓✓✓	+0.7	+15.3	
Beverages	42	43	44	48	✓✓✓	+8.2	+15.3	yes
Soft drinks	81	79	81	85	✓✓✓	+5.3	+5.1	yes
Confectionery	80	83	87	93	✓✓✓	+6.7	+16.2	yes
Alcoholic drinks	273	281	262	289	✓✓	+10.2	+5.7	yes
Beers	19	20	17	21	✓	+21.1	+8.7	yes
Lagers and continental beers	49	47	45	48	✓✓	+7.4	-1.5	
All household food and non-alcoholic drink	2155	2214	2300	2386	✓✓✓	+3.7	+10.7	yes
All household food and drink	2428	2495	2562	2675	✓✓✓	+4.4	+10.2	yes
<b>Eating Out Expenditure</b>								
total expenditure on alcoholic drink eaten out	354	341	304	308	✓✓	+1.3	-13.2	
total expenditure on food and drink eaten out (excluding alcoholic drinks)	800	796	816	826	✓✓✓	+1.1	+3.3	
total expenditure on food and drink eaten out	1154	1137	1120	1133	✓✓✓	+1.2	-1.8	
<b>Expenditure on all food and drink</b>	<b>3582</b>	<b>3632</b>	<b>3683</b>	<b>3808</b>	<b>✓✓✓</b>	<b>+3.4</b>	<b>+6.3</b>	<b>yes</b>

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.

(b) "yes" if the change since 2006 is statistically significant (if the change is more than twice its standard error).



# Chapter 2 UK trends in energy and nutrient intakes

## 2.1 Overview

Household purchases and eating out quantities are converted to energy and nutrient intakes in this chapter. Trends over four years are examined, and comparisons are made with the reference nutrient intake (RNI) or estimated average requirement (EAR) in the case of energy. No allowance is made for food bought but not eaten.

## 2.2 Headlines

Total energy from food had been falling from 2006, but it increased in 2009. Compared to the reference nutrient intakes, all average intakes are at least 100% of the requirement, where one is set, before food waste is considered.

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## 2.4 Interpreting the results

Estimated nutrient intakes are calculated from food purchases using nutrient composition data supplied by the Food Standards Agency (FSA). The majority of the data is from the FSA's nutrient analysis programme, supplemented by values from manufacturers and retailers. [Annex B](#) documents which food codes have been updated with new nutrient composition data in the last 4 years.

Intakes from dietary supplements are not included in any of the tables. The definitions of certain nutritional terms can be found in the [glossary](#).

## 2.5 Description of Reference Nutrient Intakes

Many tables in this chapter compare intakes derived from the survey with Reference Nutrient Intakes <sup>1</sup>. These Reference Nutrient Intakes (RNIs) represent the best estimate of the amount of a nutrient that is enough, or more than enough, for about 97.5 per cent of people in a group. If average intake of a group is at or above the level of the RNI, then the risk of deficiency in the group is very small.

Energy intake is compared against the Estimated Average Requirement (EAR) for a group. Estimates of energy requirements for different populations are termed EARs and are defined as the energy intake estimated to meet the average requirements of the group. About half the people in the group will usually need more energy than the EAR and half the people in the group will usually need less.

The reference nutrient intakes and estimated average requirements and their calculation are described in the method note number 5 'Nutrient intakes'.

<sup>1</sup> Reference Nutrient Intakes from Department of Health, *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*, HMSO, 1991

## 2.6 Food Waste

Four of the tables (Tables 2.4, 2.6, 2.7 and 2.9) show average UK energy and nutrient intakes from food and drink per person per day as percentages of the weighted RNIs. In previous reports, an allowance of 10% was made for wastage of household food and drink. In July 2010 Defra published [official statistics](#) on the amount of edible food wasted, which showed that the average amount of edible food and drink wasted was 15% with a range of results from 4% (sweet snacks) to 40% (white bread). The tables in this chapter do not make any allowance for food bought and not eaten by people in the household. Table 2.5 compares estimated intakes as the percentage of weighted reference nutrient intakes before and after 10% and 15% food waste is taken into account. See also 2.17 Examining the impact of food waste on percentage of RNI estimates.

## 2.7 Key dietary indicators

The reference tables (Tables 2.6, 2.7, 2.8, 2.9 and 2.10) show a breakdown of energy and nutrients intakes from household purchases and eating out. Commentary is provided for six key elements of the diet:

Energy

Sodium

Non-milk extrinsic sugars

Saturated fatty acids

Fibre

Alcohol

Chapter 5 examines in more detail the trends in these dietary indicators over time.

## 2.8 Energy

Using the energy content of purchased food, total energy intake per person has risen by 1.2% on 2008 values but the overall trend from 2006 is downwards. Total energy intake for 2009 was 2303 kcal per person per day. Energy from household food and drink has fallen 1% since 2006 but rose 1.3% from 2008. Energy from eating out has fallen more sharply with a drop of 9.6% since 2006 but it did show a rise of 0.5% in the most recent year. Eating out accounted for an average of 11% of energy intake per person in 2009.

## 2.9 Sodium

Intakes of sodium are estimated to be 4.2% lower in 2009 than in 2006. Household intakes have fallen 3.7% over this period but from 2008 to 2009 they rose by 1.7%. Eating out intakes account for 11 % of sodium intakes and have fallen 7.8% since 2008. Household foods contributing to the rise in sodium intakes in 2009 are 'other cereals and cereal products', cheese, and 'cakes, buns and pastries'. Chapter 5 examines sodium intakes compared to the dietary reference value.

The figures for sodium do not include purchases of table salt as purchased quantities do not match consumption since salt can be used for a variety of household tasks such as melting ice. Salt that might have been added to food during cooking or at the table is excluded from the values, making them an under estimate. Nine grams of table salt was purchased per person per week ([see full dataset](#)) in 2009.

## 2.10 Non-milk extrinsic sugars

Non-milk extrinsic sugars (NMES) are defined as sugars not naturally incorporated into the cellular structure of foods, apart from lactose in milk. Non-milk extrinsic sugars include the sugars in fruit juices, table sugar and honey and sugars added to processed foods. These sugars are considered to be a major contributor to the development of dental caries (tooth decay). NMES are chemically indistinguishable from intrinsic sugars and so cannot be measured by direct analysis. The NMES content of foods must therefore be estimated rather than measured.

Intakes of non-milk extrinsic sugars (NMES) as measured as a percentage of food and drink energy (excluding alcohol) have risen by less than one per cent since 2006. The household food groups that contribute the most to total NMES intakes can be found in Table 2.8, they are 'sugar and preserves', 'soft drinks' and 'confectionery'. The percentage of household food and drink energy (excluding alcohol) from NMES has risen by 1.1% since 2006, and eating out (which accounts for less than a tenth of NMES intakes) has fallen by 5.4%.

## 2.11 Saturated fatty acids

Intakes of saturated fatty acids, as measured by percentage of food and drink energy (excluding alcohol), have remained fairly stable since 2006 ranging between 14.5% and 14.7% of food and drink energy excluding alcohol (Table 2.6 Estimated UK average energy and nutrient intakes from all food and drink). Intakes of saturated fatty acids from eating out (Table 2.9 Eating out energy and nutrient intakes) have also remained relatively stable at around 13.3% to 13.5% of energy from food and drink excluding alcohol eaten out. Actual intakes from eating out have declined 8.3% since 2006 but saw a slight rise in 2009 of 0.3%.

## 2.12 Fibre

There has been a small increase in fibre intake since 2008 but it has fallen 2.7% since 2006. The Government guideline is for an average of 18 grams of fibre intake per adult per day. Intakes of fibre from both household and eating out combined is 15.2 grams per person per day. Household food purchases account for 89% of daily fibre intakes at 13.5 grams per person per day.

## 2.13 Alcohol

Alcohol intake from all food and drink in 2009 was 7.7% higher than in 2008 but it was 4.3% lower than it was in 2006 (Table 2.6). Eating out intake (Table 2.8) has shown a large drop of 18.1% since 2006 but rose 4.1% in 2009 and accounts for 27% of all alcohol intake (Table 2.6). Household intake (Table 2.7) has fluctuated from year to year, showing an overall rise of 2.0% since 2006, it rose by 9.1% between 2008 and 2009.

## 2.14 Nutrient intakes from eating out

Eating out accounted for 11% of total energy intake in 2009. Over a third of the total energy from eating out is derived from a combination of meat and meat products, alcoholic drinks, sandwiches and potatoes (including chips). Approximately one third of energy from eating out comes from free meals and unspecified meals (Table 2.10). The estimation methods for unspecified meals were introduced in the 2005-06 Family Food report and are described in the method note 'Estimation of free food and unspecified meals'. Chapter 1 presents the estimates of quantities and spending on eating out for the last four years.

## 2.15 Major sources of energy from household food purchases

Around a third of energy from household purchases (667 kcal per person per day, 32.5% of daily energy intake) is derived from a combination of:

- bread (216 kcal) - 10.5% of daily energy intake including alcoholic drinks from household purchases,
- other cereal products (such as oat products, breakfast cereal, rice, pasta and pizza) (239 kcal) - 11.6% of daily energy intake including alcoholic drinks from household purchases, and
- other meat and meat products (212 kcal) – 10.3% of daily energy intake including alcoholic drinks from household purchases.

Tables 2.1, 2.2 and 2.3 provide a breakdown of the top 3 food categories by providing detail of the food types that are included.

A further third of energy from household purchases (681 kcal per person per day, 33.1% of daily energy intake) is derived from a combination of:

- milk, yoghurt and fromage frais, milk desserts and cream, 179 kcal (per person per day) - 8.7% of total daily energy intake from household food,
- fats, 175 kcal - 8.5% of total daily energy intake,
- processed vegetables, 130 kcal - 6.3% of total daily energy intake,
- biscuits, 114 kcal - 5.5% of total daily energy intake,
- confectionery, 84 kcal - 4.1% of total daily energy intake.

The remaining 34.4% of daily energy from household food and alcoholic drinks (706 kcal), comes from a range of foods including, carcass meat, fresh fruit and vegetables, fish, cheese, potatoes, soft drinks and alcoholic drinks, as detailed in Table 2.8 Estimated intakes from different types of household foods.

Table 2.1 Contribution to total household food and drink energy intake from other meat and meat products

	Energy kcal	% of household food and drink energy <sup>(a)</sup>
	<i>average per person per day</i>	
Meat based ready meals and convenience meat products	37	1.8
Chicken - whole or part	33	1.6
Sausages, uncooked - pork	25	1.2
Meat pies, pasties and puddings - frozen or not frozen	20	1.0
Bacon and ham, uncooked	19	0.9
Takeaway meats	13	0.6
Meat pies and sausage rolls, ready to eat	12	0.6
Ham and bacon	10	0.5
Burgers - frozen or not frozen	8	0.4
Cooked poultry (excluding canned)	8	0.4
All other non-carcass meat and meat products	26	1.3
<b>Total</b>	<b>212</b>	<b>10.3</b>

(a) includes energy from alcoholic drinks.

Table 2.2 Contribution to total household food and drink energy intake from bread

	Energy kcal	% of household food and drink energy <sup>(a)</sup>
<i>average per person per day</i>		
White bread (inc premium and soft grain)	94	4.6
Other bread	69	3.4
Brown and wholemeal bread	53	2.6
<b>Total</b>	<b>216</b>	<b>10.5</b>

(a) includes energy from alcoholic drinks.

Table 2.3 Contribution to total household energy intake from other cereals and cereal products

	Energy kcal	% of household food and drink energy <sup>(a)</sup>
<i>average per person per day</i>		
Breakfast cereals	69	3.4
Other cereal convenience foods	41	2.0
Rice	37	1.8
Pasta	35	1.7
Pizza	26	1.3
Oatmeal and oat products	12	0.6
All other cereals and cereal products	19	0.9
<b>Total</b>	<b>239</b>	<b>11.6</b>

(a) includes energy from alcoholic drinks.

## 2.16 Comparison of household and eating out intakes with Reference Nutrient Intakes

Table 2.4 'Energy and nutrient intakes in the UK in 2009 as a percentage of weighted Reference Nutrient Intakes' shows that, based on the food and drink purchases recorded, average energy and micronutrient intakes were above the reference nutrient intakes (RNI) in 2009, ranging from 101% of the RNI for potassium to 460% of the RNI for vitamin B<sub>12</sub>. Average energy intake including alcohol was 10% above the weighted Estimated Average Requirement (EAR) at 110%. Average energy intake excluding alcohol was also above the weighted EAR at 109%.

No allowance has been made for food and drink purchased and not eaten. The nutrient composition codes do take into account the inedible portion of foods, e.g. fish heads, banana skins. The section 'Examining the impact of food waste on percentage of RNI estimates' illustrates the differences in the household purchases values when 10% and 15% waste factors are applied.

Table 2.4 Energy and nutrient intakes in the UK in 2009 as a percentage of weighted Reference Nutrient Intakes

	Nutrient intakes in 2009			Intake as a percentage of weighted Reference Nutrient Intake <sup>(a)</sup>			
	Household	Eaten Out	Total	Household	Eaten Out	Total	
<i>average per person per day</i>							
Energy <sup>(b)</sup>	kcal	2054	250	2303	98	12	110
Energy excluding alcohol <sup>(b)</sup>	kcal	2002	231	2232	95	11	106
Protein	g	69.9	9.0	78.5	152	20	171
Calcium	mg	911	73	983	132	11	143
Iron	mg	10.7	1.2	11.9	104	12	115
Zinc	mg	8.3	1.0	9.3	104	13	117
Magnesium	mg	260	29	288	98	11	109
Sodium <sup>(c)</sup>	g	2.50	0.32	2.82	168	22	189
Potassium	g	2.86	0.37	3.23	89	11	101
Thiamin	mg	1.47	0.20	1.67	175	24	199
Riboflavin	mg	1.77	0.15	1.92	155	13	168
Niacin equivalent	mg	29.9	4.4	34.2	214	32	246
Vitamin B <sub>6</sub>	mg	2.1	0.3	2.5	173	28	200
Vitamin B <sub>12</sub>	µg	5.8	0.6	6.4	419	41	460
Folate	µg	259	40	299	137	21	159
Vitamin C	mg	70	9	79	182	23	205
Vitamin A (retinol equivalent)	µg	792	105	897	127	17	144

(a) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

(b) Estimated Average Requirement.

(c) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee Nutrition recommended that average salt intake for adults should not exceed 6 g/day, equivalent to 2.4 grams of sodium.

## 2.17 Examining the impact of food waste on percentage of RNI estimates

Table 2.5 shows how mean intake as a percentage of the RNI is affected by the assumption made about the percentage of food wasted. Research published in November 2009 by WRAP and further analysis by Defra showed that in 2008 different foods were wasted at different rates. Therefore nutrients are wasted at different rates.

Table 2.5 The effect of household food waste on total energy and nutrient intakes as a percentage of weighted reference nutrient intakes

		No waste			10% HH Waste			15% HH Waste		
		EO <sup>(b)</sup>	HH	All <sup>(c)</sup>	EO <sup>(b)</sup>	HH	All <sup>(c)</sup>	EO <sup>(b)</sup>	HH	All <sup>(c)</sup>
Energy <sup>(d)</sup>	%	12	98	110	12	88	100	12	83	95
Energy excluding alcohol <sup>(d)</sup>	%	11	95	106	11	86	97	11	81	92
Protein	%	20	152	171	20	137	156	20	129	149
Calcium	%	11	132	143	11	119	129	11	112	123
Iron	%	12	104	115	12	93	105	12	88	100
Zinc	%	13	104	117	13	94	107	13	88	101
Magnesium	%	11	98	109	11	88	99	11	83	94
Sodium <sup>(e)</sup>	%	22	168	189	22	151	172	22	142	164
Potassium	%	11	89	101	11	81	92	11	76	88
Thiamin	%	24	175	199	24	158	181	24	149	173
Riboflavin	%	13	155	168	13	139	152	13	132	145
Niacin equivalent	%	32	214	246	32	193	225	32	182	214
Vitamin B <sub>6</sub>	%	28	173	200	28	155	183	28	147	174
Vitamin B <sub>12</sub>	%	41	419	460	41	377	418	41	356	397
Folate	%	21	137	159	21	124	145	21	117	138
Vitamin C	%	23	182	205	23	164	187	23	155	178
Vitamin A (Retinol equivalent)	%	17	127	144	17	115	131	17	108	125

(a) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

(b) Estimates of waste are not available for Eating Out intakes.

(c) is the total of all food and drink from household purchases (HH) plus eating out (EO) purchases.

(d) As a percentage of Estimated Average Requirement.

(e) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee Nutrition recommended that average salt intake for adults should not exceed 6 g/day, equivalent to 2.4 grams of sodium.

## 2.18 Further data and analysis

More detailed series for all years from 1974 onwards are available in [Excel format](#). Estimates for some types of food and therefore some nutritional intakes are available from 1940.



## 2.19 Chapter 2 Reference tables

The inclusion since 1992 of the contributions from alcoholic drinks, confectionery and soft drinks brought into the household has affected the energy, non-milk extrinsic sugars, fat and alcohol, series. Because of these breaks in the series this chapter concentrates on trends that have emerged over the last four years.

Table 2.6 gives a total for household purchases and eating out, then the following tables look at household purchases and eating out individually.

### Table 2.6 Estimated UK average energy and nutrient intakes from all food and drink, 2006 to 2009

This is the energy and intakes derived from household purchases and eating out purchases, with no allowance for food waste.

### Table 2.7 Household energy and nutrient intakes, 2006 to 2009

This is the energy and intakes derived from household purchases only, with no allowance for food waste.

### Table 2.8 Estimated energy and nutrient intakes from different types of household foods in 2009

This table shows the average intake per person per day for energy, fat, saturated fatty acids, calcium, iron, NMES, sodium, folate, vitamin C,  $\beta$ -carotene, and vitamin A. Percentage of total intake per person per day from household purchases is included with no allowance for food waste.

### Table 2.9 Eating out energy and nutrient intakes, 2006 to 2009

This is the energy and intakes derived from eating out purchases only. No allowance for food waste has been applied to the estimates in common with previous years' reports.

### Table 2.10 Estimated energy and nutrient intakes from different types of food eaten out 2009

This table shows the average intake per person per day for energy, fat, saturated fatty acids, calcium, iron, NMES, sodium, folate, vitamin C,  $\beta$ -carotene, and vitamin A along with percentage of total intake per person per day from eating out purchases. No allowance for food waste has been applied to the estimates in common with previous years' reports.

Table 2.6 Estimated UK average energy and nutrient intakes from all food and drink

		2006	2007	2008	2009	% change since 2008	% change since 2006	% from food eaten out in 2009	
<b>Total energy and nutrient intakes <sup>(a)</sup></b>		<i>average intake per person per day</i>							
Energy	kcal	2351	2320	2276	2303	+1.2	-2.0	10.8	
	MJ	9.9	9.7	9.6	9.7	+1.2	-2.0	10.8	
Energy excluding alcohol	kcal	2276	2247	2210	2232	+1.0	-1.9	10.3	
Total Protein	g	81.3	80.4	78.1	78.5	+0.6	-3.3	11.4	
Fat	g	97	96	94	95	+1.1	-2.0	11.6	
Fatty acids:									
	Saturates	g	37.2	36.3	35.7	36.0	+0.7	-3.3	9.6
	Monounsaturates	g	35.8	35.4	35.1	35.9	+2.5	+0.4	12.7
	Polyunsaturates	g	17.7	17.6	17.4	17.2	-1.1	-3.1	13.4
Cholesterol	mg	274	273	262	262	0.0	-4.4	13.7	
Carbohydrate <sup>(b)</sup>	g	287	284	279	282	+1.0	-1.7	9.0	
	Total sugars	g	132	129	127	129	+1.4	-2.5	7.5
	Non-milk extrinsic sugars	g	86	84	83	85	+1.8	-1.4	8.6
	Starch	g	154	154	152	153	+0.7	-0.9	10.3
Fibre <sup>(c)</sup>	g	15.6	15.2	15.0	15.2	+1.3	-2.7	10.9	
Alcohol	g	10.6	10.5	9.4	10.2	+7.7	-4.3	27.0	
Calcium	mg	998	985	969	983	+1.4	-1.5	7.4	
Iron	mg	12.2	12.0	11.8	11.9	+1.0	-3.1	10.1	
Zinc	mg	9.7	9.6	9.2	9.3	+1.0	-3.5	11.0	
Magnesium	mg	298	293	287	288	+0.7	-3.2	10.0	
Sodium <sup>(d)</sup>	g	2.95	2.84	2.78	2.82	+1.5	-4.2	11.4	
Potassium	g	3.34	3.28	3.22	3.23	+0.2	-3.3	11.3	
Thiamin	mg	1.75	1.69	1.66	1.67	+1.0	-4.6	11.9	
Riboflavin	mg	1.97	1.93	1.89	1.92	+1.6	-2.7	7.7	
Niacin equivalent	mg	35.7	34.9	34.0	34.2	+0.7	-4.1	12.8	
Vitamin B <sub>6</sub>	mg	2.5	2.5	2.5	2.5	-0.5	-1.5	13.8	
Vitamin B <sub>12</sub>	µg	6.5	6.5	6.4	6.4	+0.4	-1.6	9.0	
Folate	µg	306	308	299	299	+0.1	-2.1	13.5	
Vitamin C	mg	80	79	76	79	+3.9	-1.0	11.0	
Vitamin A									
	Retinol	µg	527	523	526	530	+0.8	+0.5	8.6
	β-carotene	µg	2295	2283	2225	2190	-1.5	-4.5	16.4
	Retinol equivalent	µg	913	906	898	897	-0.1	-1.7	11.7
Vitamin D	µg	3.20	3.16	3.03	3.07	+1.2	-4.1	10.8	
Vitamin E	mg	13.08	11.98	12.17	12.22	+0.4	-6.6	13.4	

Table 2.6 continues on next page

Table 2.6 Estimated UK average energy and nutrient intakes from all food and drink continued

		2006	2007	2008	2009	% change since 2008	% change since 2006	% from food eaten out in 2009
<i>as a percentage of food and drink energy excluding alcohol</i>								
Fat	%	38.5	38.3	38.5	38.5	+0.1	0.0	
Fatty acids								
Saturates	%	14.7	14.5	14.6	14.5	-0.3	-1.3	
Monounsaturates	%	14.2	14.2	14.3	14.5	+1.5	+2.4	
Polyunsaturates	%	7.0	7.1	7.1	6.9	-2.1	-1.2	
Carbohydrate	%	47.2	47.3	47.4	47.4	0.0	+0.3	
Non-milk extrinsic sugars	%	14.2	14.0	14.1	14.2	+0.8	+0.6	
Protein	%	14.3	14.3	14.1	14.1	-0.4	-1.4	
<i>as a percentage of weighted reference nutrient intake<sup>(f)</sup></i>								
Energy <sup>(e)</sup>	%	112	110	108	110	+1.4	-2.0	
Energy excluding alcohol <sup>(e)</sup>	%	108	107	107	106	-0.6	-1.9	
Protein	%	177	175	170	171	+0.7	-3.5	
Calcium	%	145	143	140	143	+1.6	-1.4	
Iron	%	119	116	114	115	+1.1	-2.8	
Zinc	%	121	120	116	117	+1.1	-3.6	
Magnesium	%	112	110	108	109	+0.8	-3.2	
Sodium <sup>(d)</sup>	%	197	190	186	189	+1.6	-4.1	
Potassium	%	104	103	101	101	+0.3	-3.3	
Thiamin	%	209	200	197	199	+1.2	-4.7	
Riboflavin	%	172	169	165	168	+1.8	-2.7	
Niacin equivalent	%	257	250	244	246	+0.9	-4.1	
Vitamin B <sub>6</sub>	%	203	207	201	200	-0.3	-1.5	
Vitamin B <sub>12</sub>	%	467	470	458	460	+0.5	-1.6	
Folate	%	162	163	158	159	+0.3	-2.2	
Vitamin C	%	207	206	197	205	+4.0	-1.1	
Vitamin A (Retinol equivalent)	%	147	145	144	144	0.0	-1.8	

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee Nutrition recommended that average salt intake for adults should not exceed 6 g/day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

Table 2.7 Household energy and nutrient intakes

		2006	2007	2008	2009	RSE indicator (g)	% change since 2008	% change since 2006
<b>Total energy and nutrient intakes <sup>(a)</sup></b>		<i>average intake per person per day</i>						
Energy	kcal	2074	2052	2028	2054	✓✓✓	1.3	-1.0
	MJ	8.7	8.6	8.5	8.6	✓✓✓	1.3	-1.0
Energy excluding alcohol	kcal	2023	2000	1980	2002	✓✓✓	1.1	-1.1
Total Protein	g	71.5	70.8	69.1	69.6	✓✓✓	0.6	-2.7
Vegetable Protein	g	27.9	27.8	27.3	27.3	✓✓✓	1.1	-2.2
Animal Protein	g	43.6	43.1	41.8	42.3	✓✓✓	0.0	-3.0
Fat	g	85	84	83	84	✓✓✓	1.2	-1.1
Fatty acids								
Saturates	g	33.4	32.6	32.3	32.5	✓✓✓	0.8	-2.7
Monounsaturates	g	30.8	30.6	30.5	31.4	✓✓✓	2.8	1.8
Polyunsaturates	g	15.2	15.2	15.1	14.9	✓✓✓	-1.4	-2.3
Cholesterol	mg	235	235	226	226	✓✓✓	0.0	-4.0
Carbohydrate <sup>(b)</sup>	g	259	256	254	257	✓✓✓	1.1	-0.8
Total sugars	g	121	119	117	119	✓✓✓	1.7	-1.6
Non-milk extrinsic sugars	g	77	76	76	77	✓✓✓	2.1	0.0
Starch	g	137	137	136	137	✓✓✓	0.7	0.0
Fibre <sup>(c)</sup>	g	13.8	13.4	13.3	13.5	✓✓✓	1.3	-1.9
Alcohol	g	7.3	7.4	6.8	7.4	✓✓✓	9.1	2.0
Calcium	mg	918	908	897	911	✓✓✓	1.5	-0.9
Iron	mg	10.9	10.7	10.6	10.7	✓✓✓	1.0	-2.5
Zinc	mg	8.5	8.5	8.2	8.3	✓✓✓	1.0	-2.8
Magnesium	mg	266	262	258	260	✓✓✓	0.7	-2.4
Sodium <sup>(d)</sup>	g	2.60	2.50	2.46	2.50	✓✓✓	1.7	-3.7
Potassium	g	2.93	2.90	2.86	2.86	✓✓✓	0.1	-2.5
Thiamin	mg	1.54	1.48	1.46	1.47	✓✓✓	0.9	-4.1
Riboflavin	mg	1.81	1.77	1.74	1.77	✓✓✓	1.7	-2.0
Niacin equivalent	mg	30.8	30.2	29.6	29.9	✓✓✓	0.8	-3.2
Vitamin B <sub>6</sub>	mg	2.1	2.2	2.1	2.1	✓✓✓	-0.7	0.2
Vitamin B <sub>12</sub>	µg	5.9	5.9	5.8	5.8	✓✓✓	0.3	-0.9
Folate	µg	261	264	259	259	✓✓✓	0.1	-0.6
Vitamin C	mg	70	70	67	70	✓✓✓	4.2	0.2
Vitamin A								
Retinol	µg	477	476	481	485	✓✓✓	0.8	1.6
β-carotene	µg	1901	1905	1879	1832	✓✓✓	-2.5	-3.6
Retinol equivalent	µg	797	796	795	792	✓✓✓	-0.4	-0.6
Vitamin D	µg	2.84	2.81	2.70	2.74	✓✓✓	1.2	-3.8
Vitamin E	mg	11.29	10.23	10.52	10.59	✓✓✓	0.6	-6.2

Table 2.7 continues on next page

Table 2.7 Household energy and nutrient intakes continued

		2006	2007	2008	2009	RSE indicator (g)	% change since 2008	% change since 2006
<i>as a percentage of food and drink energy excluding alcohol</i>								
Fat	%	37.9	37.7	37.9	37.9			0.0
Fatty acids:								
Saturates	%	14.9	14.7	14.7	14.6			-1.6
Monounsaturates	%	13.7	13.8	13.9	14.1			2.8
Polyunsaturates	%	6.8	6.8	6.8	6.7			-1.3
Carbohydrate	%	47.9	48.1	48.1	48.1			0.3
Non-milk extrinsic sugars	%	14.4	14.2	14.4	14.5			1.1
Protein	%	14.1	14.2	14.0	13.9			-1.6
<i>as a percentage of weighted reference nutrient intake (f)</i>								
Energy (e)	%	99	98	96	98			-1.0
Energy excluding alcohol (e)	%	96	95	96	98			1.1
Protein	%	156	154	151	152			-2.8
Calcium	%	133	132	130	132			-0.7
Iron	%	106	104	102	104			-2.2
Zinc	%	107	106	103	104			-2.9
Magnesium	%	100	99	97	98			-2.3
Sodium (d)	%	174	167	164	168			-3.6
Potassium	%	92	91	89	89			-2.5
Thiamin	%	183	175	173	175			-4.1
Riboflavin	%	158	155	152	155			-2.0
Niacin equivalent	%	221	216	212	214			-3.2
Vitamin B <sub>6</sub>	%	172	178	173	173			0.3
Vitamin B <sub>12</sub>	%	422	427	417	419			-0.8
Folate	%	138	140	137	137			-0.6
Vitamin C	%	182	183	175	182			0.1
Vitamin A (Retinol equivalent)	%	128	128	128	127			-0.7

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee Nutrition recommended that average salt intake for adults should not exceed 6 g/day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

(g) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.

Table 2.8 Estimated intakes from different types of household foods 2009

	Energy	Fat	Saturated fatty acids	Calcium	Iron	NMES	Sodium	Folate	Vitamin C	β-carotene	Vitamin A
	<i>average per person per day</i>										
	kcal	g	g	mg	mg	g	mg	µg	mg	µg	µg
Milk and cream <sup>(a)</sup>	179	7.8	4.9	348	0.2	3.1	135	19.6	4.2	43	96
Cheese	61	5.0	3.2	100	0.0	0.0	113	5.0	0.0	23	56
Carcase meat	58	3.9	1.6	2	0.4	0.0	19	2.9	0.0	0	1
Non-carcase meat and meat products	212	13.3	4.8	31	1.1	0.1	536	11.4	2.2	69	151
Fish	32	1.5	0.3	15	0.2	0.0	80	3.3	0.1	4	3
Eggs	18	1.3	0.4	7	0.2	0.0	17	5.9	0.0	0	23
Fats	175	19.2	5.9	4	0.0	0.2	86	12.7	0.0	83	150
Sugar and preserves	64	0.0	0.0	3	0.1	16.8	4	0.1	0.3	1	0
Fresh potatoes	44	0.1	0.0	3	0.2	0.0	5	19.9	3.5	0	0
Fresh green vegetables	5	0.1	0.0	9	0.2	0.0	2	14.8	2.6	74	12
Other fresh vegetables	17	0.2	0.0	15	0.3	0.0	9	18.5	5.4	1000	167
Processed vegetables	130	5.5	1.3	24	0.9	0.9	209	20.1	6.5	262	48
Fresh fruit	46	0.4	0.1	11	0.2	0.0	3	8.3	16.1	30	5
Processed fruit	50	2.1	0.4	10	0.3	5.7	15	10.1	15.7	10	2
Bread	216	2.5	0.6	134	1.8	0.1	442	28.3	0.0	1	5
Flour	29	0.1	0.0	8	0.2	0.0	0	1.3	0.0	0	0
Cakes, buns and pastries	77	3.3	1.3	17	0.4	5.1	67	2.5	0.2	4	14
Biscuits	114	5.2	2.6	28	0.5	5.7	80	2.7	0.0	3	1
Other cereal products <sup>(b)</sup>	239	4.7	1.6	76	2.4	4.5	236	42.5	0.6	46	22
Beverages	6	0.1	0.0	6	0.2	0.6	6	8.9	0.0	0	2
Other food <sup>(c)</sup>	81	4.4	1.3	23	0.4	5.9	398	13.8	0.8	106	18
Soft drinks	60	0.0	0.0	9	0.0	15.9	17	2.2	12.0	67	11
Confectionery	84	3.4	1.9	20	0.2	11.7	19	1.5	0.0	6	5
Alcoholic drinks	59	0.0	0.0	7	0.3	1.2	7	2.7	0.0	0	0
<b>Total household intake 2054</b>	<b>84</b>	<b>33</b>	<b>911</b>	<b>11</b>	<b>77</b>	<b>2503</b>	<b>259</b>	<b>70</b>	<b>1832</b>	<b>792</b>	

Table 2.8 continues on next page

Table 2.8 Estimated intakes from different types of household foods 2009 continued

	Energy	Fat	Saturated fatty acids	Calcium	Iron	NMES	Sodium	Folate	Vitamin C	$\beta$ -carotene	Vitamin A
<i>percentage of total intake per person per day from household purchases</i>											
	%	%	%	%	%	%	%	%	%	%	%
Milk and cream <sup>(a)</sup>	9	9	15	38	2	4	5	8	6	2	12
Cheese	3	6	10	11	0	0	4	2	0	1	7
Carcase meat	3	5	5	0	4	0	1	1	0	0	0
Non-carcase meat and meat products	10	16	15	3	10	0	21	4	3	4	19
Fish	2	2	1	2	2	0	3	1	0	0	0
Eggs	1	2	1	1	2	0	1	2	0	0	3
Fats	9	23	18	0	0	0	3	5	0	5	19
Sugar and preserves	3	0	0	0	1	22	0	0	0	0	0
Fresh potatoes	2	0	0	0	2	0	0	8	5	0	0
Fresh green vegetables	0	0	0	1	2	0	0	6	4	4	2
Other fresh vegetables	1	0	0	2	3	0	0	7	8	55	21
Processed vegetables	6	7	4	3	8	1	8	8	9	14	6
Fresh fruit	2	0	0	1	2	0	0	3	23	2	1
Processed fruit	2	2	1	1	2	7	1	4	22	1	0
Bread	11	3	2	15	17	0	18	11	0	0	1
Flour	1	0	0	1	2	0	0	1	0	0	0
Cakes, buns and pastries	4	4	4	2	3	7	3	1	0	0	2
Biscuits	6	6	8	3	5	7	3	1	0	0	0
Other cereal products <sup>(b)</sup>	12	6	5	8	22	6	9	16	1	2	3
Beverages	0	0	0	1	2	1	0	3	0	0	0
Other food <sup>(c)</sup>	4	5	4	3	4	8	16	5	1	6	2
Soft drinks	3	0	0	1	0	20	1	1	17	4	1
Confectionery	4	4	6	2	2	15	1	1	0	0	1
Alcoholic drinks	3	0	0	1	3	2	0	1	0	0	0

(a) Includes all whole and skimmed liquid and instant milks, yoghurt and fromage frais, milk desserts and cream.

(b) Includes oatmeal and oat products, breakfast cereals, canned milk puddings, other puddings such as sponge puddings and pies, rice, cereal-based invalid foods, slimming foods, infant foods, frozen cakes and pastries, pasta, pizza, cereal convenience foods such as cake, pudding and dessert mixes, custard powder, other cereals such as barley, couscous, corn and tapioca.

(c) Includes mineral or spring waters, baby foods, soups, other takeaway food brought home, meals on wheels, salad dressings and other spreads & dressings, pickles, sauces, takeaway sauces and mayonnaise, stock cubes and meat & yeast extracts, jelly squares or crystals, ice cream (all types), salt, artificial sweeteners, vinegar, spices and dried herbs, bisto, gravy granules, stuffing mix, baking powder, yeast, fruit, herbal and instant teas, and soya and novel protein foods.

Table 2.9 Eating out energy and nutrient intakes

		2006	2007	2008	2009	RSE indicator <sup>(g)</sup>	% change since 2008	% change since 2006
<b>Total energy and nutrient intakes <sup>(a)</sup></b>		<i>average intake per person per day</i>						
Energy	kcal	276	268	248	250	✓✓✓	+0.5	-9.6
	MJ	1.2	1.1	1.0	1.0	✓✓✓	+0.5	-9.6
Energy excluding alcohol	kcal	253	247	230	231		+0.2	-8.8
Total Protein	g	9.8	9.5	8.9	9.0	✓✓✓	+0.3	-8.2
Fat	g	12	12	11	11	✓✓✓	+0.5	-7.9
Fatty acids								
	Saturates g	3.8	3.6	3.4	3.5	✓✓✓	+0.3	-8.3
	Monounsaturates g	5.0	4.9	4.5	4.6	✓✓	+0.7	-7.7
	Polyunsaturates g	2.5	2.5	2.3	2.3	✓✓	+0.4	-7.9
Cholesterol	mg	39	38	36	36	✓✓	0.0	-7.0
Carbohydrate <sup>(b)</sup>	g	28	27	25	25	✓✓✓	-0.1	-10.0
	Total sugars g	11	10	10	10	✓✓✓	-1.1	-12.8
	Non-milk extrinsic sugars g	9	8	7	7	✓✓✓	-1.5	-13.8
	Starch g	17	17	16	16	✓✓	+0.5	-8.2
Fibre <sup>(c)</sup>	g	1.8	1.8	1.6	1.7	✓✓	+1.0	-8.6
Alcohol	g	3.3	3.0	2.6	2.7	✓✓	+4.1	-18.1
Calcium	mg	80	78	73	73	✓✓✓	0.0	-9.1
Iron	mg	1.3	1.3	1.2	1.2	✓✓✓	+0.6	-7.4
Zinc	mg	1.1	1.1	1.0	1.0	✓✓	+0.4	-8.6
Magnesium	mg	32	31	29	29	✓✓✓	+0.4	-10.6
Sodium <sup>(d)</sup>	g	0.35	0.35	0.32	0.32	✓✓✓	-0.6	-7.8
Potassium	g	0.40	0.39	0.36	0.37	✓✓	+1.6	-9.3
Thiamin	mg	0.22	0.21	0.20	0.20	✓✓	+1.4	-8.3
Riboflavin	mg	0.16	0.16	0.15	0.15	✓✓✓	-0.1	-10.8
Niacin equivalent	mg	4.9	4.7	4.4	4.4	✓✓✓	-0.3	-10.1
Vitamin B <sub>6</sub>	mg	0.4	0.4	0.3	0.3	✓✓	+1.0	-11.0
Vitamin B <sub>12</sub>	µg	0.6	0.6	0.6	0.6	✓✓	+1.2	-8.6
Folate	µg	45	44	40	40	✓✓	+0.7	-11.0
Vitamin C	mg	10	9	9	9	✓✓	+2.3	-9.6
Vitamin A								
	Retinol µg	50	47	45	45	✓✓	+0.1	-9.5
	β-carotene µg	394	377	346	359	✓✓	+3.7	-8.8
	Total (Retinol equivalent) µg	116	110	103	105	✓✓	+2.1	-9.1
Vitamin D	µg	0.35	0.35	0.33	0.33	✓✓✓	+1.2	-6.3
Vitamin E	mg	1.79	1.76	1.64	1.63	✓✓✓	-0.7	-9.0

Table 2.9 continues on next page



Table 2.9 Eating out energy and nutrient intakes continued

		2006	2007	2008	2009	RSE indicator <sup>(g)</sup>	% change since 2008	% change since 2006
<i>as a percentage of total food &amp; drink energy excluding alcohol</i>								
Fat	%	42.9	43.0	43.2	43.3			+1.0
Fatty acids								+0.0
	Saturates %	13.4	13.3	13.5	13.5			+0.6
	Monounsaturates %	17.7	17.8	17.8	17.9			+1.2
	Polyunsaturates %	8.9	9.0	8.9	9.0			+1.0
Carbohydrate	%	41.7	41.6	41.3	41.2			-1.3
	Non-milk extrinsic sugars %	12.6	12.0	12.1	11.9			-5.4
Protein	%	15.4	15.5	15.5	15.5			+0.7
<i>as a percentage of weighted reference nutrient intake<sup>(f)</sup></i>								
Energy <sup>(e)</sup>	%	13	13	12	12			-9.6
Energy excluding alcohol <sup>(e)</sup>	%	12	12	11	11			-8.8
Protein	%	21	21	19	20			-8.3
Calcium	%	12	11	11	11			-9.0
Iron	%	13	13	12	12			-7.1
Zinc	%	14	14	13	13			-8.7
Magnesium	%	12	12	11	11			-10.5
Sodium <sup>(d)</sup>	%	23	23	22	22			-7.7
Potassium	%	13	12	11	11			-9.3
Thiamin	%	26	25	23	24			-8.3
Riboflavin	%	14	14	13	13			-10.8
Niacin equivalent	%	35	34	32	32			-10.1
Vitamin B <sub>6</sub>	%	31	30	27	28			-11.0
Vitamin B <sub>12</sub>	%	45	43	41	41			-8.6
Folate	%	24	23	21	21			-11.0
Vitamin C	%	25	24	22	23			-9.7
Vitamin A (Retinol equivalent)	%	19	18	17	17			-9.2

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee Nutrition recommended that average salt intake for adults should not exceed 6 g/day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

(g) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.

Table 2.10 Estimated intakes from different types of food eaten out 2009

	Energy	Fat	Saturated fatty acids	Calcium	Iron	NMES	Sodium	Folate	Vitamin C	β-carotene	Vitamin A
	<i>average per person per day</i>										
	kcal	g	g	mg	mg	g	mg	µg	mg	µg	µg
Indian, Chinese and Thai meals or dishes	13	0.6	0.1	4	0.1	0.2	25.4	1.1	0.1	6.3	1.4
Meat and meat products	24	1.4	0.6	7	0.1	0.0	56.0	1.9	0.2	25.7	11.6
Fish and fish products	4	0.2	0.0	1	0.0	0.0	4.9	0.4	0.0	0.1	0.5
Cheese and egg dishes and pizza	7	0.4	0.1	4	0.0	0.0	10.6	2.1	0.1	4.5	4.6
Potatoes	16	0.7	0.1	1	0.1	0.0	2.9	4.4	1.4	0.4	0.5
Vegetables	3	0.1	0.0	2	0.0	0.0	8.3	1.5	0.3	42.2	7.3
Salads	2	0.1	0.0	1	0.0	0.0	2.5	0.7	0.4	17.6	3.3
Rice, pasta and noodles	3	0.1	0.0	0	0.0	0.0	1.1	0.1	0.0	0.3	0.1
Soups	1	0.0	0.0	0	0.0	0.0	5.5	0.2	0.0	0.2	0.0
Breakfast cereals	0	0.0	0.0	0	0.0	0.0	0.5	0.1	0.0	0.0	0.0
Fruit	1	0.0	0.0	0	0.0	0.0	0.0	0.1	0.2	0.7	0.1
Yoghurt	0	0.0	0.0	0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Bread	4	0.2	0.1	1	0.0	0.0	6.4	0.3	0.0	0.9	1.6
Sandwiches	20	1.0	0.3	11	0.1	0.0	42.5	2.2	0.2	12.4	6.4
Beverages	1	0.1	0.0	2	0.0	0.1	1.1	0.3	0.0	0.3	0.5
Soft drinks including milk	13	0.1	0.1	5	0.0	2.9	2.7	0.6	1.0	1.0	1.0
Alcoholic drinks	26	0.0	0.0	4	0.1	1.8	4.7	5.6	0.3	0.1	0.0
Confectionery	7	0.3	0.2	2	0.0	1.0	1.6	0.1	0.0	0.4	0.2
Ice cream, desserts and cakes	12	0.7	0.3	3	0.0	0.8	9.2	0.4	0.1	3.6	4.8
Biscuits	2	0.1	0.0	1	0.0	0.1	0.8	0.1	0.0	0.1	0.0
Crisps, nuts and snacks	5	0.3	0.1	0	0.0	0.1	7.7	0.4	0.0	0.4	0.1
<b>All Food &amp; Drink Eaten Out <sup>(a)</sup></b>	<b>164</b>	<b>6.4</b>	<b>2.1</b>	<b>50</b>	<b>0.7</b>	<b>7.1</b>	<b>195</b>	<b>23</b>	<b>4.3</b>	<b>117</b>	<b>44</b>

(a) The category 'Other food products' has been removed from this table as it predominantly comprises of unspecified meals which is an imputed category, therefore the percentages do not total 100%. See Method note number 4 for details of how 'other food products' are calculated.

Table 2.10 continues on next page

Table 2.10 Estimated intakes from different types of food eaten out 2009 continued

	Energy	Fat	Saturated fatty acids	Calcium	Iron	NMES	Sodium	Folate	Vitamin C	β-carotene	Vitamin A
	%	%	%	%	%	%	%	%	%	%	%
Indian, Chinese and Thai meals or dishes	5	6	3	5	11	2	8	3	1	2	1
Meat and meat products	10	13	16	9	11	0	17	5	2	7	11
Fish and fish products	2	2	1	2	1	0	2	1	0	0	0
Cheese and egg dishes and pizza	3	4	4	6	4	0	3	5	1	1	4
Potatoes	6	6	3	1	5	0	1	11	16	0	0
Vegetables	1	1	1	2	4	1	3	4	3	12	7
Salads	1	1	1	1	1	0	1	2	5	5	3
Rice, pasta and noodles	1	0	0	0	1	0	0	0	0	0	0
Soups	0	0	0	0	0	0	2	1	0	0	0
Breakfast cereals	0	0	0	0	0	0	0	0	0	0	0
Fruit	0	0	0	0	0	0	0	0	2	0	0
Yoghurt	0	0	0	1	0	0	0	0	0	0	0
Bread	2	2	3	2	1	0	2	1	0	0	2
Sandwiches	8	9	8	15	9	0	13	5	2	3	6
Beverages	1	1	1	3	1	2	0	1	0	0	0
Soft drinks including milk	5	1	2	8	1	40	1	2	12	0	1
Alcoholic drinks	11	0	0	6	5	24	1	14	3	0	0
Confectionery	3	2	5	3	1	13	0	0	0	0	0
Ice cream, desserts and cakes	5	6	9	4	3	10	3	1	1	1	5
Biscuits	1	1	1	1	1	2	0	0	0	0	0
Crisps, nuts and snacks	2	3	4	0	1	1	2	1	1	0	0

(a) The category 'Other food products' has been removed from this table as it predominantly comprises of unspecified meals which is an imputed category, therefore the percentages do not total 100%. See Method note number 4 for details of how 'other food products' are calculated.



# Chapter 3 Geographic comparisons

## 3.1 Overview

This chapter presents estimates for the four countries of the United Kingdom and the nine Government Office Regions of England. For the first time rural urban analysis is included for England, Wales and Scotland.

## 3.2 Headlines

Households in Scotland spent the most on household purchases and English ones the least. For eating out Northern Ireland was the highest and Wales the lowest. People living in rural areas in GB bought more alcoholic drinks than those in urban areas.

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3.4 UK country comparisons

Differences in relative prices of food and drink across the United Kingdom and variations in average household income should be considered when interpreting the data presented in this chapter and in the datasets.

The analysis uses regions as defined in the Nomenclature of Territorial Units for Statistics (NUTS) which is an internationally agreed standard developed by the European Union. The level 1 regions of the UK are the nine regions of England, plus Wales, Scotland and Northern Ireland, making 12 NUTS 1 regions in all. For more information on NUTS codes see: [www.statistics.gov.uk/geography/nuts.asp](http://www.statistics.gov.uk/geography/nuts.asp)

Chapter 4 includes region as one of the demographic variables analysed against purchases of sodium, saturated fatty acids, non-milk extrinsic sugars, fruit and vegetables.

3.5 Household purchases: UK countries

Wales features as highest ranked country 8 times out of 16 food groups:

Milk and cream, cheese, other meat and meat products, fats and oils, sugar and preserves, vegetables excluding potatoes, beverages and alcoholic drinks.

Northern Ireland is the lowest 8 times out of 16 food groups:

Cheese, fish, eggs, sugar and preserves, vegetables excluding potatoes, fruit, beverages and alcoholic drinks.

### 3.6 Nutritional intakes: UK countries

**Table 3.3:** Purchases of selected foods by UK country 3 year average, with highest and lowest, shows that there are variations in the average amount of different foods purchased in the four UK countries. By contrast there is little variation in the nutrient intakes derived from these purchases as outlined in Table 3.4 (Energy and nutrient intakes by UK country with ratio lowest to highest 3 year average), demonstrating that there are different ways to achieve the same dietary outcomes.

Scottish households have the highest intake of non-milk extrinsic sugars (NMES) at 14.6% of food energy per day, compared to the recommended maximum level of 11% (see Chapter 2 for description of Government guidelines). Northern Ireland and England were the lowest at 14.1% of food energy per day.

For polyunsaturates there is very little difference in intakes in terms of grams per person per day, ranging from 17.3 to 17.6 grams. As a percentage of food energy from polyunsaturates, England had the highest level at 7.1% food energy per day and the other three countries were equal at 6.8% of food energy per day.

### 3.7 Spending: UK countries

Spending on all food and drink was highest in Northern Ireland at £39.57 per person per week compared to people in Wales who spent the least at £36.07. The same ratio is seen for eating out purchases with people in Northern Ireland spending the most and those in Wales spending the least. For household purchases Scotland was the highest at £27.26 and England the lowest at £25.57.

Overall alcohol spending, that is household and eating out combined, was highest in Scotland at £6.24 a week per person. Northern Ireland had the highest level of spending on alcoholic drinks consumed outside the house at £3.41 per person per week and the lowest spending on household supplies at £2.42.

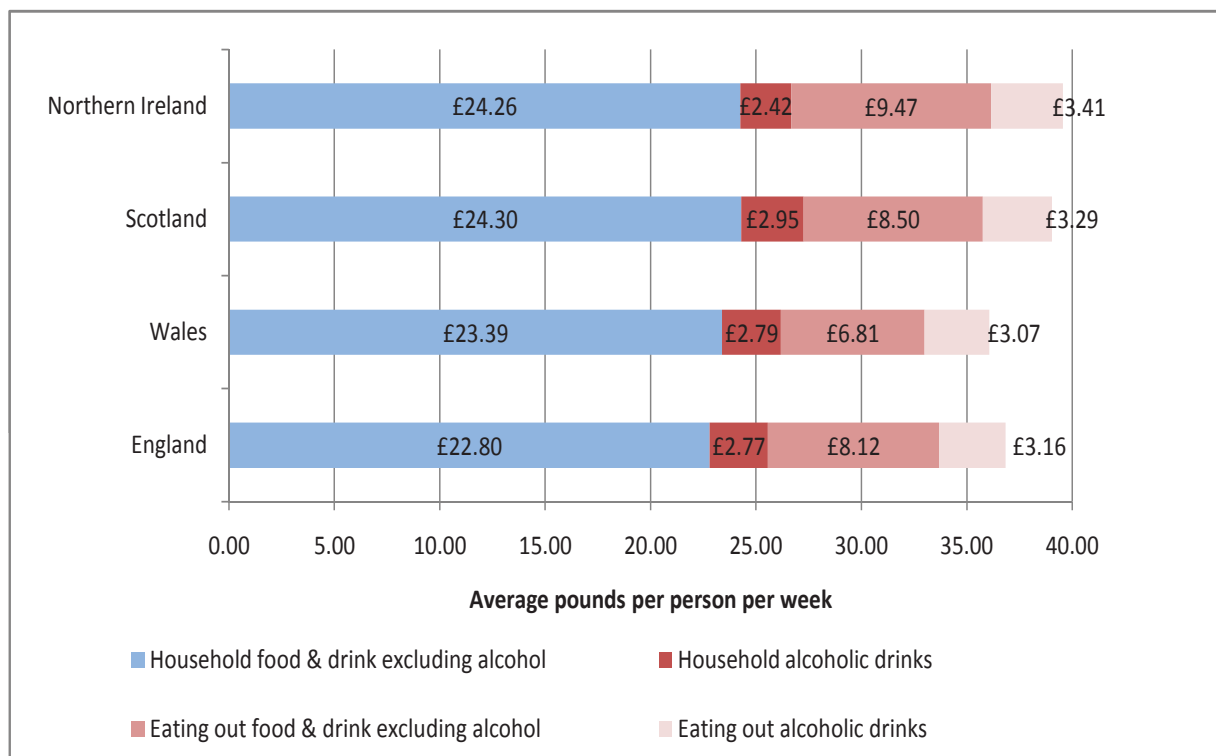
### 3.8 Eating out: UK countries

Spending on eating out food (not including alcoholic drinks) was lowest in Wales at £6.81 per week and highest in Northern Ireland at £9.47. Consequently Wales features as the country with the lowest purchases for many food categories in Table 3.3: Purchases of selected foods by UK country 3 year average, with highest and lowest. For example, purchases of 'Indian, Chinese and Thai meals' were lowest in Wales and highest in England. Purchases of sandwiches were highest in Scotland and lowest in Wales. The overall trend is reversed for beverages bought outside the household (which includes tea and coffee) with Northern Ireland being the lowest at 99 grams and Scotland the highest at 135 grams.

Table 3.1: Spending by UK countries – 3 year average 2007, 2008, 2009

	England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample	13678	816	1545	1772			
Average age of household reference person	53	54	52	51			
Average number of adults per household	1.9	1.9	1.8	2.0			
Average number of children per household	0.5	0.4	0.4	0.6			
Average gross weekly household income (£)	689	587	651	603			
<b>Household expenditure</b>	<i>pounds per person per week</i>						
Household food & drink excluding alcohol	22.80	23.39	24.30	24.26	England	Scotland	1.1
Household alcoholic drinks	2.77	2.79	2.95	2.42	NI	Scotland	1.2
All food & drink	25.57	26.19	27.26	26.68	England	Scotland	1.1
<b>Eating out expenditure</b>							
Eating out food & drink excluding alcohol	8.12	6.81	8.50	9.47	Wales	NI	1.4
Eating out alcoholic drinks	3.16	3.07	3.29	3.41	Wales	NI	1.1
All food & drink	11.28	9.88	11.79	12.89	Wales	NI	1.3
<b>Total expenditure</b>							
All food & drink excluding alcohol	30.92	30.20	32.80	33.73	Wales	NI	1.1
Alcoholic drinks	5.93	5.86	6.24	5.83	NI	Scotland	1.1
All food & drink	36.85	36.07	39.05	39.57	Wales	NI	1.1

Figure 3.1: Spending on food and alcoholic drinks by UK country, 3 year average





### 3.9 England regional comparisons

In 2009 the population of England was 52 million or 84 percent of the UK, therefore the English regions merit examination in their own right. A map of the United Kingdom split by Government Office Regions (NUTS 1) is available at:

[www.statistics.gov.uk/geography/maps.asp](http://www.statistics.gov.uk/geography/maps.asp)

Detailed population statistics can be found at:

[www.statistics.gov.uk/statbase/Product.asp?vlnk=15106](http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15106)

### 3.10 Household purchases: England regions

Vegetable purchases (excluding fresh and processed potatoes) were highest in the South West at 1259 grams per person per week and lowest in the North West at 997 grams per person per week. Chapter 4 section 4.10 contains an analysis of vegetable purchases by region in 2009 which controls for baseline characteristics other than region.

Fruit purchases were highest in London (1383 grams per person per week) and lowest in the North East (966 grams per person per week). Analysis in Chapter 4 (page 77) concludes that in 2009 there was little evidence of regional differences in fruit purchases once other demographic characteristics are controlled for.

### 3.11 Alcohol intakes: England regions

Household purchases of alcoholic drinks were 1.7 times higher in the North West than London, whilst purchases for eating out were highest in the North East and lowest in London. In terms of spending on drinks bought outside the home, London was ranked second highest in the country at £3.39 (for the lowest quantity 387 ml) compared to the highest North West at £3.45 (for 573 ml). The datasets on the Defra website by 'Countries & Regions' provide a breakdown of the amount of different types of alcoholic drinks bought by region. London has the lowest 3 year average alcohol intake at 7.7 grams per person per day, and the North West the highest at 11.7 grams per person per day. See Table 3.7: Energy and nutrient intakes by English region – 3 year average

### 3.12 Nutritional intakes: England regions

Given that London is the lowest for purchases of food for household supplies and eating out (Table 3.7: Energy and nutrient intakes by English region – 3 year average), it follows that London is often the lowest for nutritional intakes. The South West is most frequently ranked the highest. East Midlands and the East of England do not feature as the highest or lowest for any nutrient.

South West has the highest dietary intake of sodium (excluding table salt as it is not included in the calculation – see Chapter 2).

London has the lowest percentage of energy intake from saturates but the highest from monounsaturates and polyunsaturates.

Total energy intake is highest in the South West, closely followed by the East Midlands, and lowest in London.

### 3.13 Proportion of spending on eating out: England regions

Eating out expenditure as a percentage of overall food and drink spending was highest in London at 35% and lowest in the West Midlands at 28%. In England as a whole, people spent 31% of all the money they spent on food and drink on eating out purchases. The percentage of spending on alcoholic drinks outside the household is highest in London at

59% and lowest in the South East at 50%.

**Table 3.2: Percentage of food and drink spending on eating out: England regions**

	Food & drink excluding alcohol		Alcoholic drinks		All food & drink including alcohol	
	% of total spent eating out	Rank (1 highest)	% of total spent eating out	Rank (1 highest)	% of total spent eating out	Rank (1 highest)
England	26%		53%		31%	
North East	24%	8	56%	2	30%	5
North West	26%	5	53%	5	31%	3
Yorkshire and The Humber	26%	3	55%	3	31%	2
East Midlands	25%	6	54%	4	30%	7
West Midlands	24%	9	52%	6	28%	9
East	26%	4	50%	8	30%	6
London	31%	1	59%	1	35%	1
South East	27%	2	50%	9	30%	4
South West	24%	7	52%	7	29%	8

### 3.14 Eating out: England regions

The biggest difference in eating out purchases in English regions is in the 'Indian, Chinese and Thai meals' category with people living in London purchasing 57 grams per week and those in the South West purchasing less than half this amount at 21 grams per week, on average. In contrast, there is very little difference in purchasing patterns of meat and meat products. East of England at 74 grams is the lowest and, at 6 grams per person per week more, North West is the highest at 80 grams per person per week.

### 3.15 Rural Urban comparisons for England, Scotland and Wales

Using the information on where the surveyed households are located it is possible to define each household as rural or urban, for England, Scotland and Wales. A Northern Ireland rural urban analysis is not presented. The rural urban definition for England and Wales is described in detail on the ONS website [www.ons.gov.uk/about-statistics/geography/products/area-classifications/rural-urban-definition-and-la-classification/index.html](http://www.ons.gov.uk/about-statistics/geography/products/area-classifications/rural-urban-definition-and-la-classification/index.html). The way rural and urban areas in Scotland are defined is different, reflecting the different geography of the country. Details of the Scottish Rural Urban Classification are at [www.scotland.gov.uk/Publications/2004/06/19498/38784](http://www.scotland.gov.uk/Publications/2004/06/19498/38784). In Scotland, Large Urban Areas and Other Urban Areas are defined as urban and all the other categories of the definition are defined as rural. In England and Wales, Urban Sparse and Urban Less Sparse (with population over 10,000 people) are defined as urban and all other types of area are defined as rural.

One fifth of the household population of England lives in rural areas, two fifths of the Wales population and a quarter of the Scottish populations. Average weekly incomes are included in the tables to aid comparisons and are higher in rural areas than urban areas in all three countries presented.

### 3.16 Household purchases: Rural Urban comparison

The full datasets on the website show the reliability of the estimates by use of ticks

and crosses as described in Annex B. Households in rural areas of Wales have the highest amount of purchases in most categories and Scottish urban the lowest in most categories. The largest proportional difference is in the carcass meat category with Scottish urban households buying on average 173 grams per person per week and Welsh rural households buying over 100 grams more at 277 grams per person per week. See [Table 3.8](#) Purchases of selected foods by Rural Urban – 3 year average.

### 3.17 Eating out: Rural Urban comparison

Welsh rural regions have the lowest number of incidences for eating out in the most food categories, including 'Indian, Chinese and Thai meals', 'meat and meat products', 'fish and fish products', potatoes and beverages. It follows that spending on eating out is lowest in rural Welsh households at £6.45 per person per week on food excluding alcohol, compared to the highest – England rural at £8.89. Households in English urban areas purchase nearly twice as much Indian, Chinese and Thai meals as Welsh rural households. See [Table 3.8](#) Purchases of selected foods by Rural Urban – 3 year average.

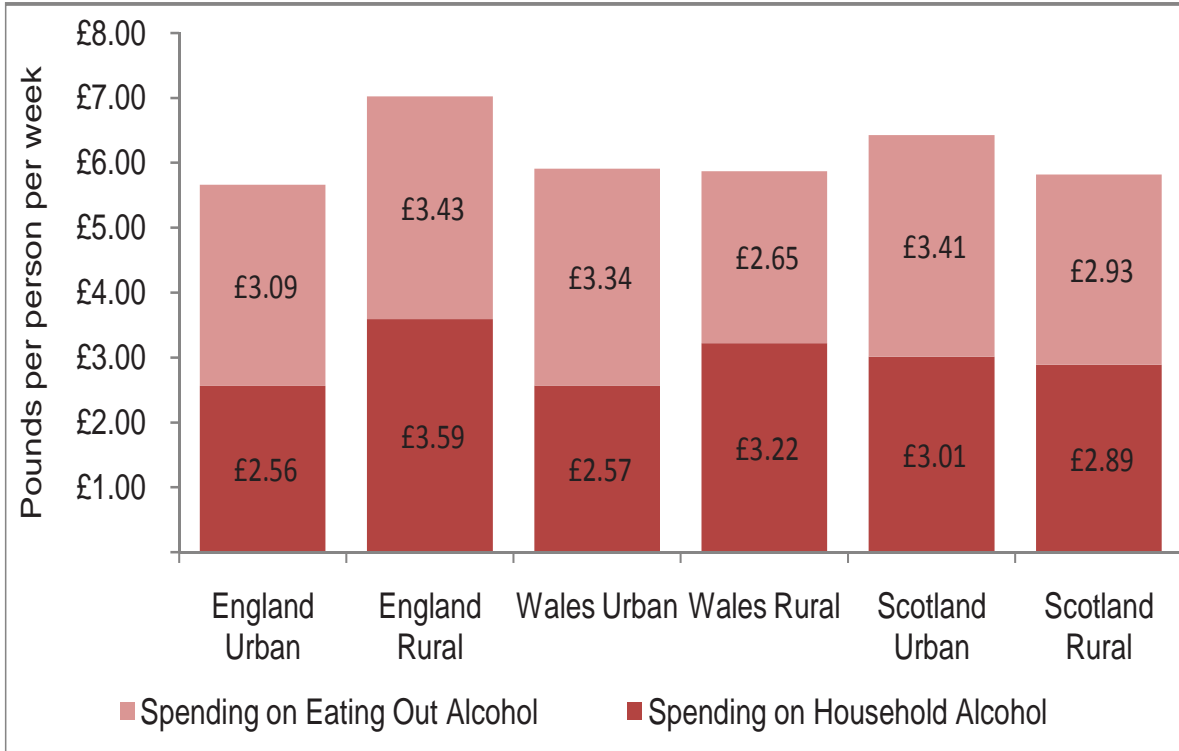
### 3.18 Nutritional intakes: Rural Urban comparison

Comparing percentage contributions of macronutrients to energy intake excluding alcohol there are small differences across rural and urban areas. The percentage of energy from fat is lowest in Scottish urban areas at 38.1% and highest in English rural areas at 38.8%. The biggest proportional differences are in Vitamin A intakes, with Welsh rural regions being the highest at 684 µg retinol per person per day compared to an urban Great British average of 513 µg. See [Table 3.9](#): Energy and nutrient intakes by Rural Urban – 3 year average.

### 3.19 Spending: Rural Urban comparison

In general, households in rural areas spend more than households in urban areas on household food and drink. English urban areas have the lowest level of average spending per person per week on household food and drink over the 3 year period of £25.00. Scottish rural areas have the highest at £28.15. See [table 3.8](#). [Figure 3.2](#) shows the average amount spent on alcoholic drinks for household supplies and eating out by rural and urban area. Total spending on alcoholic drinks is highest in English rural areas at £7.02 per person per week, and lowest in English urban areas at £5.66 per person per week. See also [Table 3.8](#) Purchases of selected foods by Rural Urban – 3 year average.

Figure 3.2: Average spending on alcoholic drinks eaten out and household purchases rural and urban areas



### 3.20 Chapter 3 Reference tables

To improve reliability, the figures shown in the tables are all averages of the estimates for the 3 years from January 2007 to December 2009. The total sample size for this time period is given at the top of each column as an indication of the reliability of the figures.

The purchases and expenditure tables contain data from both household food and drink and eating out. The energy and nutrient intake tables have the combined intakes from food brought into the home and eaten out including alcoholic drinks.

More detailed breakdown of the data in respect of the countries and regions are available at:

[www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm)

**Table 3.3: Purchases of selected foods by UK country 3 year average, with ratio lowest to highest.**

Provides details of 3 year averages for household foods and eating out purchases for the four UK countries.

**Table 3.4: Energy and nutrient intakes by UK country 3 year average with ratio lowest to highest.**

No allowance is made for food purchased and not eaten by any member of the household in this table, see Chapter 2 for details.

**Table 3.5: Highest and lowest English regions for selected foods – 3 year average**

**Table 3.6: Selected foods by English region – 3 year average**

**Table 3.7: Energy and nutrient intakes by English region – 3 year average.**

No allowance is made for food purchased and not eaten by any member of the household in this table, see Chapter 2 for details.

**Table 3.8: Purchases of selected foods by Rural Urban – 3 year average.**

Rural and urban analysis is presented for England, Wales and Scotland as well as a combined Great Britain(GB) value. Northern Ireland is not included.

**Table 3.9: Energy and nutrient intakes by Rural Urban – 3 year average.**

No allowance is made for food purchased and not eaten by any member of the household in this table, see Chapter 2 for details.

Table 3.3: Purchases of selected foods by UK country 3 year average, with ratio lowest to highest

	England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample	13678	816	1545	1772			
Average age of HRP	53	54	52	51			
Average number of adults per household	2	2	2	2			
Average number of children per household	0	0	0	1			
Average gross weekly household income (£)	689	587	651	603			
<b>Household purchases</b>	<i>grams per person per week unless otherwise stated</i>						
Milk and cream (ml)	1962	2161	2028	2095	England	Wales	1.1
Cheese	116	121	115	89	NI	Wales	1.4
Carcase meat	220	239	194	248	Scotland	NI	1.3
Other meat and meat products	778	892	832	839	England	Wales	1.1
Fish	164	159	150	116	NI	England	1.4
Eggs (no.)	2	2	2	2	NI	Scotland	1.1
Fats and oils	183	188	174	177	Scotland	Wales	1.1
Sugar and preserves	126	132	124	106	NI	Wales	1.3
Potatoes	760	840	755	1081	Scotland	NI	1.4
Vegetables excluding potatoes	1141	1212	942	873	NI	Wales	1.4
Fruit	1213	1211	1205	1061	NI	England	1.1
Total cereals	1571	1640	1655	1725	England	NI	1.1
Beverages	56	59	51	43	NI	Wales	1.4
Soft drinks <sup>(a)</sup> (ml)	1629	1891	2024	1868	England	Scotland	1.2
Alcoholic drinks (ml)	743	783	738	620	NI	Wales	1.3
Confectionery	128	146	152	141	England	Scotland	1.2
<b>Eating out purchases</b>	<i>grams per person per week unless otherwise stated</i>						
Indian, Chinese and Thai meals	32	21	28	31	Wales	England	1.5
Meat and meat products	77	73	74	100	Wales	NI	1.4
Fish and fish products	14	9	14	10	Wales	Scotland	1.5
Cheese and egg dishes and pizza	23	20	18	22	Scotland	England	1.3
Potatoes	66	65	63	82	Scotland	NI	1.3
Vegetables excluding potatoes	30	30	21	24	Scotland	Wales	1.5
Sandwiches	71	67	87	71	Wales	Scotland	1.3
Ice creams, desserts and cakes	26	21	30	32	Wales	NI	1.5
Beverages (ml)	127	107	135	99	NI	Scotland	1.4
Soft drinks including milk (ml)	287	276	360	417	Wales	NI	1.5
Alcoholic drinks (ml)	469	511	405	430	Scotland	Wales	1.3
Confectionery	12	12	15	19	England	NI	1.6

(a) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Table 3.4: Energy and nutrient intakes by UK country 3 year average with ratio lowest to highest

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest	
Number of households in sample		13678	816	1545	1772				
Average age of HRP		53	54	52	51				
Average number of adults per household		1.9	1.9	1.8	2.0				
Average number of children per household		0.5	0.4	0.4	0.6				
Average gross weekly household income (£)		689	587	651	603				
<b>Total energy &amp; nutrient intakes <sup>(a)</sup></b>						<i>intake per person per day</i>			
Energy	kcal	2285	2388	2375	2374	England	Wales	1.05	
	MJ	9.6	10.0	10.0	10.0	England	Wales	1.05	
Energy intake excluding alcohol	kcal	2215	2313	2301	2313	England	Wales	1.04	
Total Protein	g	78.5	82.8	80.4	82.0	England	Wales	1.05	
Fat	g	95	99	98	97	England	Wales	1.05	
Fatty acids:									
	Saturates	g	35.7	38.0	37.8	37.1	England	Wales	1.06
	Monounsaturates	g	35.3	36.7	36.4	36.3	England	Wales	1.04
	Polyunsaturates	g	17.4	17.6	17.5	17.3	NI	Wales	1.01
Cholesterol	mg	265	277	268	269	England	Wales	1.05	
Carbohydrate <sup>(b)</sup>	g	279	291	292	296	England	NI	1.06	
	Total sugars	g	127	137	134	131	England	Wales	1.07
	Non-milk extrinsic sugars	g	83	89	90	87	England	Scotland	1.08
	Starch	g	152	154	157	165	England	NI	1.08
Fibre <sup>(c)</sup>	g	15.1	15.7	15.0	15.3	Scotland	Wales	1.05	
Alcohol	g	10.0	10.6	10.5	8.8	NI	Wales	1.22	
Calcium	mg	971	1040	1014	1014	England	Wales	1.07	
Iron	mg	11.8	12.4	12.1	12.2	England	Wales	1.05	
Zinc	mg	9.3	9.8	9.5	9.7	England	Wales	1.05	
Magnesium	mg	288	301	295	289	England	Wales	1.04	
Sodium <sup>(d)</sup>	g	2.79	2.95	3.00	2.98	England	Scotland	1.08	
Potassium	g	3.23	3.39	3.25	3.31	England	Wales	1.05	
Thiamin	mg	1.66	1.76	1.69	1.78	England	NI	1.07	
Riboflavin	mg	1.90	2.05	1.93	1.95	England	Wales	1.08	
Niacin equivalent	mg	34.2	36.1	34.9	35.6	England	Wales	1.06	
Vitamin B <sub>6</sub>	mg	2.5	2.7	2.5	2.7	England	NI	1.09	
Vitamin B <sub>12</sub>	µg	6.4	6.7	6.4	6.2	NI	Wales	1.08	
Folate	µg	302	318	294	303	Scotland	Wales	1.08	
Vitamin C	mg	78	80	79	76	NI	Wales	1.05	
Vitamin A:									
	Retinol	µg	526	578	519	462	NI	Wales	1.25
	β-carotene	µg	2243	2401	2084	2081	NI	Wales	1.15
	Retinol equivalent	µg	902	979	869	813	NI	Wales	1.20
Vitamin D	µg	3.08	3.41	2.97	3.06	Scotland	Wales	1.15	
Vitamin E	mg	12.11	12.22	12.16	12.17	England	Wales	1.01	

Table 3.4 continues on next page

Table 3.4: Energy and nutrient intakes by UK country 3 year average with ratio lowest to highest – continued

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
<i>Percentage contributions of macronutrients to energy intake excluding alcohol</i>								
Fat	%	38.4	38.5	38.3	37.8	NI	Wales	1.02
Fatty acids:								
Saturates	%	14.5	14.8	14.8	14.4	NI	Scotland	1.02
Monounsaturates	%	14.3	14.3	14.2	14.1	NI	England	1.02
Polyunsaturates	%	7.1	6.8	6.8	6.8	NI	England	1.05
Carbohydrate	%	47.3	47.2	47.6	47.9	Wales	NI	1.02
Non-milk extrinsic sugars	%	14.1	14.5	14.6	14.1	England	Scotland	1.04
Protein	%	14.2	14.3	14.0	14.2	Scotland	Wales	1.02
<i>As a percentage of weighted reference nutrient intake <sup>(f)</sup></i>								
Energy <sup>(e)</sup>	%	109	113	113	113	England	Wales	1.04
Energy excluding alcohol <sup>(e)</sup>	%	105	110	110	110	England	NI	1.04
Protein	%	171	179	177	181	England	NI	1.06
Calcium	%	141	151	147	147	England	Wales	1.07
Iron	%	115	121	115	116	England	Wales	1.05
Zinc	%	117	123	119	122	England	Wales	1.05
Magnesium	%	109	113	112	110	England	Wales	1.04
Sodium <sup>(d)</sup>	%	186	196	202	201	England	Scotland	1.08
Potassium	%	101	105	103	105	England	Wales	1.04
Thiamin	%	197	208	202	212	England	NI	1.07
Riboflavin	%	166	178	170	172	England	Wales	1.07
Niacin equivalent	%	245	259	250	256	England	Wales	1.05
Vitamin B <sub>6</sub>	%	201	215	205	220	England	NI	1.09
Vitamin B <sub>12</sub>	%	462	480	468	451	NI	Wales	1.06
Folate	%	160	167	157	162	Scotland	Wales	1.07
Vitamin C	%	203	207	206	199	NI	Wales	1.04
Vitamin A (retinol equivalent)	%	145	157	140	131	NI	Wales	1.19

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee on Nutrition recommended that average salt intake for adults should not exceed 6 grams per day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.



Table 3.5: Highest and lowest English regions for selected foods – 3 year average

	Lowest region	Lowest value		Highest region	Highest value	Ratio of lowest to highest
<b>Household purchases</b> <i>grams per person per week unless otherwise stated</i>						
Milk and cream	London	1707 (ml)		East Midlands	2167 (ml)	1.3
Cheese	London	97		South West	138	1.4
Carcase meat	East Midlands	190		West Midlands	261	1.4
Other meat and meat products	London	659		North West	834	1.3
Fish	North East	160		London	179	1.1
Eggs	West Midlands	1 (no.)		South West	2(no.)	1.2
Fats and oils	North East	164		London	201	1.2
Sugar and preserves	London	109		West Midlands	148	1.3
Potatoes	London	572		West Midlands	866	1.5
Vegetables excluding potatoes	North West	997		South West	1259	1.3
Fruit	North East	966		London	1383	1.4
Total cereals	London	1490		South West	1635	1.1
Beverages	London	45		South West	61	1.3
Soft drinks	London	1286 (ml)		East Midlands	1757 (ml)	1.4
Alcoholic drinks	London	519 (ml)		North West	872 (ml)	1.7
Confectionery	London	95		East Midlands	144	1.5
<b>Eating out purchases</b> <i>grams per person per week unless otherwise stated</i>						
Indian, Chinese and Thai meals	South West	21		London	57	2.6
Meat and meat products	East	74		North West	80	1.1
Fish and fish products	North East			Yorkshire & the Humber	18	1.6
Cheese and egg dishes and pizza	Yorkshire & the Humber	21		North East	25	1.2
Potatoes	South East	62		East Midlands	73	1.2
Vegetables excluding potatoes	Yorkshire & the Humber	26		East Midlands	34	1.3
Sandwiches	West Midlands	60		Yorkshire & the Humber	84	1.4
Ice creams, desserts and cakes	West Midlands	21		South West	31	1.5
Beverages	West Midlands	106 (ml)		North East	145 (ml)	1.4
Soft drinks including milk	South West	240 (ml)		London	318 (ml)	1.3
Alcoholic drinks	London	387 (ml)		North East	637 (ml)	1.6
Confectionery	London	11		North East	13	1.2
<b>Household expenditure</b> <i>Pence per person per week</i>						
Total all food & drink excluding alcohol	North East	2095		South East	2472	1.2
Total alcoholic drinks	London	239		South East	308	1.3
Total all food & drink	North East	2356		South East	2780	1.2
<b>Eating out expenditure</b> <i>Pence per person per week</i>						
Total all food & drink excluding alcohol	North East	669		London	1012	1.5
Total alcoholic drinks	West Midlands	290		North West	345	1.2
Total all food & drink	West Midlands	982		London	1352	1.4

Table 3.6: Selected foods by English region – 3 year average

	England	North East	North West	Yorkshire and The Humber	East Midlands
Number of households in sample	13678	729	1778	1500	1256
Average age of HRP	53	53	53	52	53
Average number of adults per household	1.9	1.9	1.9	1.8	1.9
Average number of children per household	0.5	0.4	0.5	0.5	0.5
Average gross weekly household income (£)	689	565	604	572	625
<b>Household purchases</b>	<i>grams per person per week unless otherwise stated</i>				
Milk and cream (ml)	1962	1991	2001	2005	2167
Cheese	116	100	109	107	123
Carcase meat	220	227	213	199	190
Other meat and meat products	778	822	834	803	772
Fish	164	160	160	160	162
Eggs (no.)	2	2	2	2	2
Fats and oils	183	164	172	171	190
Sugar and preserves	126	118	117	123	134
Potatoes	760	795	764	790	817
Vegetables excluding potatoes	1141	1027	997	1072	1193
Fruit	1213	966	1060	1068	1210
Total cereals	1571	1618	1548	1544	1591
Beverages	56	55	55	54	61
Soft drinks <sup>(a)</sup> (ml)	1629	1755	1648	1620	1757
Alcoholic drinks (ml)	743	857	872	797	750
Confectionery	128	135	134	131	144
<b>Eating out purchases</b>	<i>grams per person per week unless otherwise stated</i>				
Indian, Chinese and Thai meals	32	22	26	31	28
Meat and meat products	77	77	80	74	78
Fish and fish products	14	11	12	18	14
Cheese and egg dishes and pizza	23	25	23	21	22
Potatoes	66	71	67	68	73
Vegetables excluding potatoes	30	31	28	26	34
Sandwiches	71	75	69	84	68
Ice creams, desserts and cakes	26	26	22	24	27
Beverages (ml)	127	145	110	127	139
Soft drinks including milk (ml)	287	309	313	289	290
Alcoholic drinks (ml)	469	637	573	533	500
Confectionery	12	13	13	12	11
<b>Household expenditure</b>	<i>pence per person per week</i>				
Total all food & drink excluding alcohol	2280	2095	2174	2138	2255
Total alcoholic drinks	277	261	307	258	260
Total all food & drink	2557	2356	2481	2396	2515
<b>Eating out expenditure</b>	<i>pence per person per week</i>				
Total all food & drink excluding alcohol	812	669	750	770	750
Total alcoholic drinks	316	337	345	318	304
Total all food & drink	1128	1005	1095	1089	1054

(a) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Table 3.6: Selected foods by English region – 3 year average - continued

	West Midlands	East	London	South East	South West
Number of households in sample	1498	1582	1468	2347	1520
Average age of HRP	53	53	51	53	55
Average number of adults per household	2.0	1.9	1.9	1.9	1.9
Average number of children per household	0.5	0.5	0.5	0.5	0.4
Average gross weekly household income (£)	635	734	887	814	636
<b>Household purchases</b>	<i>grams per person per week unless otherwise stated</i>				
Milk and cream (ml)	1951	1944	1707	1918	2111
Cheese	110	123	97	132	138
Carcase meat	261	224	201	230	235
Other meat and meat products	811	781	659	788	778
Fish	161	164	179	162	163
Eggs (no.)	1	2	2	2	2
Fats and oils	194	171	201	179	190
Sugar and preserves	148	128	109	123	143
Potatoes	866	733	572	768	827
Vegetables excluding potatoes	1115	1159	1196	1210	1259
Fruit	1096	1277	1383	1323	1345
Total cereals	1615	1577	1490	1573	1635
Beverages	58	57	45	58	61
Soft drinks <sup>(a)</sup> (ml)	1698	1727	1286	1712	1632
Alcoholic drinks (ml)	732	764	519	743	746
Confectionery	139	132	95	129	130
<b>Eating out purchases</b>	<i>grams per person per week unless otherwise stated</i>				
Indian, Chinese and Thai meals	31	28	57	30	21
Meat and meat products	74	74	77	78	76
Fish and fish products	13	13	16	13	12
Cheese and egg dishes and pizza	22	23	24	23	22
Potatoes	68	63	63	62	64
Vegetables excluding potatoes	29	29	29	30	34
Sandwiches	60	75	79	69	61
Ice creams, desserts and cakes	21	28	27	27	31
Beverages (ml)	106	138	119	134	141
Soft drinks including milk (ml)	278	261	318	278	240
Alcoholic drinks (ml)	461	413	387	388	435
Confectionery	12	12	11	11	11
<b>Household expenditure</b>	<i>pence per person per week</i>				
Total all food & drink excluding alcohol	2217	2373	2265	2472	2409
Total alcoholic drinks	263	295	239	308	279
Total all food & drink	2480	2668	2504	2780	2688
<b>Eating out expenditure</b>	<i>pence per person per week</i>				
Total all food & drink excluding alcohol	692	832	1012	894	775
Total alcoholic drinks	290	300	339	305	298
Total all food & drink	982	1132	1352	1199	1073

(a) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Table 3.7: Energy and nutrient intakes by English region – 3 year average

		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Number of households in sample		13678	729	1778	1500	1256	1498	1582	1468	2347	1520
Average age of HRP		53	53	53	52	53	53	53	51	53	55
Average number of adults per household		1.9	1.9	1.9	1.8	1.9	2.0	1.9	1.9	1.9	1.9
Average number of children per household		0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Average gross weekly household income (£)		689	565	604	572	625	635	734	887	814	636
<b>Total energy &amp; nutrient intakes<sup>(a)</sup></b>		<i>intake per person per day</i>									
Energy	kcal	2285	2261	2254	2237	2325	2327	2289	2191	2310	2386
	MJ	9.6	9.5	9.5	9.4	9.8	9.8	9.6	9.2	9.7	10.0
Energy excluding alcohol	kcal	2215	2183	2172	2166	2255	2257	2219	2137	2241	2315
Total Protein	g	78.5	78.5	78.7	77.4	79.4	79.5	78.8	74.9	79.3	81.4
Fat	g	95	92	92	93	96	96	95	92	97	99
Fatty acids:											
Saturates	g	35.7	35.4	35.1	35.4	36.3	36.2	36.3	31.9	36.9	38.4
Monounsaturates	g	35.3	33.9	34.4	34.4	35.6	35.7	35.3	34.8	36.1	36.9
Polyunsaturates	g	17.4	16.1	16.7	16.7	17.4	17.5	16.9	18.8	17.5	17.6
Cholesterol	mg	265	264	265	262	263	264	267	252	268	278
Carbohydrate <sup>(b)</sup>	g	279	278	273	273	287	287	280	270	280	291
Total sugars	g	127	123	124	124	134	131	131	115	131	137
Non-milk extrinsic sugars	g	83	81	82	81	87	88	85	72	85	88
Starch	g	152	155	149	148	153	156	149	155	149	154
Fibre <sup>(c)</sup>	g	15.1	14.3	14.3	14.6	15.5	15.0	15.2	15.0	15.4	16.1
Alcohol	g	10.0	11.1	11.7	10.1	9.9	9.9	10.1	7.7	9.9	10.1
Calcium	mg	971	971	969	966	1028	982	985	859	983	1039
Iron	mg	11.8	11.4	11.6	11.6	12.0	11.9	12.0	11.3	12.0	12.4
Zinc	mg	9.3	9.4	9.3	9.2	9.4	9.4	9.4	8.9	9.4	9.8
Magnesium	mg	288	283	282	282	297	287	291	277	295	303
Sodium <sup>(d)</sup>	g	2.79	2.84	2.84	2.80	2.83	2.80	2.84	2.43	2.87	2.94
Potassium	g	3.23	3.18	3.17	3.18	3.33	3.24	3.25	3.06	3.29	3.42
Thiamin	mg	1.66	1.61	1.64	1.62	1.70	1.68	1.68	1.58	1.69	1.75
Riboflavin	mg	1.90	1.87	1.90	1.89	1.99	1.90	1.92	1.73	1.92	2.04
Niacin equivalent	mg	34.2	34.2	34.4	33.8	34.5	34.6	34.4	32.5	34.6	35.3
Vitamin B <sub>6</sub>	mg	2.5	2.4	2.5	2.4	2.6	2.5	2.5	2.3	2.5	2.6
Vitamin B <sub>12</sub>	µg	6.4	6.5	6.5	6.4	6.5	6.3	6.5	5.9	6.4	6.8
Folate	µg	302	286	293	295	311	301	305	290	308	327
Vitamin C	mg	78	70	73	73	79	74	79	83	82	83
Vitamin A:											
Retinol	µg	526	502	510	541	510	495	561	479	550	585
β-carotene	µg	2243	2138	2108	2165	2339	2146	2286	2185	2346	2452
Retinol equivalent	µg	902	861	864	903	902	854	945	844	943	995
Vitamin D	µg	3.08	2.89	3.14	3.00	3.20	3.13	3.18	2.84	3.11	3.23
Vitamin E	mg	12.11	11.24	11.57	11.71	12.29	12.21	11.81	13.06	12.18	12.26

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Table 3.7: Energy and nutrient intakes by English region – 3 year average – Continued

		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West	
		<i>Percentage contributions of macronutrients to energy intake excluding alcohol</i>										
Fat	%	38.4	37.8	38.3	38.5	38.2	38.2	38.4	38.6	38.9	38.7	
Fatty acids:												
Saturates	%	14.5	14.6	14.6	14.7	14.5	14.4	14.7	13.4	14.8	14.9	
Monounsaturates	%	14.3	14.0	14.2	14.3	14.2	14.2	14.3	14.7	14.5	14.3	
Polyunsaturates	%	7.1	6.6	6.9	7.0	7.0	7.0	6.8	7.9	7.0	6.8	
Carbohydrate	%	47.3	47.8	47.2	47.2	47.7	47.7	47.3	47.4	46.9	47.2	
Non-milk extrinsic sugars	%	14.1	13.9	14.1	14.1	14.5	14.6	14.4	12.6	14.2	14.3	
Protein		14.2	14.4	14.5	14.3	14.1	14.1	14.2	14.0	14.1	14.1	
		<i>As a percentage of weighted reference nutrient intake <sup>(f)</sup></i>										
Energy <sup>(e)</sup>	%	109	108	108	106	111	111	109	104	110	113	
Energy excluding alcohol <sup>(e)</sup>	%	105	104	104	103	108	107	106	101	107	110	
Protein	%	171	171	173	168	174	173	174	162	171	175	
Calcium	%	141	140	141	140	149	142	144	124	142	150	
Iron	%	115	111	112	113	117	116	115	110	118	121	
Zinc	%	117	118	117	114	118	117	118	111	118	122	
Magnesium	%	109	106	107	106	112	108	111	104	110	113	
Sodium <sup>(d)</sup>	%	186	189	191	187	190	187	191	162	190	195	
Potassium	%	101	99	100	99	105	101	103	95	102	106	
Thiamin	%	197	191	196	192	203	199	200	187	200	207	
Riboflavin	%	166	163	167	165	175	165	169	150	167	177	
Niacin equivalent	%	245	245	248	241	248	247	247	232	248	252	
Vitamin B <sub>6</sub>	%	201	198	203	199	209	205	203	186	202	211	
Vitamin B <sub>12</sub>	%	462	464	472	464	472	455	472	425	456	483	
Folate	%	160	151	156	157	165	159	163	153	162	172	
Vitamin C	%	203	183	189	189	205	193	207	215	212	215	
Vitamin A (retinol equivalent)	%	145	138	139	145	145	137	153	135	151	159	

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee on Nutrition recommended that average salt intake for adults should not exceed 6 grams per day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.

Table 3.8: Purchases of selected foods by Rural Urban – 3 year average

	Urban (GB)	Rural (GB)	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
Number of households in sample	12342	3697	10802	2876	492	324	1048	497
Average age of HRP	52	56	52	56	52	57	51	55
Average number of adults per household	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8
Average number of children per household	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4
Average gross weekly household income (£)	655	762	664	784	575	619	607	759
<b>Household purchases</b>	<i>grams per person per week unless otherwise stated</i>							
Milk and cream (ml)	1936	2132	1930	2096	2008	2410	1963	2151
Cheese	112	132	111	134	119	123	110	126
Carcase meat	212	242	215	237	215	277	173	242
Other meat and meat products	787	791	777	778	912	869	838	812
Fish	161	169	163	170	140	180	146	154
Eggs (no.)	2	2	2	2	1	2	2	2
Fats and oils	179	194	181	191	185	195	160	203
Sugar and preserves	121	146	123	142	118	161	106	159
Potatoes	751	809	749	804	856	810	723	818
Vegetables excluding potatoes	1102	1220	1116	1246	1190	1282	903	1036
Fruit	1180	1329	1182	1341	1202	1244	1155	1304
Total cereals	1574	1610	1565	1594	1664	1592	1625	1709
Beverages (ml)	54	61	54	60	50	73	48	58
Soft drinks <sup>(a)</sup> (ml)	1685	1645	1642	1573	2027	1780	2032	2008
Alcoholic drinks (ml)	715	851	709	884	794	792	760	706
Confectionery	128	141	126	139	150	147	154	149
<b>Eating out purchases</b>	<i>grams per person per week unless otherwise stated</i>							
Indian, Chinese and Thai meals	32	26	33	27	24	17	29	28
Meat and meat products	77	75	76	78	80	57	78	67
Fish and fish products	13	16	13	16	8	12	13	16
Cheese and egg dishes and pizza	22	21	23	22	18	20	20	13
Potatoes	65	68	65	70	68	54	64	62
Vegetables excluding potatoes	29	31	29	33	31	28	22	17
Sandwiches	72	73	71	72	67	72	87	89
Ice creams, desserts and cakes	25	30	25	31	21	22	30	32
Beverages (ml)	126	128	126	128	106	102	131	143
Soft drinks including milk (ml)	299	270	291	268	300	248	385	309
Alcoholic drinks (ml)	462	477	461	501	573	419	416	372
Confectionery	12	12	12	12	14	10	14	15
<b>Household expenditure</b>	<i>pence per person per week</i>							
Total all food & drink excluding alcohol	2255	2447	2243	2433	2283	2450	2382	2526
Total alcoholic drinks	260	347	256	359	257	322	301	289
Total all food & drink	2515	2794	2500	2793	2540	2772	2684	2815
<b>Eating out expenditure</b>	<i>pence per person per week</i>							
Total all food & drink excluding alcohol	793	865	793	889	708	645	835	874
Total alcoholic drinks	313	329	309	343	334	265	341	293
Total all food & drink	1106	1194	1103	1232	1042	910	1176	1168

(a) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Table 3.9: Energy and nutrient intakes by Rural Urban – 3 year average

		Urban (GB)	Rural (GB)	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
Number of households in sample		12342	3697	10802	2876	492	324	1048	497
Average age of HRP		52	56	52	56	52	57	51	55
Average number of adults per household		1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8
Average number of children per household		0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4
Average weekly income of HRP		655	762	664	784	575	619	607	759
<b>Total energy and nutrient intake</b> <sup>(a)</sup>		<i>intake per person per day</i>							
Energy	kcal	2273	2386	2264	2369	2397	2394	2321	2480
	MJ	10	10	10	10	10	10	10	10
Energy intake excluding alcohol	kcal	2217	2316	2198	2285	2324	2315	2246	2410
Total Protein	g	78	82	78	81	82	84	79	83
Fat	g	94	99	94	98	99	99	95	104
Fatty acids:									
	Saturates	g	35	38	35	38	38	37	40
	Monounsaturates	g	35	37	35	37	37	35	38
	Polyunsaturates	g	17	17	17	17	17	17	19
Cholesterol	mg	262	279	262	277	269	290	261	281
Carbohydrate <sup>(b)</sup>	g	279	289	278	286	294	289	286	304
	Total sugars	g	126	137	125	135	140	131	141
	Non-milk extrinsic sugars	g	83	89	82	88	91	88	93
Starch	g	153	152	152	150	157	149	155	162
Fibre <sup>(c)</sup>	g	15	16	15	16	16	16	15	16
Alcohol	g	10	12	9	12	10	11	11	10
Calcium	mg	963	1034	958	1027	1026	1060	993	1053
Iron	mg	12	12	12	12	12	13	12	13
Zinc	mg	9	10	9	10	10	10	9	10
Magnesium	mg	286	304	285	303	298	306	288	307
Sodium <sup>(d)</sup>	g	3	3	3	3	3	3	3	3
Potassium	g	3	3	3	3	3	3	3	3
Thiamin	mg	2	2	2	2	2	2	2	2
Riboflavin	mg	2	2	2	2	2	2	2	2
Niacin Equivalent	mg	34	36	34	35	36	36	34	36
Vitamin B <sub>6</sub>	mg	2	3	2	3	3	3	2	3
Vitamin B <sub>12</sub>	µg	6	7	6	7	6	7	6	7
Folate	µg	297	321	297	322	316	327	285	313
Vitamin C	mg	77	82	77	82	81	81	77	82
Vitamin A:									
	Retinol	µg	513	584	513	581	535	505	552
	Carotene	µg	2185	2425	2196	2440	2344	1994	2290
	Retinol equivalent	µg	879	991	881	990	926	840	937
Vitamin D	µg	3	3	3	3	3	4	3	3
Vitamin E	mg	12	12	12	12	13	12	12	13

Table 3.9 continues on next page

Table 3.9: Energy and nutrient intakes by Rural Urban – 3 year average – Continued

		Urban (GB)	Rural (GB)	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
<i>Percentage contributions of macronutrients to energy intake excluding alcohol</i>									
Fat	%	38	39	38	39	38	39	38	39
Fatty acids:									
Saturates	%	14	15	14	15	15	15	15	15
Monounsaturates	%	14	14	14	14	14	14	14	14
Polyunsaturates	%	7	7	7	7	7	7	7	7
Carbohydrate	%	47	47	47	47	47	47	48	47
Non-milk extr sugars	%	14	14	14	14	15	15	15	15
Total Protein	%	14	14	14	14	14	14	14	14
<i>As a percentage of weighted reference nutrient intake <sup>(f)</sup></i>									
Energy <sup>(e)</sup>	%	108	112	107	111	112	113	110	117
Energy exc alcohol <sup>(e)</sup>	%	107	111	106	110	111	112	108	115
Protein	%	170	174	170	172	175	180	170	178
Calcium	%	139	148	139	147	147	153	143	151
Iron	%	113	122	112	122	120	123	111	124
Zinc	%	115	120	115	120	119	124	115	122
Magnesium	%	107	112	107	111	110	114	107	113
Sodium	%	185	192	184	190	195	193	196	201
Potassium	%	100	104	100	104	103	107	98	104
Thiamin	%	195	204	195	203	207	207	194	208
Riboflavin	%	164	175	164	174	171	188	164	174
Niacin equivalent	%	243	252	242	250	254	259	243	256
Vitamin B <sub>6</sub>	%	198	208	198	207	213	213	196	210
Vitamin B <sub>12</sub>	%	455	481	455	478	452	520	449	470
Folate	%	157	167	157	167	165	172	149	162
Vitamin C	%	199	210	199	211	207	210	199	211
Vitamin A (retinol equivalent)	%	140	157	141	156	146	176	134	148

(a) Contributions from pharmaceutical sources are not recorded by the survey.

(b) Available carbohydrate, calculated as monosaccharide equivalent.

(c) As non-starch polysaccharides.

(d) (i) Excludes sodium from table salt (ii) In May 2003 the Scientific Advisory Committee on Nutrition recommended that average salt intake for adults should not exceed 6 grams per day, equivalent to 2.4 grams of sodium.

(e) As a percentage of Estimated Average Requirement.

(f) Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. RNI values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group. Weighted RNIs, based on the age/sex composition of the survey sample, have been calculated for comparison with population average intakes.



# Chapter 4 Demographic patterns in key dietary indicators

## 4.1 Overview

This chapter reveals how key dietary intakes vary with demographic characteristics of households. It examines age, region, income, ethnicity and household composition with respect to sodium, saturated fatty acids, non-milk extrinsic sugars, fruit and vegetables.

Age and ethnicity are taken from the household reference person who is legally responsible for the household. Household income is equivalised to make it a better measure of standard of living than income alone. It adjusts household income for differences in household composition taking into account economies of scale of two or more people living in the same household.

Since correlations between the demographic characteristics are common, and make simple tables difficult to interpret, multiple regression is used to isolate the pattern in one demographic characteristic while controlling for differences in the others.

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### 4.3 Statistical method

A simple form of multiple regression is used with no attempt made to model the interrelationships between different demographic characteristics. Each demographic variable is separated into a number of categories, e.g. equivalised income is split into ten bands. A main effects regression is carried out to provide separate estimates for each category of the variable.

The method is synonymous to finding the average demographic pattern in the data. For example if the percentage of energy from fat increases with age then the method finds the average pattern of increase across all regions, ethnic groups, household compositions and incomes.

The analysis in this chapter includes both household and eating out food and drink purchases. The only exception is when considering fruit and vegetables, for which only household purchases are considered. When considering energy intake, energy from alcohol is excluded.

The analysis uses regions as defined in the Nomenclature of Territorial Units for Statistics (NUTS) which is an internationally agreed standard developed by the European Union. There are twelve NUTS 1 regions in the UK: the nine regions of England, plus Wales, Scotland and Northern Ireland. For more information on NUTS codes see: [www.statistics.gov.uk/geography/nuts.asp](http://www.statistics.gov.uk/geography/nuts.asp) and [Chapter 3](#).

This chapter uses the concept of the Household Reference Person (HRP) to categorise the data, [see glossary](#) for a detailed definition.

#### 4.4 Baseline household

In drawing out the comparisons a baseline group is used which is the most frequently occurring category of household in the data. The characteristics of the baseline household are as follows:

Table 4.1: Baseline household

Demographic Variable	Baseline category
Region	South East of England
Household composition	2 adults, no children
Age of household reference person	40-50 years
Ethnicity of household reference person	White British
Equivalentised income	Income decile 5 (around average income)

#### 4.5 Analyses in this section

Five analyses are presented. They focus on public health targets and aim to identify key demographic differences which may be useful in developing a clearer understanding of the barriers towards healthier eating.

Table 4.2: Summary of analyses

Item	Target (per person per day) and reason for analysis
Sodium	Less than 2.4 grams. Figures in this analysis do not include table salt and so are not directly comparable with the recommended maximum level of 2.4 grams; however data still give a good indication of patterns in sodium intake by demographics.
Percentage of energy intake derived from saturated fatty acids	Contributes no more than 11% of food energy to diet. Chapter 2 shows that the current percentage is above the target with no signs of a downward trend.
Percentage of energy intake derived from non-milk extrinsic sugars	Contributes no more than 11% of food energy to diet. Chapter 5 shows that the current percentage is well above the Government target and increased slightly in 2009.

Table 4.2 continues on next page

Table 4.2: Summary of analyses (continued)

Item	Target (per person per day) and reason for analysis
Fruit	400g of fruit and vegetables. Chapter 5 shows that the UK population are not achieving 5 A DAY fruit and vegetables coupled with a 4.7% drop in purchases of fruit in 2009.
Vegetables	400g of fruit and vegetables. Chapter 5 shows that the UK population are not achieving 5 A DAY fruit and vegetables coupled with a 1.3% drop in purchases in vegetables in 2009.

Results of each analysis concentrate on demographic variables where there was most correlation shown, hence each section may focus on different variables (age, region, ethnic origin, etc).

Note that, although the target for fruit and vegetable consumption does not separate out the two, the analysis here has done so as different patterns were seen for fruit and vegetables.

As explained in Annex B, intakes are calculated from household purchases and eating out purchases assuming that all the food bought is consumed by members of the household.

### 4.6 Sodium

Sodium intake data from this survey excludes the contribution from table salt and so is an underestimate of total intake. On average people obtained 2.82 grams of sodium per day from household and eating out purchases in 2009.

Figure 4.1a: Sodium content of food purchases by region (baseline characteristics other than region), 2009. Recommended maximum = 2.4 grams.

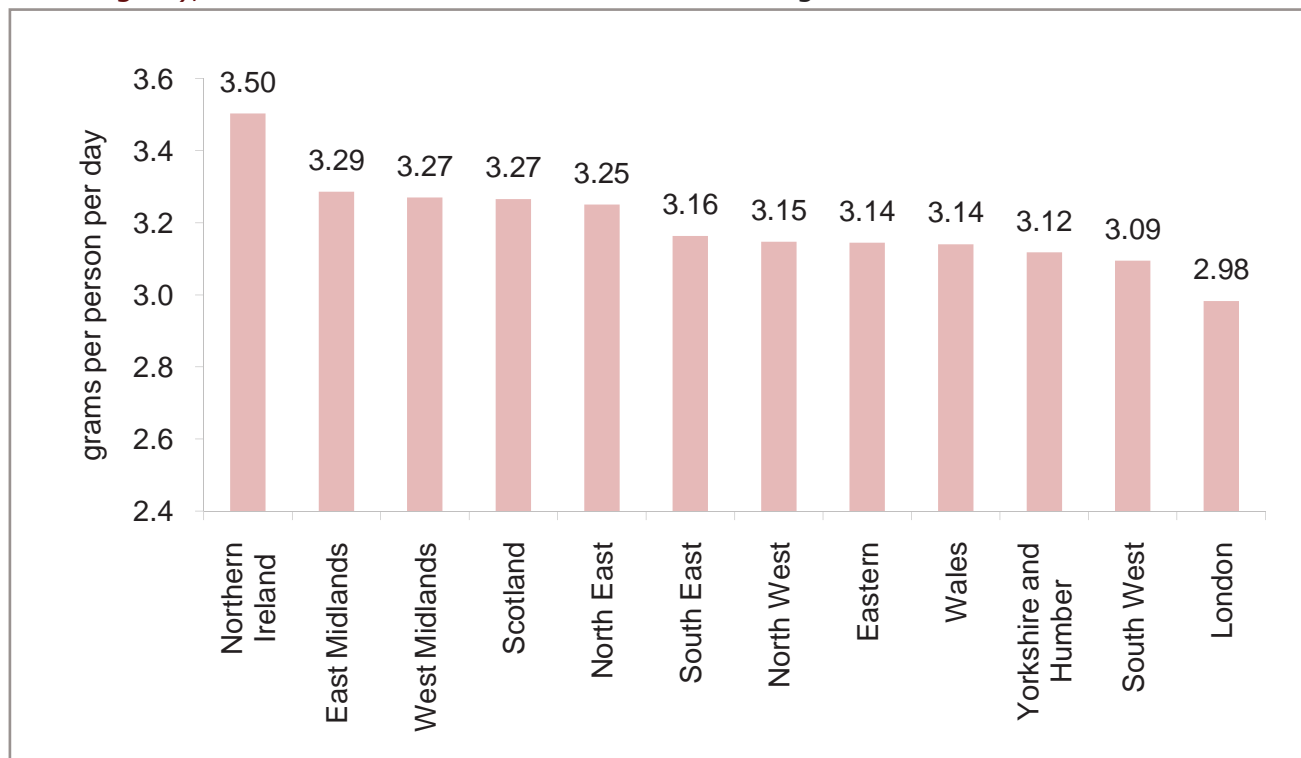
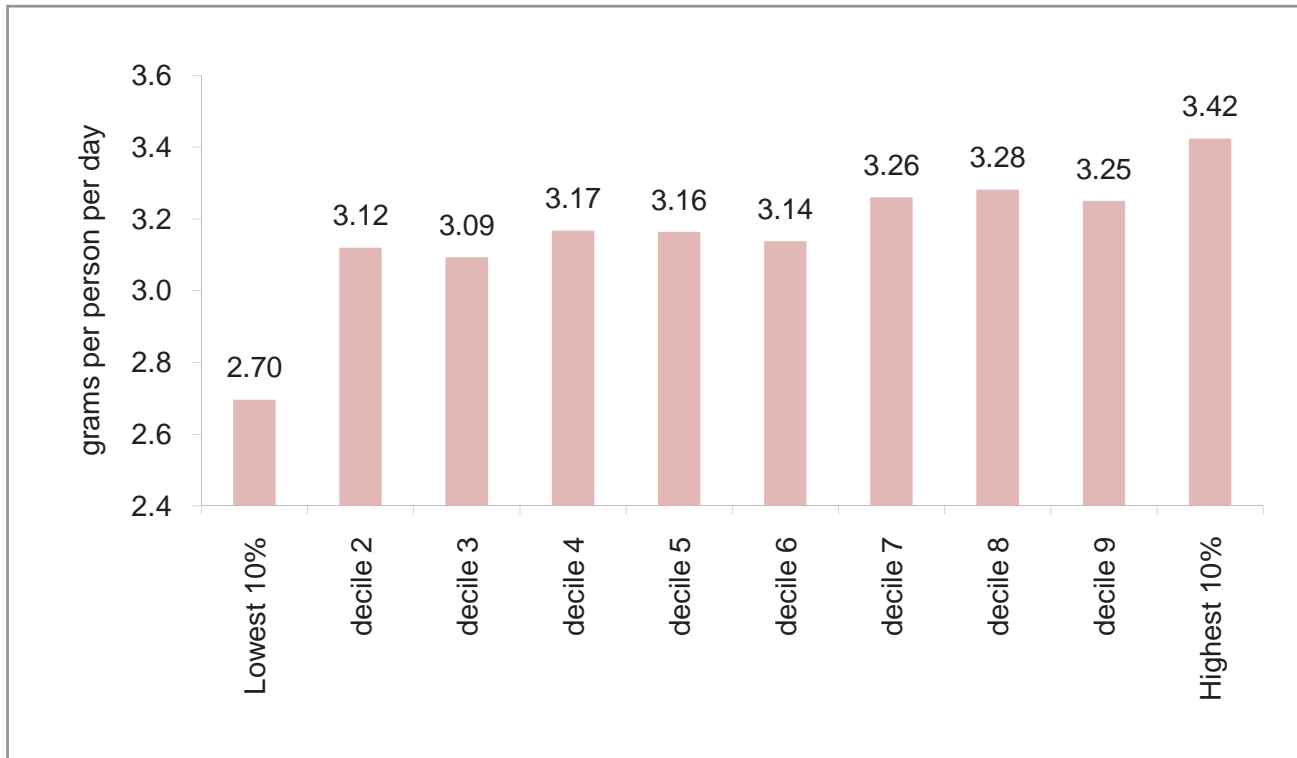


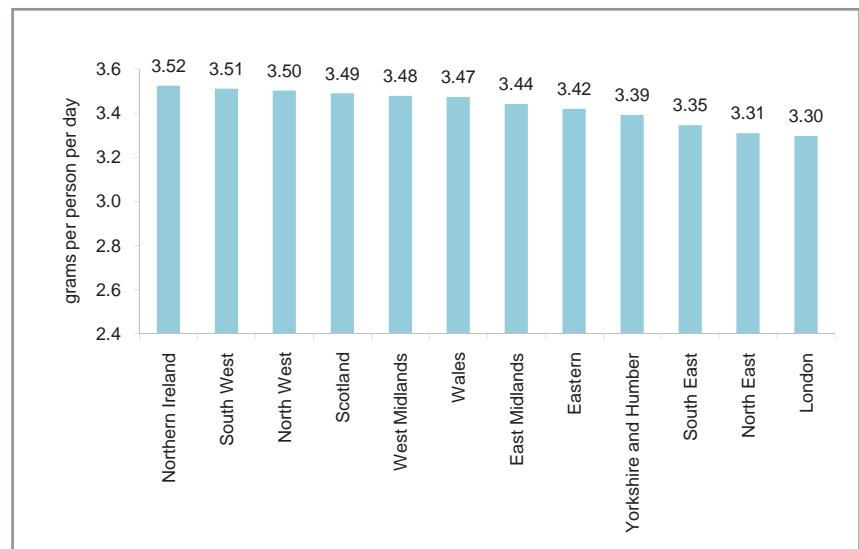
Figure 4.1b: Sodium content of food purchases by income (baseline characteristics other than income), 2009.



**Region**

Sodium intake (excluding table salt) is lowest in London and highest in Northern Ireland. There is not a clear pattern among the rest of the regions. The sodium content of food purchases in Northern Ireland is estimated by the model to be 3.5 grams per person per day in 2009 which is unchanged from 2008 (Figure 4.2). It is equivalent to 8.75 grams of salt.

Figure 4.2: Sodium content of food purchases by region (baseline characteristics other than region), 2008. Recommended maximum = 2.4 grams.



**Equivalentised income**

Sodium intake is highest in households with a greater income. The lowest ten percent of households by equivalentised income purchased foods with the lowest sodium content at 2.7 grams per person per day. In all cases sodium intake (excluding table salt) is above the recommended levels.

**Household composition and ethnic origin**

Patterns analysis on sodium also showed that single person households and White British households purchased food with higher sodium content than others.

### 4.7 Saturated fatty acids

On average people obtained 14.5% of food energy from saturated fatty acids in 2009 based on both household and eating out purchases.

Figure 4.3a: Percentage energy from saturated fatty acids by age of household reference person (baseline characteristics other than age), 2009. Recommended maximum = 11%.

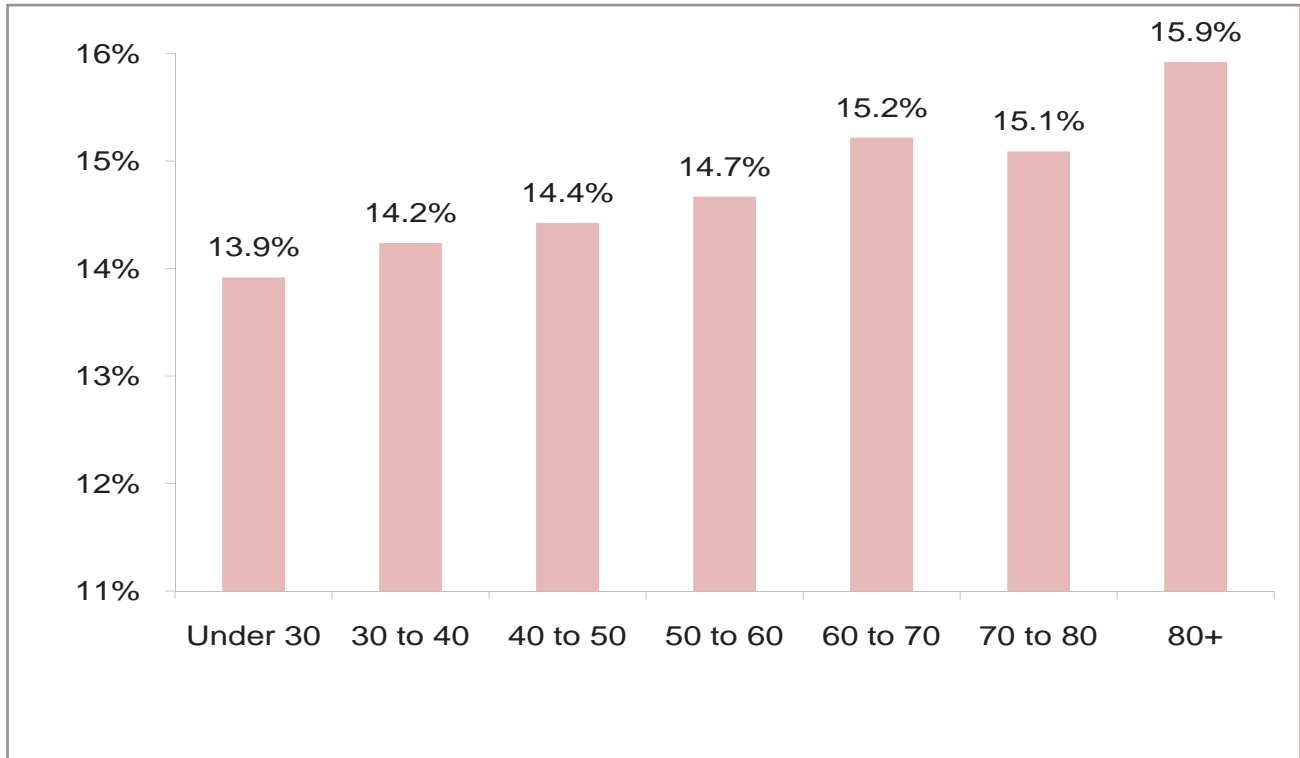
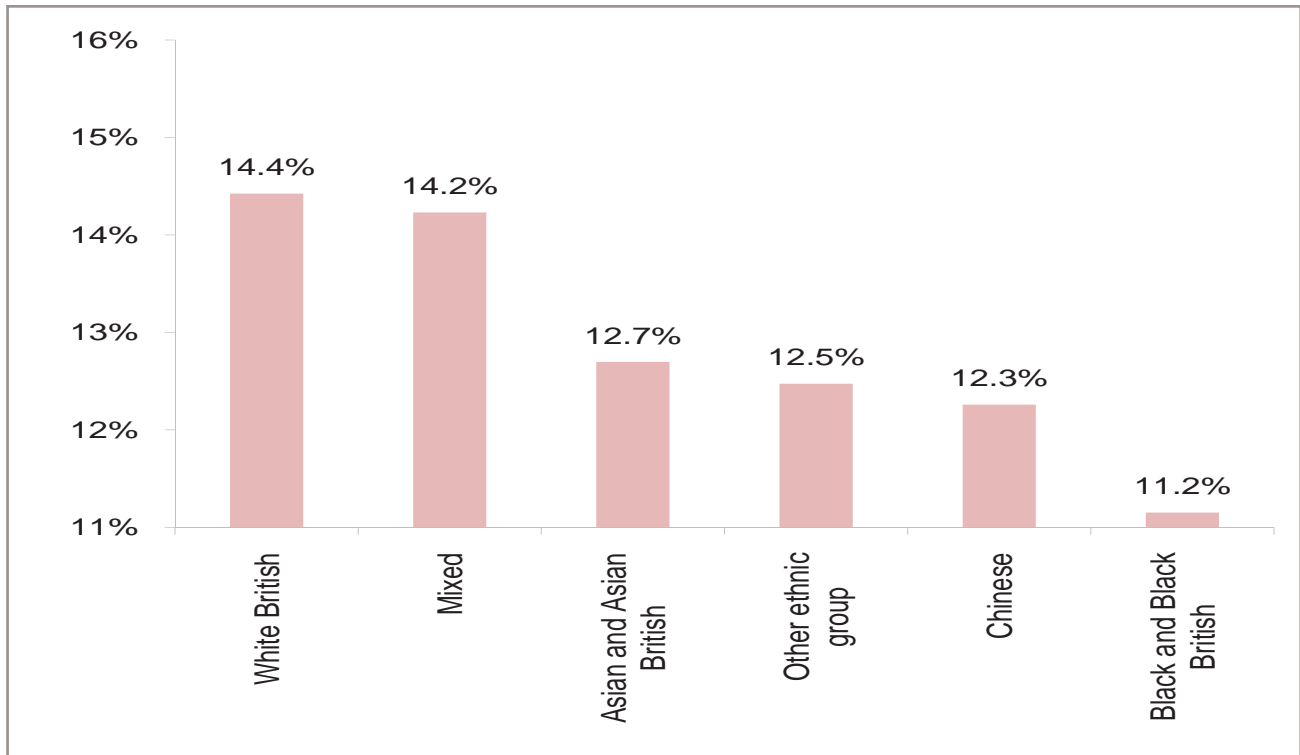


Figure 4.3b: Percentage energy from saturated fatty acids by ethnicity of household reference person (baseline characteristics other than ethnicity), 2009. Recommended maximum = 11%.

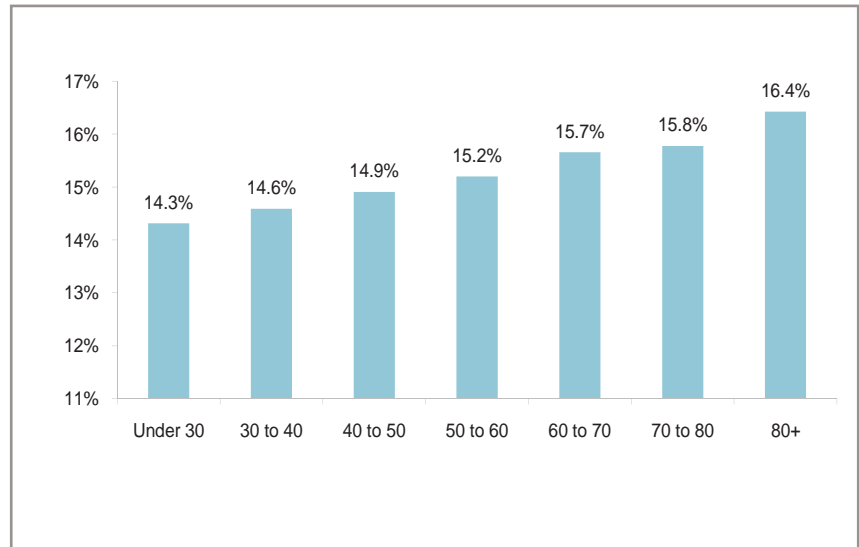


### Age of Household Reference Person

The percentage of energy intake derived from saturated fatty acids rises in line with the age of the household reference person. Households where the household reference person is under 30 have the lowest energy intakes from saturated fatty acids at 13.9% in 2009, still above the recommended level of 11%. Households with the household reference person over 80 years old derive the greatest percentage of energy from saturated fatty acids at 15.9% in 2009. This is 1.5 percentage points above the baseline group of the household reference person aged 40 to 50. The same pattern was exhibited in 2008 as shown in figure 4.4a.

Figure 4.4a: % energy from saturated fatty acids by age of household reference person (baseline characteristics other than age), 2008.

Recommended maximum = 11%.

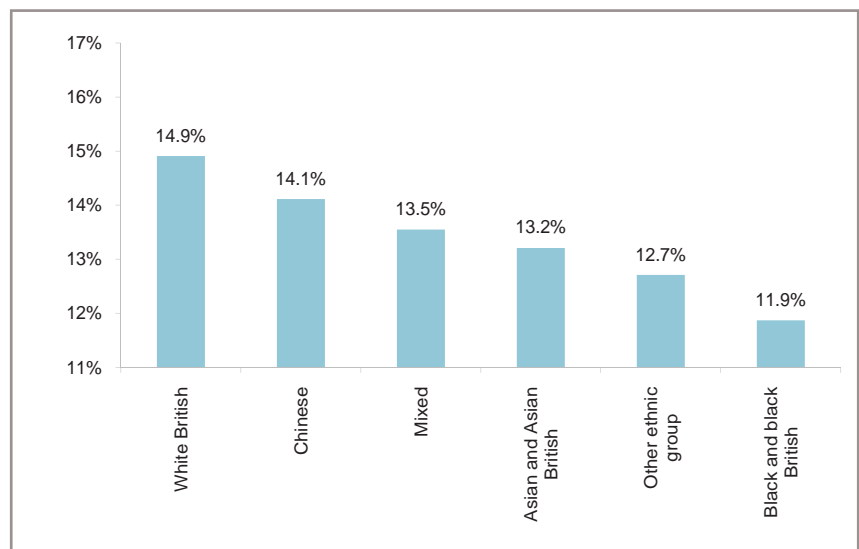


### Ethnic Origin

There are differences in saturated fatty acid intake associated with ethnic origin of the household reference person. Black and black British households have the lowest levels of energy derived from saturated fatty acids at 11.2% in 2009, only slightly above the recommended level. White British households obtained 14.4% of their energy intake from saturated fatty acids in 2009, well above the recommended upper level of 11%. The same pattern was exhibited in 2008 as shown in figure 4.4b.

Figure 4.4b: % energy from saturated fatty acids by ethnicity of household reference person (baseline characteristics other than ethnicity), 2008.

Recommended maximum = 11%.



4.8 Non-milk extrinsic sugars (NMES)

On average people obtained 14.2% of food energy from NMES in 2009, based on household and eating out purchases combined.

Figure 4.5a: Percentage energy from NMES by equivalised income (baseline characteristics other than income), 2009. Recommended maximum = 11%.

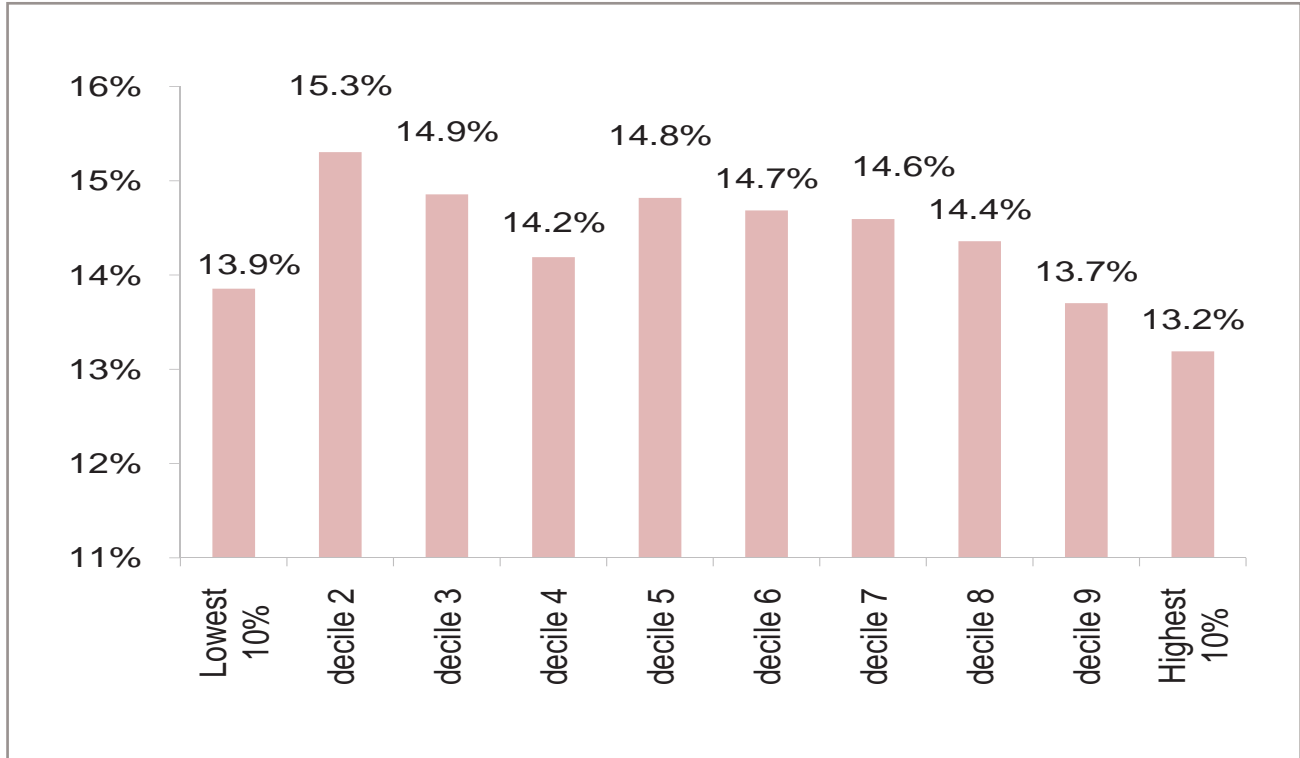
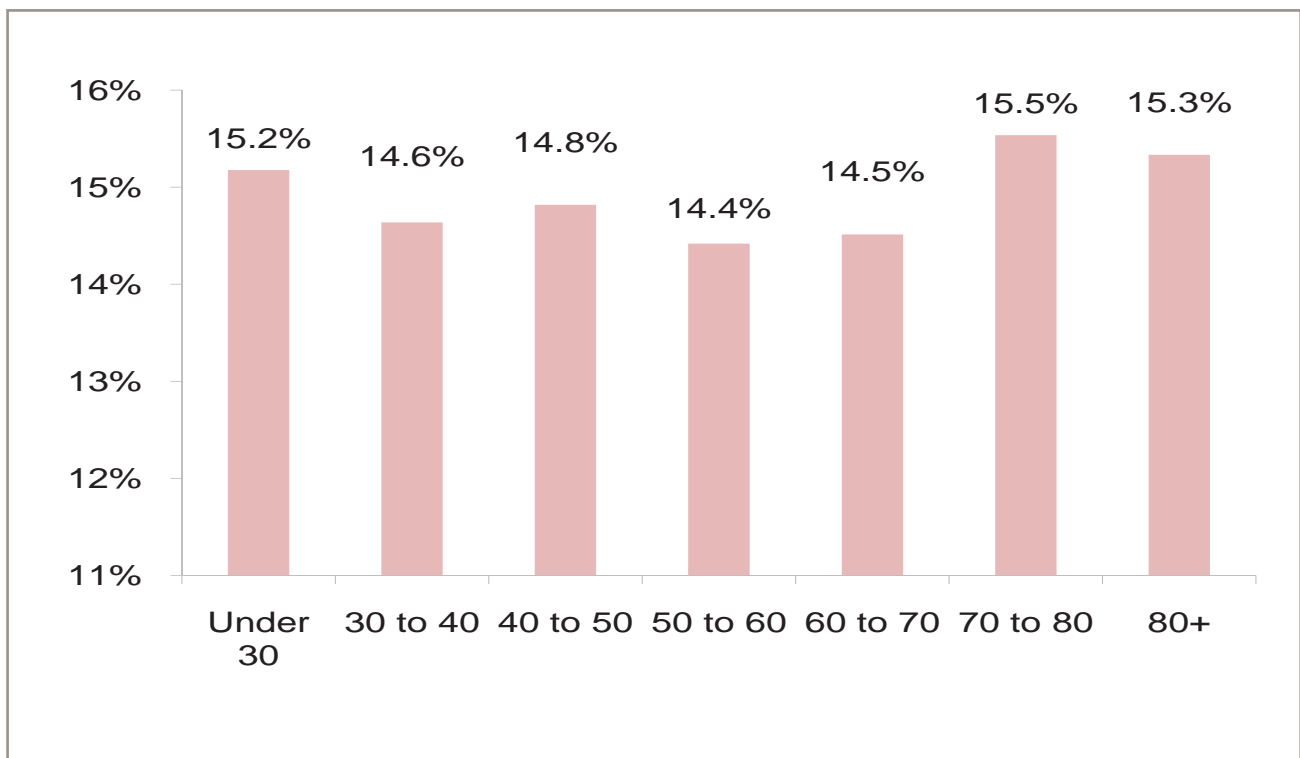


Figure 4.5b: Percentage energy from NMES by age of household reference person (baseline characteristics other than age), 2009. Recommended maximum = 11%.

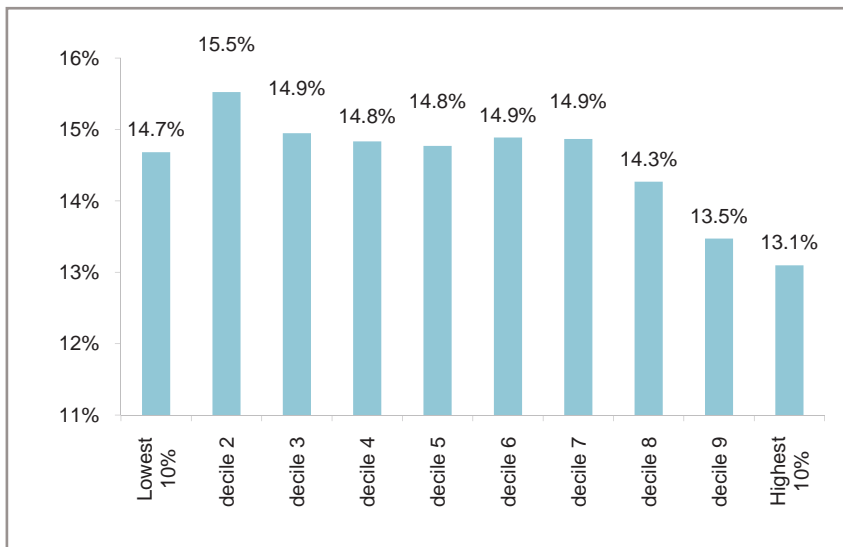




## Equivalised Income

Income is an important factor in determining percentage of energy intake from NMES. In general the higher the equivalised income the lower the intake of NMES. The one exception is the lowest income decile where intake of NMES is relatively low. In the highest income decile in 2009 there was a relatively low average of 13.2% of energy intake being derived from NMES. The second income decile showed the highest average intake at 15.3% in 2009. All income levels are estimated to have exceeded the Government recommended level of 11% of energy from NMES. The same pattern was seen in 2008, Figure 4.6.

**Figure 4.6: Percentage energy from NMES by income (baseline characteristics other than income), 2008.**  
Recommended maximum = 11%.



## Age

Both the young and the old have relatively high intakes of NMES. Where the household reference person is aged under 30 there was an average of 15.2% of energy derived from NMES. This was slightly larger for households where the reference person was aged 70 to 80 or over 80.

## Ethnic Origin

Asian and Chinese households have lower intakes of NMES. In 2009 their intakes were close to the recommended level of 11% of energy from NMES.

4.9 Fruit

This analysis includes all purchases of fresh and processed (e.g. dried, frozen and canned) fruit including fruit juice but it excludes: nuts, fruit contained in composite products (e.g. fruit pudding) and all fruit eaten out. On average people purchased 163 grams of fresh and processed fruit (including nuts) per day in 2009. See Chapter 1, Table 1.8.

Figure 4.7a: Fruit purchases by income (baseline characteristics other than income), 2009. 5 A DAY = 400 grams fruit and vegetables per day.

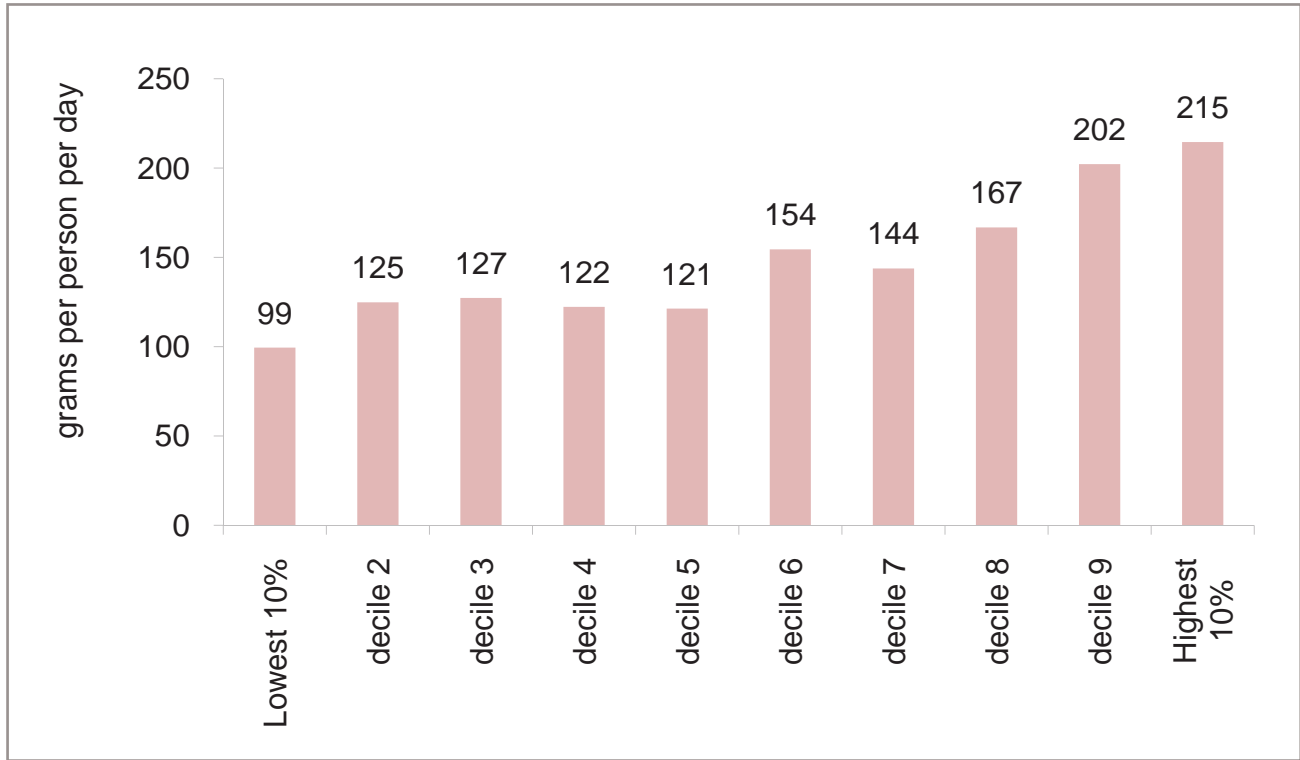
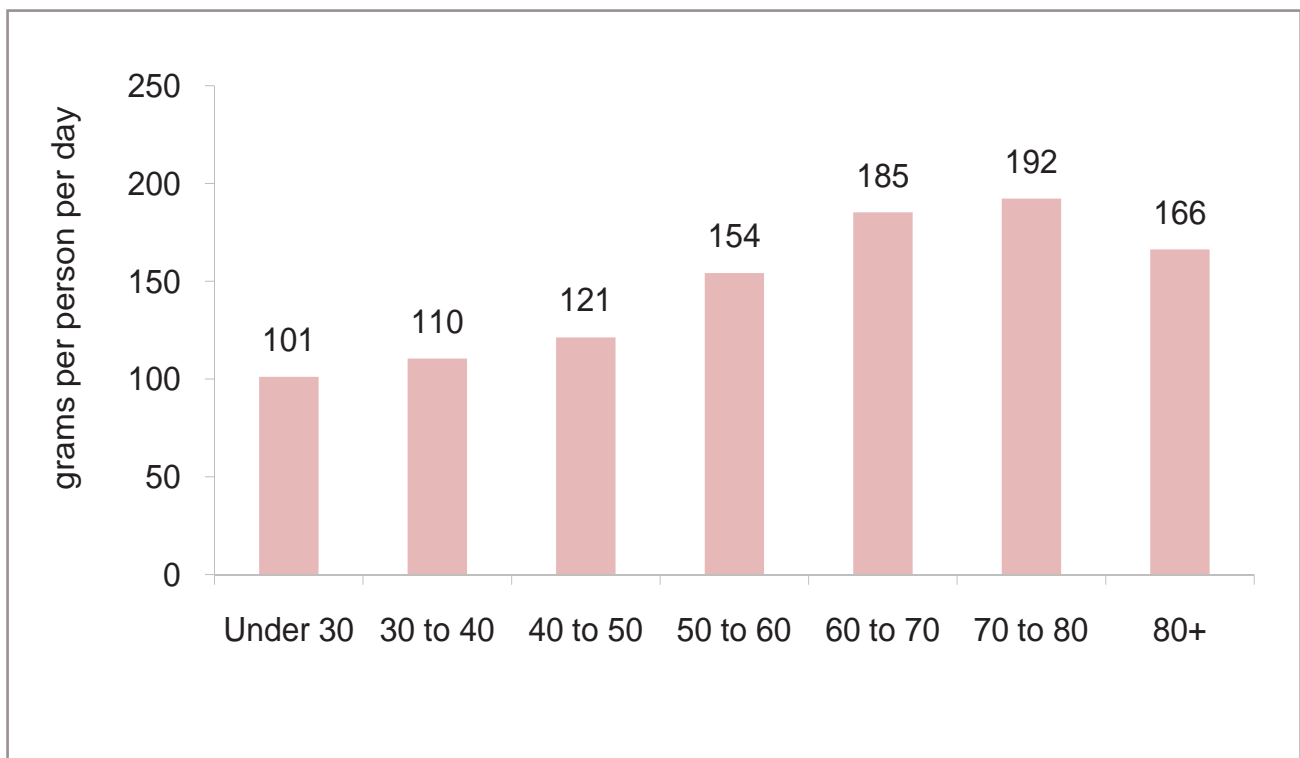


Figure 4.7b: Fruit purchases by age of household reference person (baseline characteristics other than age), 2009. 5 A DAY = 400 grams fruit and vegetables per day.



### Equivalised Income

Purchases of fruit increase with income - with the average varying from 1.2 to 2.7 portions per person per day depending on income. Households with baseline characteristics in the lower income deciles purchased on average only 99 grams of fruit per person per day in 2009 which is little over one portion (80 grams a portion). Households in the highest income decile purchased 215 grams per person per day in 2009 which is approaching 3 portions of fruit per day.

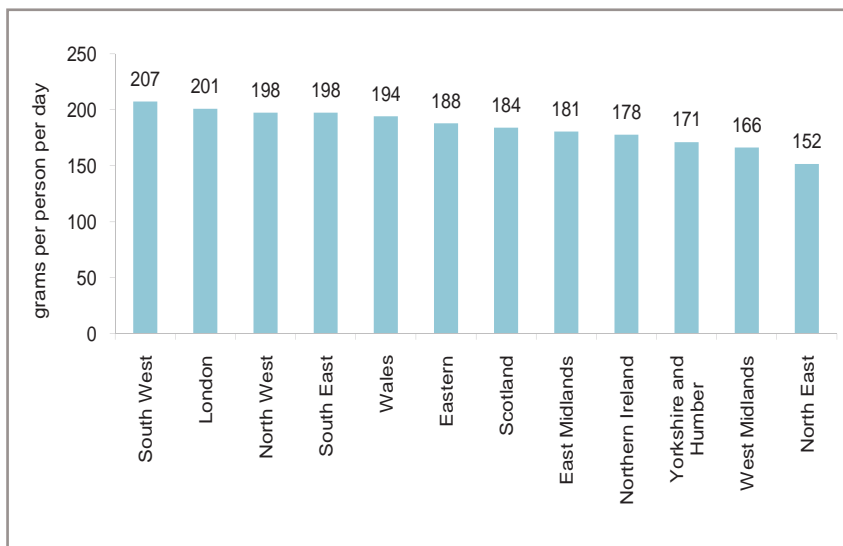
### Age of Household Reference Person

Purchases of fruit increase with age – with the average varying from 1.3 to 2.4 portions per person per day depending on age. Households with baseline characteristics where the household reference person was less than fifty years old purchased on average no more than 121 grams of fruit per person per day in 2009 which is approximately 1.5 portions (80 grams a portion). Where the household reference person was over fifty the purchases were higher, reaching 192 grams per person per day for those in their seventies, equivalent to almost 2.5 portions per person per day.

### Region and Household Composition

Single person households have high purchases at 180 grams of fruit per person per day, 50% more than any other household composition. Households with 3 or more adults and no children purchase on average less than one portion of fruit per person per day. There was little evidence of regional differences in fruit purchases once other demographic characteristics are controlled for. Figure 4.8 shows the regional analysis in 2008.

**Figure 4.8: Fruit purchases by region 2008 (baseline characteristics other than region). 5 A DAY = 400 grams fruit and vegetables per day.**



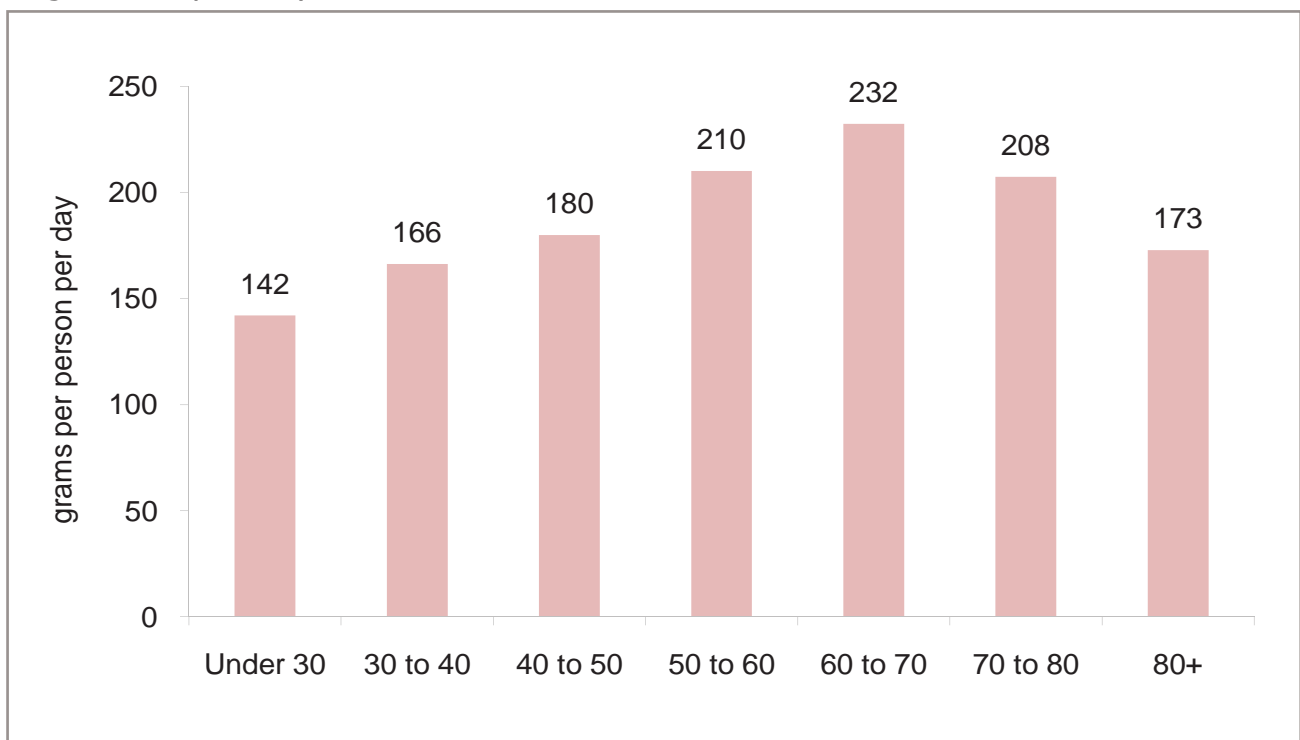
4.10 Vegetables

This analysis includes all purchases of vegetables apart from: potatoes, vegetables contained in composite products (e.g. vegetable curry) and all vegetables eaten out. On average people purchased 158 grams of vegetables per person per day in 2009. See Chapter 1, [Table 1.8](#).

Figure 4.9a: Vegetable purchases by region (baseline characteristics other than region), 2009. 5 A DAY = 400 grams fruit and vegetables per day.



Figure 4.9b: Vegetable purchases by age of household reference person (baseline characteristics other than age), 2009. 5 A DAY = 400 grams fruit and vegetables per day.



## Region

There are regional differences in purchasing patterns for vegetables with lower purchasing in the north of the United Kingdom. In 2009 it is estimated that purchasing of vegetables was lowest in Scotland, North West England, Northern Ireland and North East England. On average purchases in these regions were less than 2 portions of vegetables per person per day. In the South West region an average of 3 portions of vegetables were purchased per person per day in 2009.

## Age of Household Reference Person

Purchases of vegetables increase with age up to seventy years old. Where the household reference person was under 30 years old purchases are lowest. In 2009 the amount purchased by under 30 year olds was on average less than 2 portions per person per day. Where the age of household reference person was 60 to 70 the average was almost 3 portions of vegetables per person per day.

## Equivalent Income

Purchases of vegetables increase with income. The clearest effect is that those in the highest income decile purchase significantly more at 225 grams of vegetables per person per day, equivalent to 2.8 portions.



# Chapter 5 Exploratory analysis and dietary trends

## 5.1 Overview

This chapter shows how the food price rises in 2009 altered people's purchasing patterns. The percentage of households' spending that is spent on food and non-alcoholic drink is examined. It also compares food purchases to healthy eating targets and provides an indication of the four year trend. Estimates of average intakes from this survey indicate that many of the Government's healthy eating guidelines are not being met.

## 5.2 In this chapter

This chapter is used for exploratory analysis, and to examine trends in purchases and energy and nutrient intake relating to key Government policies. This chapter investigates what effect the food price rises in 2009 had on consumer purchasing. There is also analysis on healthy eating, in particular: an investigation into intakes of sodium, non-milk extrinsic sugars, fat, saturated fatty acids, fibre and alcohol and comparison to the fruit and vegetable 5 A DAY target.

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### 5.3 Food prices

Food prices rose in real terms from September 2007 and peaked in February 2009, then fell by 1.2% by December 2009. This chapter looks at how the price changes are affecting people's purchasing choices. As the survey is continuous with households being surveyed gradually throughout the year, it is necessary to examine the average price rise over the year.

The increase in food prices was driven by commodity price rises, fuel price rises and the weakening of sterling against the euro. Following six consecutive quarters of negative growth, the UK economy moved out of recession in the last quarter of 2009.

Table 5.1 shows the Retail Price Index of key food groups and highlights the percentage change from 2008 to 2009 and 2007 to 2008 for reference. From this it is clear that the commodities that have had the highest percentage rise in price are: sugar and preserves, tea, coffee and hot drinks, beef, and lamb. Smallest percentage price increases were seen in: soft drinks, poultry, bread and eating out. A price drop was seen in the butter category in 2009 compared to 2008.

Table 5.1 Average annual price indices in 2007, 2008 and 2009 compared to 2001

	Average price in 2001-02	Average price in 2007	Average price in 2008	Average price in 2009	% rise between 2007 and 2008	% change between 2008 and 2009
All Items Retail Price Index (2001-02 = 100)	100	121	125	125	+4.0	-0.5
RPI food items						
Food	100	114	125	131	+9.2	+5.3
Seasonal food <sup>(a)</sup>	100	122	132	139	+8.9	+4.9
Bread	100	130	150	155	+15.4	+2.8
Cereals	100	107	121	130	+12.8	+7.5
Biscuits and cakes	100	111	123	128	+11.2	+3.7
Beef	100	106	121	151	+14.6	+8.4
Lamb	100	124	135	143	+8.9	+11.8
Pork	100	115	132	133	+15.1	+7.7
Bacon	100	116	127	122	+9.3	+4.9
Poultry	100	106	120	130	+13.3	+2.1
Fish	100	115	124	137	+7.1	+5.2
Butter	100	113	139	137	+23.4	-1.9
Cheese	100	115	132	137	+15.2	+3.9
Eggs	100	127	161	167	+26.6	+3.7
Milk	100	132	151	161	+14.2	+6.6

Table 5.1 continues on next page

Table 5.1 Average annual price indices in 2007, 2008 and 2009 compared to 2001 continued

	Average price in 2001-02	Average price in 2007	Average price in 2008	Average price in 2009	% rise between 2007 and 2008	% change between 2008 and 2009
All Items Retail Price Index (2001-02 = 100)	100	121	125	125	+4.0	-0.5
RPI food items						
Tea	100	103	109	121	+6.0	+11.2
Coffee and hot drinks	100	108	112	121	+3.9	+8.2
Soft drinks	100	106	108	112	+2.1	+2.9
Sugar and preserves	100	124	130	148	+5.5	+13.2
Sweets and chocolates	100	126	135	145	+6.9	+7.4
Potatoes	100	108	119	125	+10.6	+4.9
Vegetables	100	136	147	157	+8.1	+6.7
Fruit	100	111	119	125	+6.8	+5.1
of which fresh fruit	100	101	107	114	+6.1	+6.3
Alcoholic drinks	100	116	121	125	+3.9	+3.7
Catering: Restaurant meals	100	123	128	131	+3.8	+2.6
Catering: Canteen meals	100	132	137	140	+3.9	+2.0

(a) seasonal food is white fish, fresh, chilled or frozen; herrings and other blue fish, fresh, chilled or frozen; salmon, fresh, chilled or frozen; blue fish, dried, salted or smoked; white fish, dried, salted or smoked; shellfish; eggs; potatoes; cabbages, fresh; Brussels sprouts, fresh; cauliflowers, fresh; leafy salads, fresh; peas, fresh; beans, fresh; other fresh green vegetables; carrots, fresh; turnips and swedes, fresh; other root vegetables, fresh; onions, leeks and shallots, fresh; cucumbers, fresh; mushrooms, fresh; tomatoes, fresh; miscellaneous fresh vegetables; oranges, fresh; other citrus fruit, fresh; apples, fresh; pears, fresh; stone fruit, fresh; grapes, fresh; other soft fruit, fresh; bananas, fresh; melons, fresh; other fresh fruit.

### 5.4 Unit value analysis

The price rises shown in Table 5.1 are likely to have affected consumers' purchasing decisions, as many consumers try to keep their shopping bills down. In some cases this may mean buying less food, or consumers may look for other ways to save money such as trading down to cheaper produce, buying in bulk and switching retailers to maximise special offers. To examine the extent of trading down, 'unit values' have been used. This calculates pence per kg or per litre for various types of food categories using data from the survey.

Table 5.2 shows unit values or expenditure per unit of quantity for various types of food and drink purchases. To make these comparisons it is necessary to compare Family Food estimates with Retail Price Index (RPI) estimates by mapping Family Food food groupings onto the RPI food groupings. These groupings differ from those in the rest of this report and lead to slightly different estimates of changes.

The percentage change between 2008 and 2009 is shown for quantities purchased, price, expenditure and the unit value. Using these four pieces of information the following approximation can be deduced:

$$\begin{aligned} \text{Change in expenditure} &= \text{change in price} \\ &+ \text{change in quantity purchased} \\ &+ \text{change in unit value achieved} \end{aligned}$$

For example, for tea there was a change in expenditure of +8%. This is approximated by a change in price of +11% and change in quantity of -4% and change in deflated unit value of +1% ( $8 = 11 - 4 + 1$ ).

$$\begin{aligned} \text{Trading down} &= \text{unit value reduced} \\ \text{Buying less} &= \text{purchased quantities reduced between 2008-2009} \\ \text{Spending more} &= \text{expenditure increased} \end{aligned}$$

Unit values rise or fall if prices rise or fall but they also change if the pattern of purchases within a food code changes. Such a change may be towards purchases of more expensive or less expensive items within the products in a code. It may also indicate that products within a code have changed in terms of value added such as pre-packed salads or organic produce. Trading down is only identified here where consumers find cheaper produce in the same food group; for example, within vegetables moving from green beans to cabbage.

Table 5.2 Unit values, quantity purchased changes and price changes

	Indices of unit values (expenditure/ purchased quantity) deflated by price rises in the category			Percentage change between 2008 and 2009				Consumer Action
	2001-02	2008	2009	Quantity purchased (a)	Price (b)	Expenditure b+a+c	Deflated unit value (c)	
	<i>pence per kg or pence per litre</i>			<i>percentage change</i>				
Food	100	100	98	0.0	5.3	3.6	-1.6	
Seasonal food	100	98	97	-2.6	4.9	0.6	-1.1	
Bread	100	105	103	-0.4	2.8	0.7	-1.7	
Cereals	100	89	85	2.3	7.5	5.3	-4.3	Trading down
Biscuits & cakes	100	101	99	1.3	3.7	2.5	-2.4	
Beef	100	106	102	0.6	8.4	5.2	-3.4	
Lamb	100	97	84	4.4	11.8	0.7	-13.9	Trading down
Pork	100	96	92	-1.7	7.7	1.9	-3.6	
Bacon	100	91	87	6.4	4.9	7.0	-4.2	Spending more
Poultry	100	102	107	-1.6	2.1	6.0	5.4	
Fish	100	98	96	-2.0	5.2	1.5	-1.9	
Butter	100	99	98	-3.6	-1.9	-7.1	-1.8	Buying less
Cheese	100	95	92	4.9	3.9	6.5	-2.3	
Eggs (pence per egg)	100	103	100	3.1	3.7	2.5	-2.3	

Table 5.2 continues on next page

Table 5.2 Unit values, quantity purchased changes and prices changes continued

	Indices of unit values (expenditure/ purchased quantity) deflated by price rises in the category			Percentage change between 2008 and 2009				Consumer Action
	2001-02	2008	2009	Quantity purchased (a)	Price (b)	Expenditure b+a+c	Deflated unit value (c)	
	<i>pence per kg or pence per litre</i>			<i>percentage change</i>				
Milk	100	89	87	2.4	6.6	7.1	-1.9	Spending more
Tea	100	97	98	-3.6	11.2	8.3	1.1	
Coffee & hot drinks	100	99	99	-0.3	8.2	8.2	0.3	Spending more
Soft Drinks	100	104	107	-0.3	2.9	5.3	2.6	
Sugar & preserves	100	106	101	-1.5	13.2	5.9	-4.5	Trading down
Sweets & chocolates	100	78	76	2.4	7.4	6.7	-2.9	
Potatoes	100	108	103	-3.9	4.9	-4.6	-4.8	
Vegetables	100	83	82	-1.3	6.7	3.8	-1.0	
Fruit	100	108	108	-4.7	5.1	-0.4	-0.5	Buying less
of which fresh fruit	100	118	115	-3.6	6.3	-0.5	-3.0	

Table 5.2 shows that for commodities where price rises were most marked, people made different choices depending on the product:

Trading Down	Buying less	Spending more
<ul style="list-style-type: none"> <li>• Lamb</li> <li>• Sugars &amp; preserves</li> <li>• Cereals</li> <li>• Pork</li> <li>• Potatoes</li> <li>• Bacon</li> </ul>	<ul style="list-style-type: none"> <li>• Fruit (fresh/processed)</li> <li>• Potatoes</li> <li>• Butter</li> <li>• Fish</li> <li>• Tea</li> </ul>	<ul style="list-style-type: none"> <li>• Tea</li> <li>• Coffee &amp; hot drinks</li> <li>• Milk</li> <li>• Bacon</li> <li>• Sweets/chocolate</li> <li>• Cheese</li> </ul>

For most food categories as food prices went up so did the amount people spent on that category to varying degrees. The two categories where an increase in price saw a decrease in expenditure were potatoes and fruit (including fresh fruit). There was only one instance of a price fall in the period: butter, where a 1.9% fall in prices saw a 7% decrease in spending and 3.6% fall in the quantity purchased. Bacon is identified as both trading down and spending more: as the unit value fell 4.2%, the quantity purchased went up 6.4% and expenditure went up 7% on 2008 levels. In the case of vegetables, which had a 6.7% price rise, there was some evidence of trading down with a 1% fall in the unit values; some spending more, with spending going up 3.8%, and a small drop of 1.3% in the quantity people bought.

This analysis implies that for some products (those traded down or where purchases have not shown any adverse reaction to price rises), consumers see these as an essential part of their food shopping and will continue to buy them in some form or other. Other products are more sensitive to price changes, fruit being a good example of this.

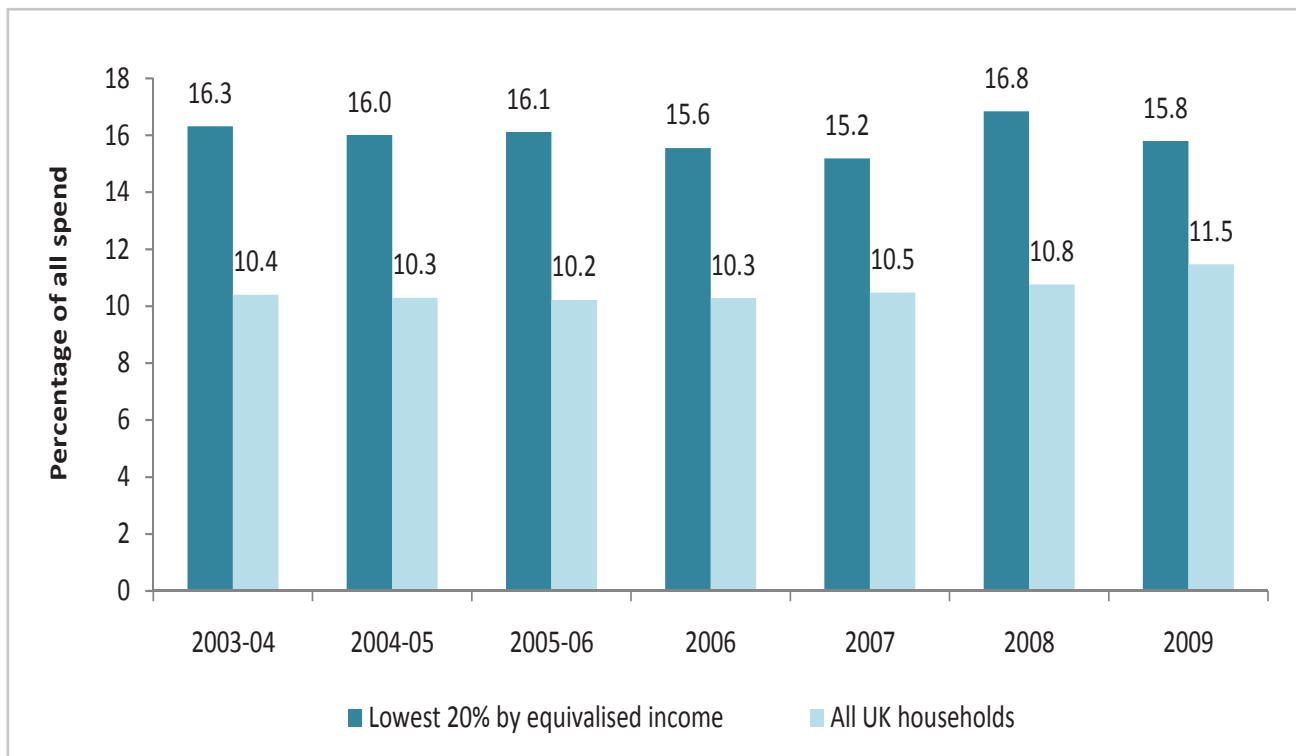
Price elasticity of demand measures the responsiveness of the quantity demanded (bought) in response to a change in price. Price elasticities were estimated for food purchases between 1988 and 2000 and reported in the National Food Survey 2000 [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/index.htm). This analysis found that income elasticities are relatively high for processed cheese, fish, fresh green vegetables, fresh fruit and fruit juices. This means that demand for these foods is likely to fall (people buy less) when overall food prices rise.

## 5.5 Proportion of all spending that is on food and drink (excluding alcohol)

The relative affordability of food can be monitored by the share of total household spending that goes on food purchases. In 2009, on average food and non-alcoholic drink accounted for 11.5% of all household spending. The percentage of all household spending that goes on food and drink has been increasing since 2005-06 when it was 10.2%. This indicates that food is now exerting greater pressure on the household budget.

People in the lowest fifth of households by equivalised income (see [Glossary](#) for definition) spent 15.8% of their total budget on food and non-alcoholic drinks in 2009. The proportion of spend has dropped by one percentage point since 2008, indicating that food is becoming relatively more affordable for these households. In contrast, for people in the highest income fifth spending on food and soft drinks made up 8% of their spending in 2009.

Figure 5.1: Consumer spending on food and non-alcoholic drinks in low income and all households



## 5.6 Healthy eating

The rest of this chapter focuses on how the UK diet compares with Government dietary guidelines using data from Family Food. The Government has set various nutrient recommendations and dietary guidelines, most of which were published by the Committee on Medical Aspects of Food and Nutrition Policy (COMA). Its successor the Scientific Advisory Committee on Nutrition (SACN) is currently reviewing some of these nutrient recommendations, see [www.sacn.gov.uk](http://www.sacn.gov.uk).

Estimates of average intakes from this survey indicate that many of these guidelines are not being met. A large proportion of the population consumes less than the recommended amount of fibre and fruit and vegetables and more than the recommended amount of saturated fatty acids, total fat, salt and sugar. Such a diet could contribute to ill health and premature death.

The Government targets along with data from Family Food are summarised in Table 5.3. Some recommended intakes are shown as a percentage of food energy (excluding energy from alcohol). This allows comparisons between groups with different levels of energy expenditure and/or intake. Unless otherwise stated, all statistics in this chapter are based on food energy intake and do not take food waste into account. The only instance where food waste is considered is in respect to portions of 5 A DAY fruit and vegetables. See Chapter 2 for more details on food waste.

Table 5.3 Key Government dietary and health targets with estimated intakes (2001-02 and 2004-05 to 2009)

Item	Target (per person per day)	2001-02	2004-05	2005-06	2006	2007	2008	2009
Fruit & vegetables (excl. potatoes)	Minimum of 400g	321	325	350	351	346	331	321
Total fat	Contributes no more than 35% of food energy to diet	38.4	38.2	38.1	38.5	38.3	38.5	38.5
Saturated fatty acids	Contributes no more than 11% of food energy to diet	14.8	14.7	14.6	14.7	14.5	14.6	14.5
Non-milk extrinsic Sugars (NMES)	Contributes no more than 11% of food energy to diet	14.8	14.8	14.4	14.2	14.0	14.1	14.2
Sodium	Maximum of 2.4g	3.25	3.07	3.09	2.95	2.84	2.78	2.82
Fibre	Minimum of 18.0g	15.0	15.0	15.6	15.6	15.2	15.0	15.2

Sodium estimates exclude purchases of table salt and are therefore likely to be an underestimate of consumption.

## 5.7 Obesity/Energy

Levels of obesity are linked with the risk of developing diseases such as; diabetes, coronary heart disease and some cancers, all of which affect the future cost of health care.

Energy intake together with energy expenditure determines the overall energy balance. Family Food provides the best available official statistics data that can be used to provide information on long term trends in energy intake per person in the United Kingdom (Great Britain before 1996).

Statistics on obesity levels in England are available on the NHS Information Centre website:

[www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/obesity](http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/obesity)

## 5.8 Long term trends in energy intake

Table 5.4 shows values of the various different forms of estimate of energy intake based on the National Food Survey and the Family Food module of the Living Costs and Food Survey (formerly the Expenditure and Food Survey). The most important changes in the surveys are highlighted but in reality smaller changes occur each year as factors used to convert purchases into intakes are periodically reviewed and updated (see Chapter 2). Figure 5.2 shows energy intake as the survey has evolved.

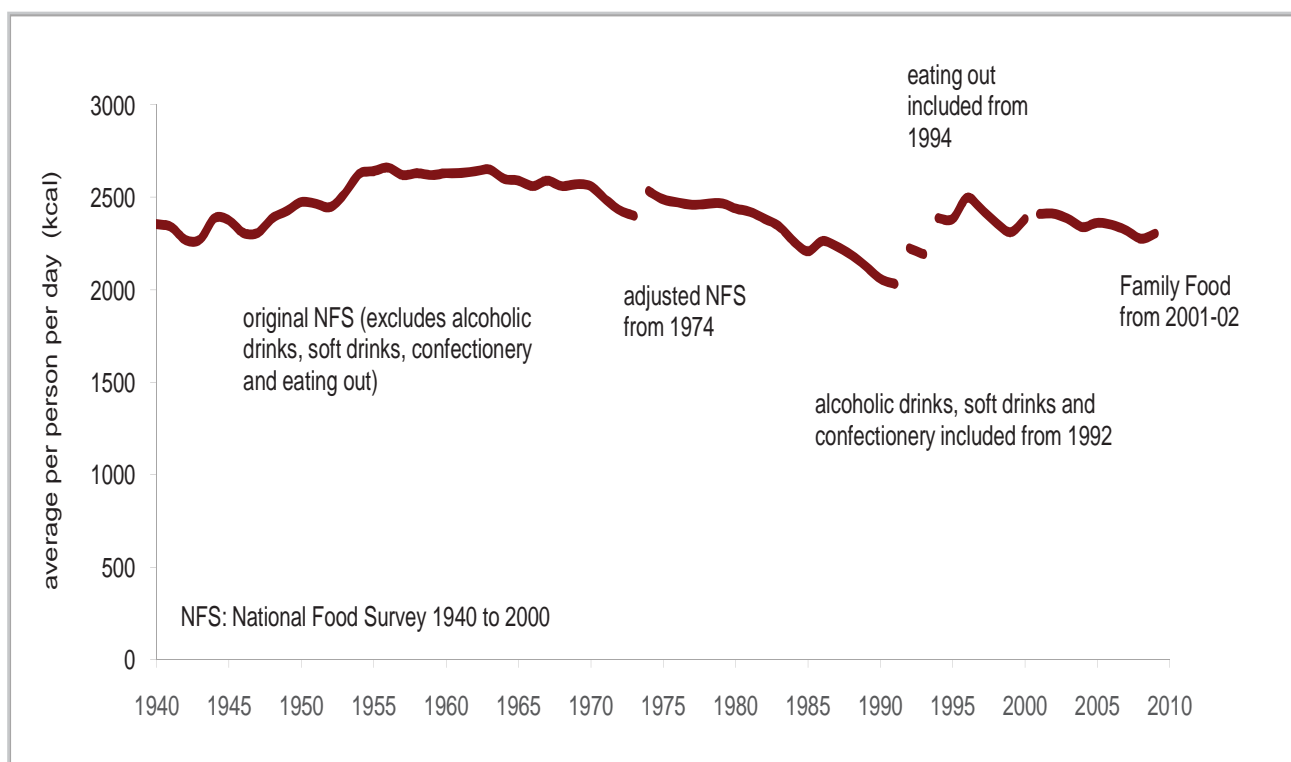
Table 5.4 Different estimates of energy intake as the surveys have evolved

Year	National Food Survey				Expenditure & Food Survey (EFS) and Living Costs & Food Survey (LCFS)			Combined Series <sup>(c)</sup>			Index of change <sup>(e)</sup>
	Excluding asc <sup>(a)</sup>	Including asc <sup>(a)</sup>	Aligned with EFS <sup>(b)</sup>	NFS eating out	Household (HH)	Eating out (EO)	HH + EO	Household (HH)	Eating out (EO)	HH + EO <sup>(d)</sup>	
	<i>kcal per person per day</i>										
1940	2355							2355		2355	
1974	2320		2534					2534		2534	100
1980	2230		2439					2439		2439	74
1990	1870		2058					2058		2058	81
1995	1780	1881	2143	240				2143	240	2383	77
2000 <sup>(f)</sup>	1750	1881	2152	230				2152	230	2382	78
2001-02					2098	310	2409	2098	310	2409	76
2003-04					2079	303	2381	2079	303	2381	73
2005-06					2082	280	2362	2082	280	2362	74
2006					2074	276	2351	2074	276	2351	74
2007					2052	268	2320	2052	268	2320	73
2008					2028	248	2276	2028	248	2276	71
2009					2054	250	2303	2054	250	2303	72

Table 5.4 Different estimates of energy intake as the surveys have evolved - continued

- (a) "asc" is alcoholic drinks, soft drinks and confectionery.
  - (b) includes alcoholic drinks, soft drinks and confectionery from 1992 onwards.
  - (c) uses fullest information available each year. Historical estimates of household purchases between 1974 and 2000 have been adjusted to align with the level of estimates from the Family Expenditure Survey in 2000. Estimates are generally higher than original data and indicate that the scaling has partially corrected for under-reporting in the National Food Survey.
  - (d) This is the series with breaks shown in Figure 5.2
  - (e) This is the index shown in Figure 5.3
  - (f) Change in methodology makes the estimate of the year on year change unreliable between 2000 and 2001-02.
- Note: The estimates do not take into account food waste i.e. edible food purchased and not eaten by members of the household.

Figure 5.2 Average energy intake from food and drink since 1940

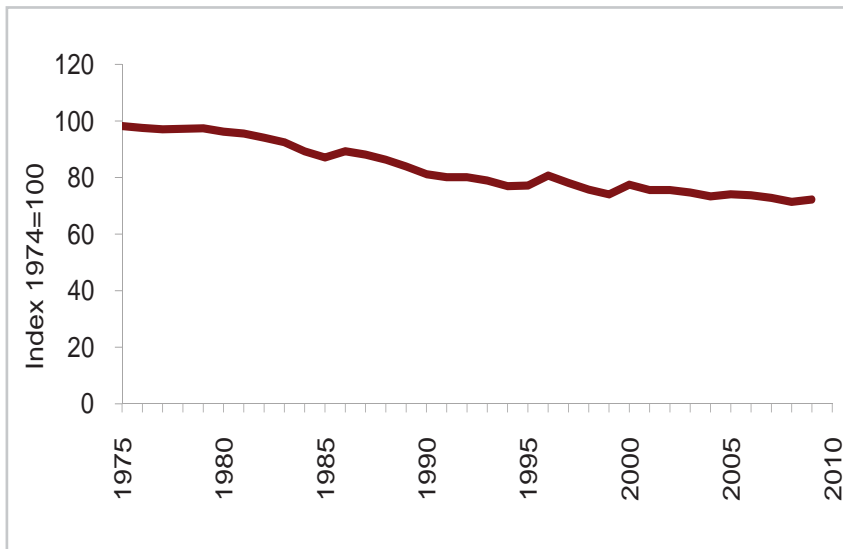


The energy intake from food and drink has been declining for many years. Since the basis of estimation of energy intake has evolved over the years, an index is calculated such that yearly changes only compare like with like i.e. eating out energy is only added to the calculation once there are two years' worth of data. The right hand column of Table 5.4 shows this index. Figure 5.3 shows year on year changes in total energy. Since 1974 it is estimated that the average energy intake per person has dropped by 29%.

From 1974 to 1992 the index was based solely on household purchases excluding confectionery, soft drinks and alcoholic drinks. Thus the drop shown for that period implies a drop in energy from household purchases only. Since 2001 the estimation includes all food and drink purchases for the household and eating out. A decline in energy intake is visible throughout the series.



Figure 5.3 Index of energy change since 1974



As Table 5.5 shows, the food categories making the greatest contribution to household energy intake are bread, cereal products, and meat products. Each of which contributes around 10-11%, on average. Chapter 2 Table 2.1 examines these categories in more detail.

Consumers have responded to price rises either by spending more or by trading down to cheaper products, but not by buying significantly less. Food groups where the reduction is due to a large drop in quantities purchased are bread, flour, fresh fruit and processed fruit and fruit products. The drop in purchases of fresh fruit is explored in more detail in the fruit and vegetables section of this chapter. Purchases of alcoholic drinks for household supplies decreased in 2008 but in 2009 increased 12.9% to return to 2007 levels.

Table 5.5 Foods contributing to increases and decreases in household energy intake

	2008	2009	change	%change
	<i>kcal per person per day</i>			
Other cereals and cereal products	231	239	7.8	3.4
Bread	217	216	-1.3	-0.6
Other meat and meat products	212	212	-0.8	-0.4
Fats	178	175	-2.8	-1.6
Milk and cream	173	179	5.3	3.0
Processed vegetables	128	130	2.2	1.7
Biscuits and crispbreads	114	114	-0.3	-0.3
Confectionery	82	84	1.8	2.2
Other foods	76	81	4.7	6.2
Cakes, buns and pastries	75	77	1.8	2.4
Sugar and preserves	65	64	-1.1	-1.7
Carcase meat	58	58	0.3	0.6
Cheese	58	61	3.3	5.7

Table 5.5 continues on next page

Table 5.5 Foods contributing to increases and decreases in household energy intake continued

	2008	2009	change	%change
Soft drinks	55	60	4.7	8.5
Alcoholic drinks	53	59	6.8	12.9
Processed fruit and fruit products	51	50	-1.0	-1.9
Fresh fruit	47	46	-1.7	-3.6
Fresh and processed potatoes	46	44	-1.8	-3.9
Fish	32	32	0.4	1.3
Flour	31	29	-2.3	-7.5
Other fresh vegetables	18	17	-0.2	-1.1
Eggs	17	18	0.5	3.1
Beverages	6	6	0.0	-0.7
Fresh green vegetables	5	5	0.0	-0.9
<b>Total</b>	<b>2028</b>	<b>2054</b>	<b>26</b>	<b>1.3</b>

Chapter 2 (Table 2.1, 2.2, 2.3) gives a breakdown of the top 3 categories of food providing energy from household purchases.

Table 5.2 shows the categories where consumers traded down within the same food group. Where this has been achieved there is normally little effect on calories contributed. For example energy from sugar and preserves fell by 1.7 percentage points despite a price rise of 13.2%. It is also worth noting that household purchases of bread, milk, potatoes, fruit and vegetables have been on downward trends for the past four years as shown in Chapter 1 Table 1.8 so the reductions in 2009 cannot solely be linked to price.

### 5.9 Fruit and vegetables

Increasing the consumption of fruit and vegetables has long been a Government policy. Using estimates of purchases as a proxy for consumption, long term trends become apparent. Table 5.6 and Figure 5.4a and 5.4b show details of the changes in purchases for fresh and processed fruit and vegetables but not potatoes.

Table 5.6 Quantities of household purchases of fruit and vegetables in the UK, 1975 to 2009

	1975	1990	2000	2006	2007	2008	2009	RSE (a)	%chg since 2008	%chg since 2006	trend <sup>(b)</sup>
<i>average grams per person per week unless otherwise stated</i>											
Fruit and vegetables excluding potatoes	1868	2170	2336	2454	2421	2317	2246	✓✓✓	-3.1	-8.5	↘
Fruit	738	962	1189	1313	1281	1199	1143	✓✓✓	-4.7	-12.9	↘
Fresh fruit	511	624	765	855	855	790	762	✓✓✓	-3.6	-10.9	↘
Processed fruit and fruit products	228	338	424	458	426	409	381	✓✓✓	-6.8	-16.8	↘
Fruit juices (ml)	42	225	332	366	340	325	302	✓✓✓	-7.1	-17.5	↘
Fresh green vegetables	341	287	246	221	224	203	201	✓✓✓	-1.1	-9.2	↘
Other fresh vegetables	405	475	506	566	566	557	552	✓✓✓	-0.9	-2.4	
Processed vegetables excluding potatoes	385	446	395	355	350	358	350	✓✓✓	-2.1	-1.4	
Fresh and processed potatoes	1378	1199	1002	810	781	776	761	✓✓✓	-2.0	-6.1	↘

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available

(b) an arrow indicates a statistically significant linear trend since 2006, see Annex B.

Figure 5.4a Household purchases of fruit

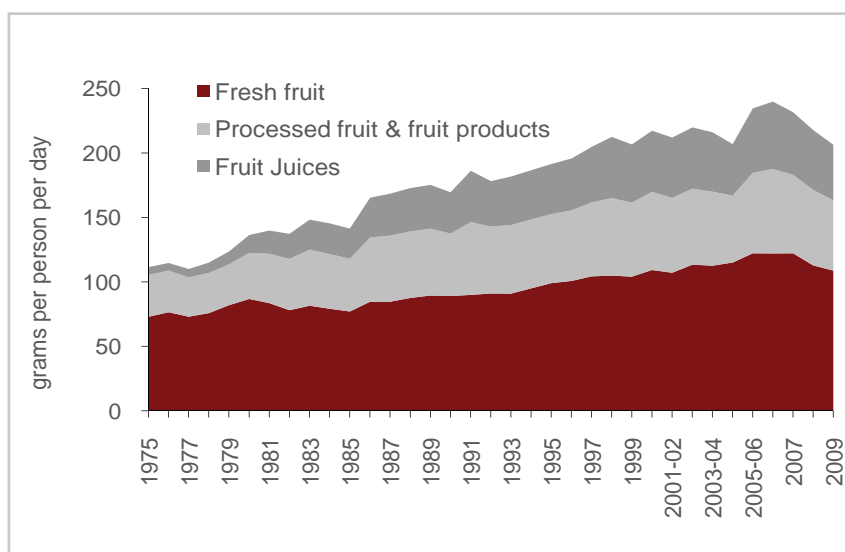
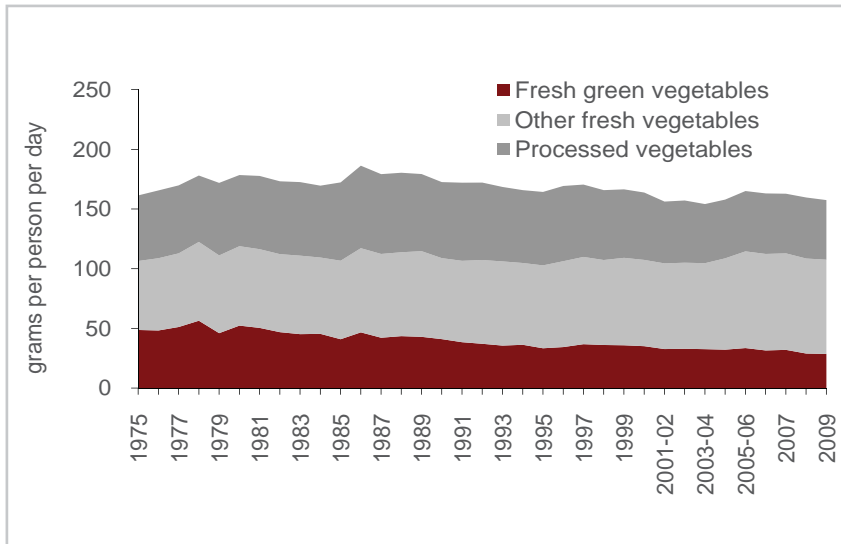


Figure 5.4b Household purchases of vegetables (excluding potatoes)



The rise in purchases since the 1970s is observable in all fruit categories but has taken a dip in the last three years and fruit purchases are now on a downward trend according to the four year trend estimate. The long term decline in fresh green vegetable purchases since the mid seventies is no longer as dramatic, though a downward trend is still evident over the last four years. Overall purchases of fruit and vegetables excluding potatoes are now on a downward trend according to the 4 year trend estimate and back at 2005-06 levels.

Fresh fruit prices rose 6% in 2009 and vegetable prices rose 7% (see [Table 5.1](#) Average annual price indices in 2007, 2008 and 2009 compared to 2001). For fresh fruit, consumers spent almost the same amount of money in 2009 but bought less and traded down in the fresh fruit category. For vegetables, consumers spent more (up nearly 4%) but bought slightly less (down 1.3%) and did less trading down than they did for fruit.

## 5.10 Comparing to 5 A DAY

The 5 A DAY policy is aimed at increasing consumption of fruit and vegetables. An adult portion of fruit is considered to be 80 grams. Following the 5 A DAY advice this leads to a recommended daily consumption of a minimum of 400 grams of fruit and vegetables excluding potatoes. Consumption at this level is associated with a reduced risk of cardiovascular disease and some cancers.

At present, potatoes are not counted towards the recommended 5 A DAY for fruit and vegetables. This is in part because in the UK they are eaten primarily as the starchy carbohydrate aspect of a meal and partly because the epidemiological evidence which underpins the 5 A DAY message did not include potatoes within the analysis that identified the reduced risk of disease.

Using purchases data, a basic estimation of 5 A DAY can be calculated. It is difficult to define 5 A DAY based on the classification of food recorded. Data presented here includes all purchases of fruit and vegetables plus nuts, all fruit juice, beans and pulses, but excludes fruit and vegetables contained in composite products and all fruit and vegetables eaten out.

The figures reported are subject to over or under-estimation for various reasons. They may be overestimated because they include:

- nuts which are excluded from 5 A DAY
- all fruit juices which are restricted in 5 A DAY to one portion (150 ml)
- all pulses which are also restricted to one portion per person per day
- minority starchy vegetables like yams, cassava and plantain that do not count, and
- the assumption that all fruit and vegetables purchased are eaten, which is not the case as detailed in 'avoidable and unavoidable food waste'.

They may be underestimated because:

- they exclude eating out data (eating out comprises 11% of food energy per person per week)
- no allowance is made for smaller portions for children where there is no guideline portion weight set.
- no estimate is made of the fruit and vegetable content of mixed dishes such as spaghetti bolognese and fruit pies.
- tomato puree and dried vegetables have not had conversion factors applied.

### **Avoidable and unavoidable food waste**

Analysis by Defra on WRAP's survey of household food waste published in July 2010 found that the amount of fruit and vegetables unavoidably wasted such as melon skins, plum stones, carrot tops was 770,000 tonnes per year. Possibly avoidable fruit and vegetable waste such as potato peelings and outer leaves of cabbages was 370,000 tonnes per year. Avoidable fruit and vegetable waste was 1,340,000 tonnes per year.

Total purchases of fruit and vegetables in 2009 were 7,112,890 tonnes. Applying the previous estimates of food waste we can estimate that around a fifth of all fruit and vegetable purchases that could be eaten are wasted and about third of all fruit and vegetable purchases are not eaten.

Table 5.6 shows that estimated purchases of fruit and vegetables were an average of 2,246 grams per person per week in 2009. To convert to daily portions:

Convert from grams per week to grams per day:

$$2,246 \text{ grams} / 7 \text{ days} = 320.9 \text{ grams a day.}$$

Convert from grams per day to 5 A DAY portions by dividing by 80:

$$320.9 / 80 = 4 \text{ portions purchased.}$$

However as we estimate that a third of all fruit and vegetable purchases are not eaten, either because they are not edible or because edible food is wasted, then this 4 portions as purchased is reduced to 2 and two thirds (2.6) of a portion per person per day.

The Department of Health takes the policy lead on public health. According to the Department of Health's 2008 Health Survey for England, women aged 16 and over consumed an average of 3.8 portions per day, whilst men aged 16 and over consumed an average of 3.5 portions per day. Reported daily consumption of five or more portions of fruit and vegetables increased between 2001 and 2006 but has since fallen back to 25% for men and 29% for women in 2008.

The Health Survey for England is a separate data source that provides different estimates of fruit and vegetable consumption in England. The 2009 Health Survey for England report is due to be published in December 2010 see [www.ic.nhs.uk/pubs/hse08physicalactivity](http://www.ic.nhs.uk/pubs/hse08physicalactivity)

The FSA devised a method for the 2008-09 National Diet and Nutrition Survey (NDNS) that estimates the fruit and vegetable content of composite foods and dishes. NDNS estimates total consumption of fruit and vegetables in men was 234g per day, unchanged from the previous survey, and in women was 253g per day, similar to the previous survey (238g per day). Taking vegetables from composite dishes into account, vegetable intakes were underestimated by previous methods by 25-35g per day for children and 40-50g for adults. By comparison, fruit intakes including those from composite dishes were only 2-6g higher (3-6%) than assessed by previous methods, since there are far fewer composite dishes containing fruit.

## 5.11 Comparison of selected nutrient intakes to dietary reference values

The rest of the chapter focuses on three key macronutrients: total fat, saturated fatty acids, and non-milk extrinsic sugars (NMES); and sodium and fibre. Table 5.7 summarises the Dietary Reference Values (DRV), the estimated intake from the survey data for food purchases in 2009 and in the right hand column the percentage above or below the DRV that estimated intakes were in 2009. For example, for sodium the DRV is 2.4 grams a day maximum per adult. The survey data indicates that intakes were 2.82 grams per person per day; this is 18% (or nearly a fifth) more than the DRV.

Table 5.7 Comparison to dietary reference value

Item	Dietary Reference Value recommended by COMA*	Intake in 2009	Comparison with DRV
Total fat	35% of food energy intake maximum	38.5%	10% above
Saturated fatty acids	11% of food energy intake maximum	14.5%	32% above
NMES	11% of food energy intake maximum	14.2%	29% above
Sodium	2.4g maximum	2.82 g	18% above
Fibre	18g minimum	15.2 g	-16% below

\* Dietary reference values excluding alcohol

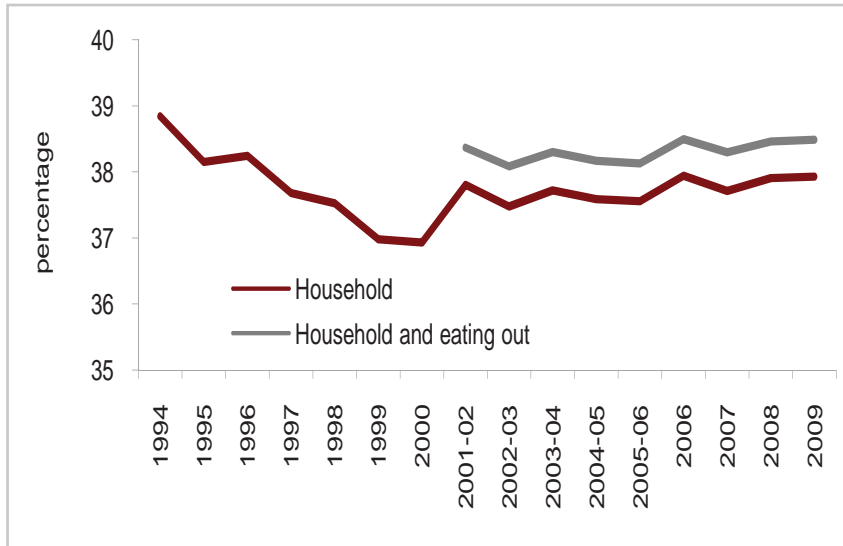
## 5.12 Fat and saturated fatty acids

The guidelines for fat intake are that average (population) intake of total fat should account for no more than 35% and saturated fatty acids for no more than 11% of food energy intake. Data presented here shows that population average intakes of both total fat and saturated fatty acids exceed these Government recommendations.

Having too much saturated fat in the diet can increase the amount of cholesterol in the blood, which increases the chance of developing heart disease. It is better to eat foods rich in monounsaturated fatty acids and polyunsaturated fatty acids than foods rich in saturated fatty acids.

In 2009 people obtained 38.5% of food energy from fat, based on both household purchases and eating out. This level is little changed over the last 4 years but remains above the recommended maximum level of 35%. Figure 5.5 shows that the percentage of energy from fat has fluctuated around the 38% level since Family Food began in 2001-02.

Figure 5.5 Intakes of fat as a percentage of food energy intake from household supplies and all food



The percentage of food energy derived from saturated fatty acids is estimated to be 14.5% in 2009, based on a combination of household purchases and eating out, which is over the recommended level of 11%. It has fluctuated since 2001-02 in a range between 14.5% and 14.8%. Figure 5.6 shows the gradual decline over the years.

Figure 5.6 Intakes of saturated fatty acids as a percentage of food energy intake from household supplies and all food

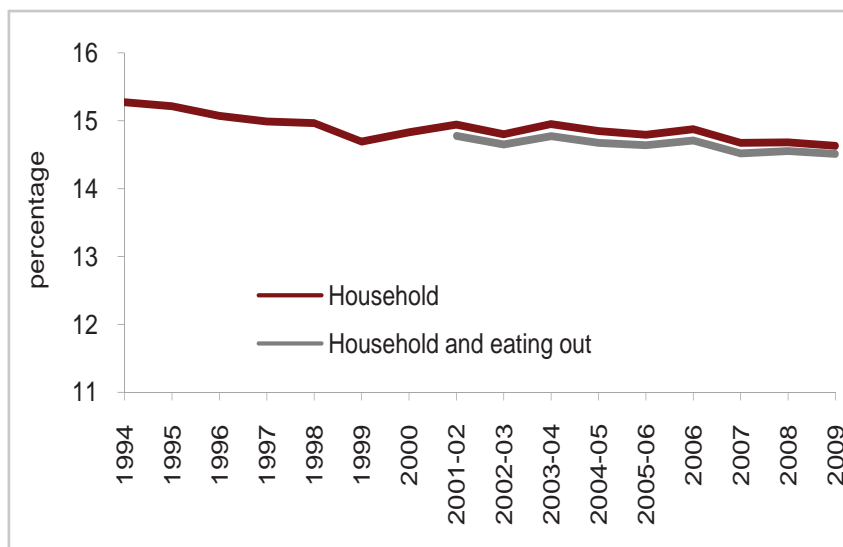


Figure 5.7 shows actual intakes and percentage energy intakes of saturated fatty acids. Actual intakes had been showing a downward trend but rose slightly in 2009 by 0.3 grams, whilst the percentage that saturated fatty acids made up of total diet intake decreased slightly.

Figure 5.7 Intakes of saturated fatty acids as a percentage of food energy intake from all food and actual saturated fatty acids intake from all food

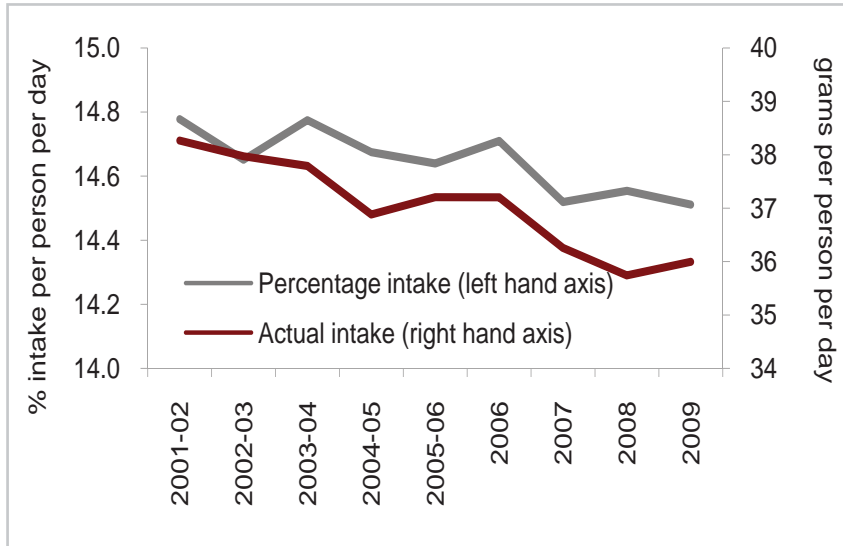


Table 5.8 shows the changes in the types of food purchased that have meant that the total amount of fat per person per day rose by less than 1 per cent in 2009 compared to 2008. The largest percentage rise is in cheese and 'other cereals and cereal products', and the largest drops in 'other foods' and fats. However, as described in Annex B, the nutrient compositions for some of these products including 'non-carcase meat and meat products' were updated in 2009.

Table 5.8 Foods contributing to increases and decreases in household saturated fatty acids intakes

	2008	2009	change	% change
	<i>grams per person per day</i>			
Fats	6.0	5.9	-0.2	-3.2
Non-carcase meat and meat products	4.8	4.8	0.0	-0.2
Cheese	3.0	3.2	0.2	5.6
Biscuits and crispbreads	2.6	2.6	0.0	0.6
Confectionery	1.9	1.9	0.0	2.5
Carcase meat	1.6	1.6	0.0	0.6
Other cereals and cereal products	1.5	1.6	0.1	4.3
Cakes, buns and pastries	1.3	1.3	0.0	1.4
Other foods	1.4	1.3	-0.1	-5.0
Processed vegetables	1.3	1.3	0.0	3.4
Bread	0.6	0.6	0.0	-2.5
All other household foods	6.1	6.3	0.2	2.6
<b>Total</b>	<b>32.3</b>	<b>32.5</b>	<b>-0.3</b>	<b>0.8</b>



Alternative estimates of dietary intakes are available from the National Diet and Nutrition Survey (NDNS) which measured food consumption directly for adults and children. NDNS 2008-09 found an average of 34-36% of food energy to be derived from total fat, which is close to Government recommendations. Saturated fatty acid intakes as a percentage of food energy were lower than in previous surveys for all age groups at 12.8% of food energy for adults. See [www.food.gov.uk/science/dietarysurveys/ndnsdocuments/ndns0809year1](http://www.food.gov.uk/science/dietarysurveys/ndnsdocuments/ndns0809year1)

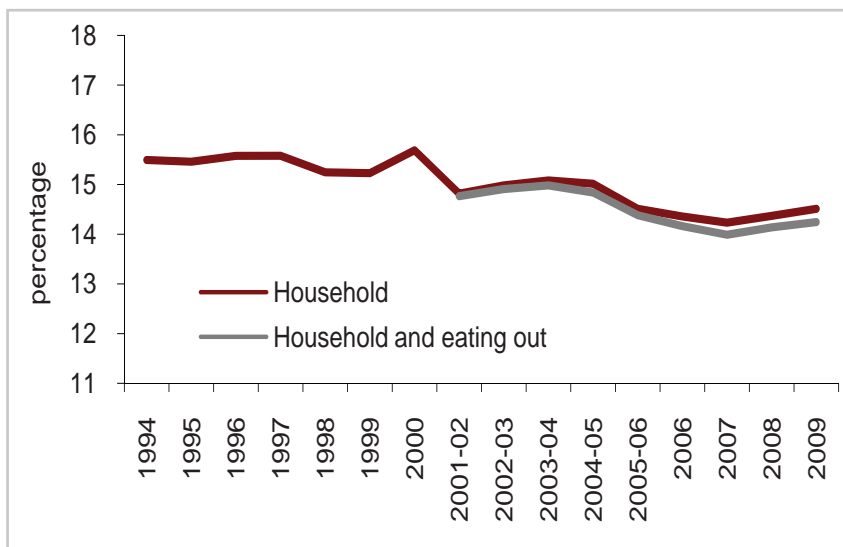
### 5.13 Non-milk extrinsic sugars

Non-milk extrinsic sugars (NMES) can be a major contributor to the development of dental decay when consumption is accompanied by poor dental hygiene.

Extrinsic sugars are any sugars not contained within the cellular structure of a food, either because they have been added to a food in the form of table sugar, honey etc; or because the food has been processed which has released sugars from the cell structure e.g. fruit juice. The guidelines for NMES are that intake should account for no more than 11% of food energy intake. This survey shows that population average intake of NMES exceeds this recommendation.

The sugar naturally present in milk and milk products (lactose) is excluded from the definition as it is not considered to contribute substantially to dental decay.

Figure 5.8 Non-milk extrinsic sugars as a percentage of food energy intake from household supplies and all food



In 2009 the percentage of food energy derived from NMES was 14.2%. This is nearly a third more than the recommended level of 11%. The contribution of NMES to energy intake hardly changed between 1994 and 2000. The recorded drop in 2001 is unreliable because it coincided with a major change in the survey. Between 2003 and 2007 the percentage of energy from NMES was dropping but this downward trend did not continue in 2008 and 2009.

Figure 5.9 shows that overall NMES intake and the percentage of food energy intake derived from NMES both increased in 2009.

Figure 5.9 Intakes of non-milk extrinsic sugars: as a percentage of food energy intake from all food, and actual non-milk extrinsic sugars intake from all food

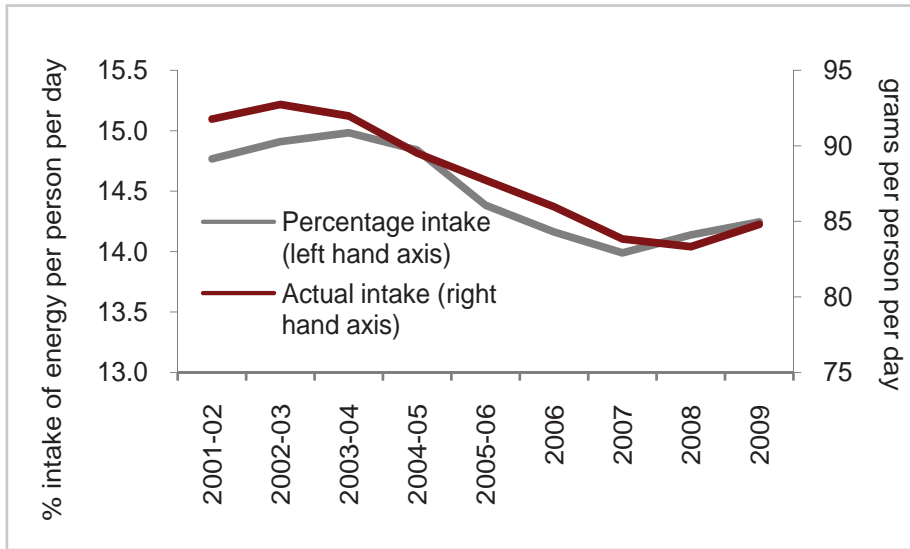


Table 5.9 shows that two of the largest contributors to NMES, 'soft drinks' and 'confectionery' for household supplies increased in 2009. The largest drops in contribution to NMES were: 'processed fruit and fruit products', 'processed vegetables' and eating out confectionery.

Table 5.9 Foods contributing to increases and decreases in household and eating out Non-milk extrinsic sugars intake

Household (hh) and eating out (eo) food groups		2008	2009	change	% change
<i>grams per person per day</i>					
hh	Sugar and preserves	17.1	16.8	-0.3	-1.8
hh	Soft drinks	14.5	15.9	1.3	9.1
hh	Confectionery	11.4	11.7	0.3	2.7
hh	Other foods	5.3	5.9	0.6	11.2
hh	Biscuits and crispbreads	5.7	5.7	0.0	-0.3
hh	Processed fruit and fruit products	6.1	5.7	-0.4	-7.1
hh	Cakes, buns and pastries	5.1	5.1	0.0	0.3
hh	Other cereals and cereal products	4.5	4.5	0.1	1.8
hh	Milk and cream	3.0	3.1	0.1	3.3
eo	Soft drinks including milk	3.0	2.9	0.0	-1.5
eo	Alcoholic drinks	1.7	1.8	0.0	1.8
hh	Alcoholic drinks	1.1	1.2	0.1	9.1
eo	Confectionery	1.1	1.0	-0.1	-8.1
hh	Processed vegetables	1.0	0.9	-0.1	-12.3
eo	Ice cream, desserts and cakes	0.8	0.8	0.0	-0.7
hh	Beverages	0.6	0.6	0.0	-3.9
combined	All other food and drink	1.4	1.4	0.0	-2.3
<b>Total</b>		<b>83.3</b>	<b>84.8</b>	<b>1.5</b>	<b>1.8</b>

According to the NDNS people are still eating too much NMES; currently for adults they comprise 12.5% of food energy intake compared to the recommended 11%.

## 5.14 Sodium

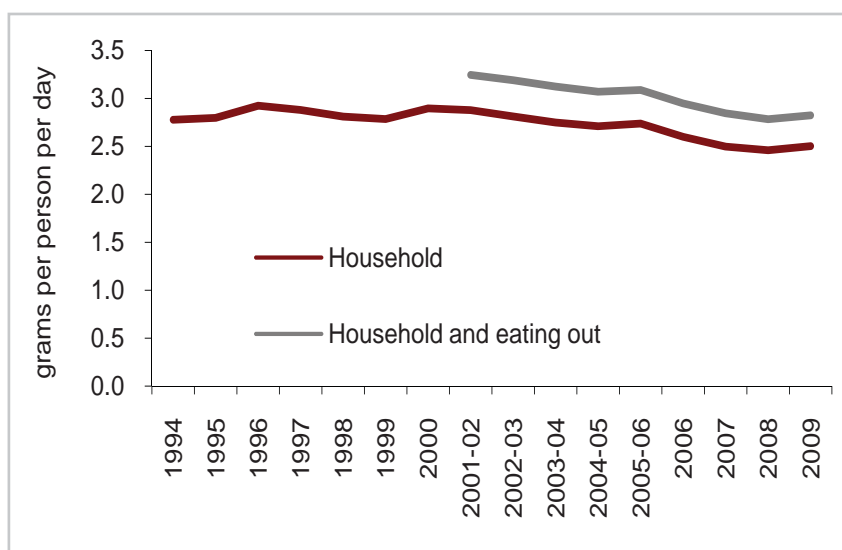
Sodium Chloride in the diet is more commonly known as salt. It is the sodium in salt that can be bad for health. Too high an intake of sodium can raise blood pressure, which triples the risk of developing heart disease or having a stroke at any age. Salt is approximately equal to sodium multiplied by 2.5.

In the report 'Nutritional Aspects of Cardiovascular Disease', COMA recommended an intake of salt of 6 grams per day or less for adults. This is equivalent to an intake of 2.4 grams of sodium per day. The amounts are lower for children. This recommendation was endorsed by the Scientific Advisory Committee on Nutrition in its 2003 report 'Salt and Health', available at:

[www.sacn.gov.uk/reports\\_position\\_statements/reports/salt\\_and\\_health\\_report.html](http://www.sacn.gov.uk/reports_position_statements/reports/salt_and_health_report.html)

The method note number 5 'Nutrient Intakes', explains how average RNI's are calculated.

Figure 5.10 Sodium intake from household supplies and all food



Sodium intake from household purchases and eating out is estimated to be an average of 2.82 grams per person per day. This is nearly a fifth over the recommended level despite being likely to be an underestimate as it excludes sodium from table salt. Sodium intake from household purchases and eating out had been on a downward trend since 2005-06 until 2008 but the latest evidence shows a slight rise. Sodium intake is 4.5% lower in 2009 than it was in 2006.

Table 2.8 in Chapter 2 shows that for household food the biggest contributors to sodium intake were 'other meat and meat products' and 'bread'. Purchases of other meat remained constant between 2008 and 2009 (Chapter 1 Table 1.8) and bread fell slightly. Annex B shows which products underwent re-formulation and new composition profiles which affect estimates of sodium intake.

The data displayed here are valuable for assessing trends in sodium intake, but are not the best source of data for accurately measuring intakes. The best method of measuring sodium intake is by analysis of sodium excretion in urine samples collected over a 24-hour period. The Food Standards Agency has carried out surveys to estimate sodium intake using this method. The most recent survey was carried out in early 2008. Information on the findings is available at: [www.food.gov.uk/science/dietarysurveys/urinary](http://www.food.gov.uk/science/dietarysurveys/urinary)

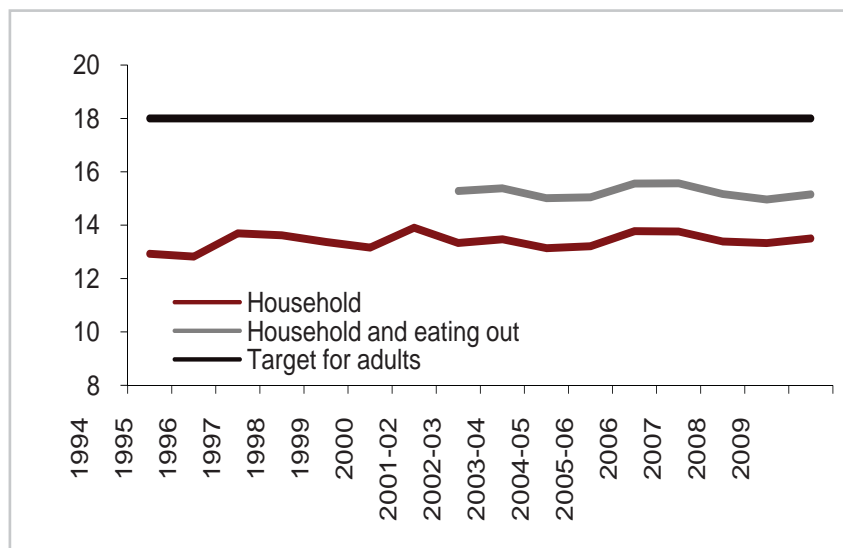
The Health Survey for England also assesses trends in sodium intake by analysis of single urine samples.

## 5.15 Fibre

Dietary fibre has a number of positive health effects. It helps to prevent constipation, lower blood cholesterol levels and control blood glucose levels.

The Government guideline is for an average of 18 grams of fibre intake per person per day for adults. The report says that intakes for children should be proportionately less, but does not provide a specific figure. For 2009 we estimate the fibre content of food purchases, household and eating out combined, to be 15.2 grams per person per day which is 2.8 grams below the recommended level. There has been a small increase in fibre intake since 2008 but it has fallen 2.7% since 2006. However, it should be noted that the lower guideline amounts for children have not been taken into account in the analysis.

Figure 5.11: Fibre intake from household supplies and all food



Focusing on household purchases, Table 5.10 shows that the increase in fibre intake in 2009 is made up of very slight changes across all food categories with no actual differences of greater or less than 0.1 grams per person per day.

Table 5.10 Foods contributing to increases and decreases in household fibre intake

Household food groups	2008	2009	% change	
			grams per person per day	% change
Bread	2.6	2.6	0.01	0.4
Other cereals and cereal products	2.4	2.4	0.06	2.3
Processed vegetables	2.2	2.3	0.07	3.3
Fresh fruit	1.2	1.2	-0.03	-2.3
Other fresh vegetables	1.1	1.1	-0.02	-1.4
Fresh and processed potatoes	0.8	0.8	-0.03	-3.9
Biscuits and crispbreads	0.6	0.6	0.00	-0.1
Non-carcase meat and meat products	0.4	0.5	0.06	13.8
Fresh green vegetables	0.4	0.4	0.00	-0.8
Processed fruit and fruit products	0.4	0.4	0.00	-0.6
All other foods	1.3	1.3	0.06	4.8
<b>Total</b>	<b>13.3</b>	<b>13.5</b>	<b>0.2</b>	<b>1.3</b>

On average, intake of fibre as measured by the 2008-09 NDNS, are 14g per day for adults, some way below the recommended 18g.

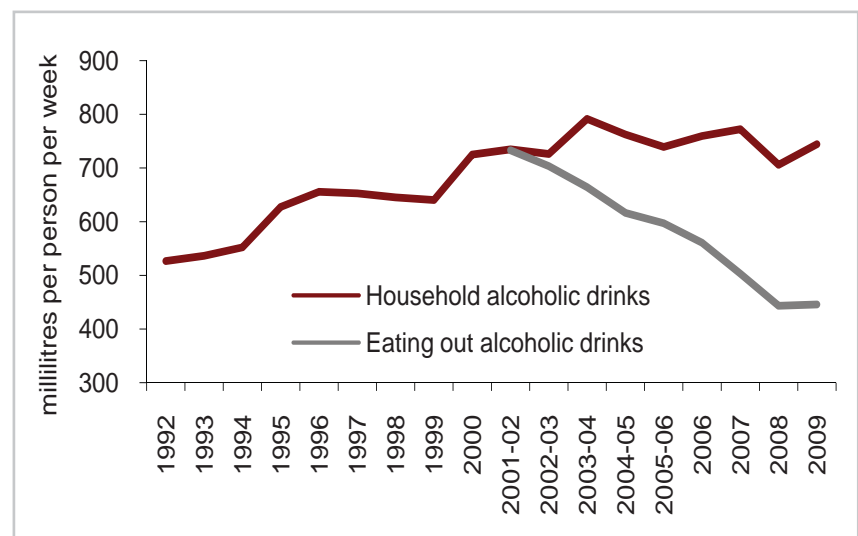
## 5.16 Alcohol

The Department of Health is responsible for Government health policy on alcohol misuse. Regularly drinking above the recommended daily limits for lower risk drinking of 2-3 units for women and 3-4 units for men, significantly increases the risk of ill health.

In the National Diet and Nutrition Survey 2008-09 for the adult population overall (which means including people that do not drink any alcohol), alcohol provided about 6% of energy intake, with men considerably higher at nearly 8% compared with women at 5%.

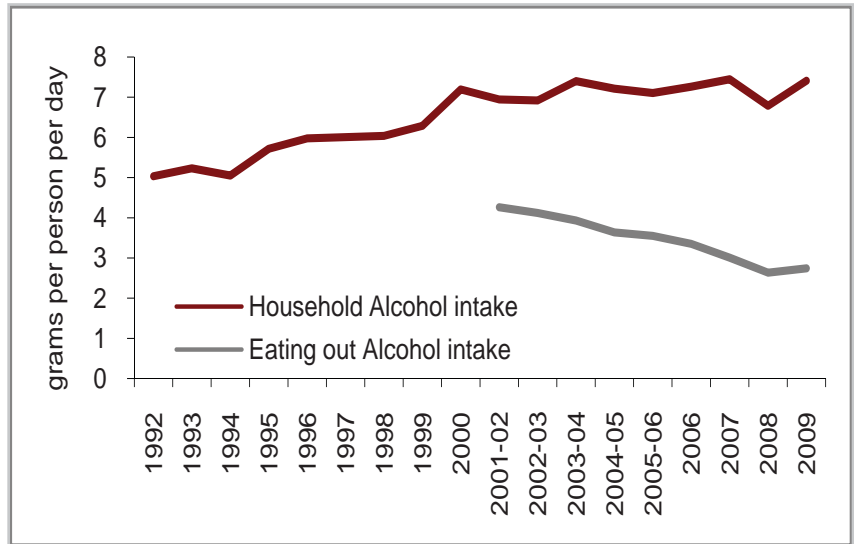
Chapter 1 shows that household purchases of alcoholic drinks rose by 5.5% in 2009 but are 2% lower than in 2006. Eating out purchases rose by 0.5% and are 20.7% lower than 2006. See Figure 5.12a for alcoholic purchases since 1992.

Figure 5.12a Alcohol purchases



Chapter 2 shows that alcohol intake from all food and drink in 2009 was 7.7% higher than in 2008 but it was 4.3% lower than it was in 2006 (Table 2.6). Eating out intake (Table 2.9) has shown a large drop of 18.1% since 2006 but rose 4.1% in 2009 and accounts for 27% of all alcohol intake (Table 2.6). See Figure 5.12b for alcohol intakes since 1992.

Figure 5.12b Alcohol intake



## Annex A: Nutrient Composition Updates

As part of the quality plan, Defra have been working with the Food Standards Agency (FSA) to review and update the market share data that is used to estimate the nutrient intakes, with a view to providing more current estimates of intakes. This annex explains the steps taken and gives an example of how the overall intakes will change when the new data for crisps is included.

### Background

Food and drink purchases are converted into energy and nutrients via food nutrient composition details supplied by the FSA from the NDNS. For each of the 500 food codes within the Family Food report there is at least one NDNS nutrient composition code. If more than one NDNS nutrient composition code is needed to make up a food type in Family Food, then a weighted average nutrient composition is calculated based on market share estimates for each of the NDNS food types. Method Note number 5 explains the method in more detail, and Annex B contains a list of foods that have had their nutrient composition revised since 2006.

The nutrient composition data that make up the Family Food food codes are updated on a rolling basis. However, many market share calculations date back to 1999 and need to be updated with more recent market intelligence. To do this, we are using detailed household purchases data from Kantar (a commercial market research company) and mapping this to NDNS food nutrient composition. This will yield new market share estimates that will be used to revise nutrient compositions for Family Food.

This analysis is not straightforward as data from Kantar can be at brand level and can be grouped according to marketing, whereas we need to group foods according to their nutritional content. For example, some Kantar pizza codes are: deep pan or stonebake, whereas from a nutritional point of view we need to know, for instance, if it has meat or cheese topping. In these cases, we need to go to more detailed level of coding and this takes time.

At the same time we are examining the NDNS food codes and assessing whether they are still representative of the Family Food food codes. The revised nutrient compositions have not been finalised and the work presented in this annex has not been used in the main report.

### Working example: analysis of crisps market share

Table A1 shows the three food codes from NDNS which make up the crisps code 20002 in Family Food. The market share and data for energy and key nutrients are also included. 20002A 'potato crisps' has the largest share making up nearly 85% of crisps bought, low fat crisps less than 4% and other potato snacks such as Hula Hoops, and Quavers nearly 12%.

Table A1: Nutritional composition of Crisps – 20002 – used in 2009 Family Food report

NDNS Code	Name	Market Share	Energy (kcal)	Total Fat	Saturated Fat	Total				
						Protein	Sugar	Carbohydrate	Fibre	Sodium
<i>Grams per 100g unless otherwise stated</i>										
20002A	Potato crisps	0.845	536	34	9.2	5.7	2.4	55.1	3.8	0.68
20002B	Potato crisps low fat	0.037	463	22	2.0	6.6	1.5	63.5	5.9	0.60
20002C	Other potato snacks	0.118	462	29	13.0	3.9	0.5	58.5	2.6	1.40

Note, products like 'wotsits' and other non-potato 'crisps' e.g. made from wheat, are coded under 'cereal snacks'.

There have been many advances in the fats and oils used in the cooking of crisps so the nutritional compositions shown in Table A1 are perhaps no longer current. When the new market shares were analysed, new NDNS food codes were also investigated. Table A2 below shows: the new NDNS codes that we selected, their nutritional composition and their calculated market share.

**Table A2: Revised nutritional composition of Crisps – 20002 – to be used in future Family Food reports.**

NDNS code	NDNS description	Market share	Energy kcal	Total Fat	Saturated Fat	Protein	Total Carbohydrate Sugar	Fibre	Sodium	
<i>Grams per 100g unless otherwise stated</i>										
7203	Quavers	0.05	535	30	2.5	2.5	2.4	67.9	1.0	1.03
7872	Potato rings eg Hula Hoops	0.139	480	22	1.9	3.6	0.3	70.5	1.7	0.90
10000	Potato crisps, fried in veg oil	0.139	519	32	8.4	4.3	1.5	57.4	2.4	0.62
10001	Potato crisps in sunseed oil	0.642	493	29	2.5	6.2	0.9	55.8	4.6	0.66
10003	Baked potato crisps in sunflower oil	0.031	396	8	1.1	6.4	7.4	80.1	3.9	0.67

The new categories were chosen to reflect the current crisp market. From the analysis, it is clear that potato crisps are still the most popular but as they are now cooked in sunseed oil their saturated fat content is much reduced. Also their market share has decreased from 85% to (14 + 64) 78%. A new food code has been added for baked potato crisps (3% of the market) and now Hula Hoops and Quaver type crisps have individual codes.

In terms of how this new data would affect an overall nutrient content for crisps, Table A3 demonstrates the percentage change in the key nutrients. Fat has decreased 21.6% and saturated fats have decreased by 68%.

**Table A3: Changes to nutrient composition of crisps a result of market share and NDNS food code updates.**

	Value used in 2009	New value	Actual difference	% change
<i>Grams per 100g unless otherwise stated</i>				
Energy (kcal)	525	494	-30.4	-5.8
Fat	33	26	-7	-21.6
Saturated fat	9.4	3.0	-6.4	-68.0
Protein	5.5	5.8	0.3	4.8
Total sugars	2.1	3.3	1.2	54.2
Carbohydrate	56	64	8	14.6
Fibre	3.7	3.5	-0.2	-5.4
Sodium	0.76	0.70	-0.06	-8.3



## Further work

The Family Food codes that we have identified as test case for market share analysis and investigation into revising the NDNS food codes used are:

- low fat spreads and reduced fat spreads
- cereal snacks
- processed cheese
- processed potatoes
- yogurt



## Annex B: Background Information

This annex gives an overview of how the Family Food survey has developed from its origins in the 1940s and provides information on the survey methods and terms used in the report.

### In this Annex

1. List of tables
2. Family Food data source
3. History
4. Main strengths of the Family Food Module
5. Using trend data from 1974 onwards
6. Sampling frame
7. Response rate and accuracy
8. Food and drink recording
9. Definition of Household Reference Person (HRP)
10. Household level estimation
11. Allowing for food waste
12. Calculating free food and unspecified meals
13. Calculating intakes
14. Calculating trends and ticks
15. Family Food Committee
16. Related data sources
17. Living Costs and Food Survey
18. Definitions
19. Difference between purchased quantities and amounts consumed
20. Feedback

### 1. List of tables

Table B1: Key dates in the evolution of data collection

Table B2: Food and drink codes that have been updated, 2006 to 2009

Table B3: How to interpret ticks and crosses

### 2. Family Food data source

The figures in Family Food are sourced from The Living Costs and Food Survey (LCFS) run by the Office for National Statistics. The Family Food Module of LCFS collects:

- detailed quantity and expenditure information on household purchases of food and drink, and
- itemised lists of eating out food and drink purchases.

The Office for National Statistics has overall project management and financial responsibility for the survey while Defra sponsors the specialist food data.

### 3. History

The National Food Survey was established in July 1940 to provide an assessment of the effectiveness of the national food policy at the time. The original survey was largely restricted to urban working class households and measured purchases of food for household stocks.

In 1950 the survey was extended to a national sample representing as far as possible a complete cross section of the Great British population.

In 2001 the National Food Survey was merged with the Family Expenditure Survey to form the Expenditure and Food Survey. The Expenditure and Food Survey was an extended Family Expenditure Survey, extended to incorporate the National Food Survey requirement. This extension is now known as the Family Food Module.

In 2008 the Expenditure and Food Survey was renamed as the Living Costs and Food Survey when it became part of the Integrated Household Survey.

**Table B1 Key dates in the evolution of data collection**

National Food Survey			Family Food Module		
1940 to 2000			Expenditure and Food Survey 2001 to 2007		Living Costs and Food Survey 2008 onwards
1992	1994	1996	2001-2002	2006	2008
Confectionery, alcoholic drinks and soft drinks brought home added to the survey	Eating out added to the survey	Northern Ireland added to the survey	National Food Survey and Family Expenditure Survey merged into one survey	Survey moved to calendar year	Part of the Integrated Household Survey

Electronic versions (in pdf format) of the National Food Survey reports from 1997 to 2000 and Family Food reports from 2001-02 are available on the Defra website: [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/index.htm) Published copies of previous years' reports are available to purchase from TSO (The Stationery Office): [www.tsoshop.co.uk/bookstore.asp](http://www.tsoshop.co.uk/bookstore.asp).

Further information on the history of the survey is in the method note number 1 'About Family Food'.

## 4. Main strengths of the Family Food Module

The Family Food Module provides:

- long terms trends with much data going back to 1974 and some data going back as far as 1940,
- household food purchases recorded with minimal under-reporting since they are based on information on attached till receipts,
- an annual sample size sufficient to allow analysis by Government Office Region (GOR) and demographic characteristics,
- trends in eating out, defined as food and drink not brought into the household.

Data in Family Food conforms fully to National Statistics standards. [www.ons.gov.uk/about-statistics/ns-standard/index.html](http://www.ons.gov.uk/about-statistics/ns-standard/index.html)

## 5. Using trend data from 1974 onwards

National level estimates from the National Food Survey from 1974 to 2000 have been adjusted by aligning estimates for the year 2000 with corresponding estimates from the Family Expenditure Survey. Whilst estimates of household consumption from the National Food Survey have been adjusted, a break in the series in 2001-02 remains and should be borne in mind when interpreting reported changes between the years up to 2000 and the years 2001-02 and beyond. National level estimates in the accompanying datasets go back to 1974 and use these adjusted estimates.

The National Food Survey was run on a calendar year basis until it terminated in 2000. Its replacement, The Expenditure and Food Survey, was run on a financial year basis (1st April to 31st March) from 2001 until 2006 when it converted to a calendar year basis. As a consequence there is a three month gap in 2001 and a three month overlap in 2006.

See the method paper note 6 'Adjustments to NFS' [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm)

## 6. Sampling frame

The Living Costs and Food Survey sample for Great Britain is a multi-stage stratified random sample with clustering. It is drawn from the Small Users file of the Postcode Address File – the Post Office's list of addresses. The Northern Ireland sample is drawn as a random sample of addresses from the Land and Property Services Agency list. The survey is a voluntary sample survey of private households run at household level. The survey is continuous, interviews being spread evenly over the year to ensure that seasonal effects are covered. Each household member over the age of seven keeps a diary of all their expenditure over a 2 week period. The diaries record expenditure and quantities of purchases of food and drink rather than consumption of food and drink. In 2009 the survey collected the diaries of 13760 people within 5825 households across the United Kingdom.

See the method note number 2 'Survey sampling for Family Food' [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm)

## 7. Response rate and accuracy

Response for this survey for 2009 was 50% for Great Britain and 56% for Northern Ireland, these rates are in line with other major Government surveys.

Under-reporting is a problem with all dietary surveys but is considered to be lower in the Family Food Module. Its focus on all expenditure with most food items collected from till receipts reduces the scope for under-reporting of household purchases. The method note no 2 'Survey sampling for Family Food' details historical response rates, and weightings.

## 8. Food and drink recording

The Family Food Module collects quantities and expenditures of food purchases for about 250 household food types and itemised lists of eating out purchases for about 250 eating out food types. The foods are listed in Annex E.

The household category covers all food that is brought into the household. Eating out covers all food that never enters the household, such as restaurant meals, school meals and snacks bought and eaten away from home. Where quantities are not recorded they are estimated using standard portion sizes.

See Method Notes 1 'About Family Food' and 4 'Free food and unspecified meals estimation'.

## 9. Definition of Household Reference Person (HRP)

The survey uses the concept of the Household Reference Person to categorise households according to personal demographic characteristics. From 2001-02 the concept of Household Reference Person (HRP) was adopted on all Government-sponsored surveys replacing the concept of head of household. The HRP is the person who:

- owns the household accommodation, or
- is legally responsible for the rent of the accommodation, or
- has the household accommodation by virtue of their employment or personal relationship to the owner who is not a member of the household.

If more than one person meets these criteria the HRP will be the one with the higher income. If the incomes are the same then the eldest is chosen.

## 10. Household level estimation

The survey collects a range of standard demographic information that can be applied to the household. This includes ethnic origin, income, region, age, socio-economic status, type of employment. Datasets are available to download at [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm)

The data collected in the survey covers food purchases over a two week period, not food consumption. The amount of purchases can vary substantially depending on the amount of shopping taking place in the surveyed period. It is assumed that by averaging over a large number of households the amount of food purchased in the surveyed period is a good approximation to the amount of food consumed.

Although the estimates in this report are presented as averages per person it is not known who in the household consumed what and no attempt is made to show estimates of food consumption by different age and gender groups. It is possible however, using relatively few assumptions, to use statistical techniques to make estimates of average consumption by age and gender from the survey data. An analysis by age and gender groups for 1974 to 1998 was reported in 'National Food Survey 1998', Section 5 - available in pdf format from [www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood//nationalfoodsurvey/documents/NFS1998.pdf](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood//nationalfoodsurvey/documents/NFS1998.pdf)

## 11. Allowing for food waste

Family Food is based on purchases of food and drink not consumption, and the figures published do not allow for any wastage of edible food. In previous reports for household food, a waste estimate of 10% was allowed for when comparing to Reference Nutrient Intakes or Government guidelines. See also 'Difference between purchased quantities and amounts consumed' in this annex. As more evidence about the amount of edible food wasted is available, it is considered that the 10% level is an underestimate for most food types.

## 12. Calculating free food and unspecified meals

Where food is free, it is not recorded in the diary part of the survey (apart from home-grown and wild food). Instead questions are asked during the interview part of the survey about the number of occurrences and types of free food in the last 2 weeks. Free food includes: free work meals, school fruit, welfare milk and meals on wheels.

Most categories of free food are estimated by assigning standard portion sizes to each item. Up until 2000 this estimation wasn't necessary since free food was included in the diary of the National Food Survey.

Unspecified meals arise in the survey when expenditure is recorded but the item is described only in generic terms such as 'Indian meal'. For most meals the diary records an itemised list of its components and Defra applies standard portion sizes to these descriptions. However, for unspecified meals a composite portion size and nutrition profile is applied.

For more information see the method note 4 'Free food and unspecified meals estimation'.

## 13. Calculating intakes

Estimated nutrient intakes are calculated from food purchases using nutrient composition data supplied by the Food Standards Agency (FSA).

The majority of the data is from the FSA's nutrient analysis programme, supplemented by values from manufacturers and retailers. Each of the 500 food codes in the Family Food Module is made up of a number of sub-codes with nutrient composition data attached. A weighted average nutrient composition is calculated for each food code based on estimates of the market share of each sub-code.

The nutrient composition data is updated on a rolling basis to keep information in line with new or reformulated products. All nutrient compositions are based on edible food and take into account inedible (unavoidable) waste e.g. banana skins. The Table B2 lists updates to household food and drink codes over the last 4 years.

Table B2 Food and drink codes that have been updated, 2006 to 2009

Year	Food codes updated
2006	Bacon & ham; baked beans; bread; breakfast cereals; burgers; canned pasta; cheese; crisps & savoury snacks; dips; fast foods; fish products; flours & grains; potato products; ready meals; sausages; soups; sauces.
2007	Biscuits; breakfast cereals; crisps & savoury snacks; fast foods; fats; soft drinks.
2008	Biscuits; cakes.
2009	Biscuits; breakfast cereals; chicken burgers; butter; cakes; cereal convenience foods (e.g. quiche, corn snacks, tortilla chips); chips; cooked poultry; confectionery and chocolate; crispbreads; fish and fish products; ice cream; infant foods (rusks); lard; meat pies, pasties and puddings; pizza; sausage rolls; soft drinks; soup; spreads and dressings; vegetable based ready meals; wine (including low-alcohol).

## 14. Calculating trends and ticks

Trend indicators and reliability ticks are published alongside many of the estimates. The quality assessments are included to make it easier to interpret and use estimates on purchases, expenditure and intakes. In all cases the method is approximate and based on sampling errors ignoring any other kinds of error.

The reliability ticks come directly from the approximate standard errors of the estimates. They indicate how reliable the estimate is. The ticks should be interpreted as laid out in Table B3.

Table B3: How to interpret ticks and crosses

Reliability indicator	Relative standard error of the estimate
✓✓✓	<2.5%
✓✓	2.5% - 5%
✓	5% - 10%
Blank	10% - 20%
*	>20%
-	Not available

Trend indicators in the form of an arrow are intended to provide a guide as to whether there is a short term trend. Four years is chosen as the period over which to check for presence of a statistically significant trend, since it is considered long enough to show a trend and short enough to be current. The method treats four annual estimates as independent measurements and examines the linear regression slope estimator.



Care should be taken when interpreting data with a high standard error (2.5% or more – see ticks). The standard error indicates where there were few instances recorded for an item and so year on year percent changes may be due to chance rather than indicating a true trend.

For more information on methodology see the method note no 3 'Trends and ticks'  
[www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/method/index.htm)

## 15. Family Food Committee

In producing Family Food 2009 Defra have been assisted by the Family Food Committee. The Family Food Committee provides a quality assurance role. As subject matter experts they are consulted to help ensure that the statistical commentary remains relevant and insightful.

The committee's main advice focussed on the interpretation of nutrient intakes, including comparisons with Dietary Reference Values as well as providing editorial input. For members of the committee see Annex C.

## 16. Related data sources

National Diet and Nutrition Survey  
[www.food.gov.uk/science/dietarysurveys/ndnsdocuments/](http://www.food.gov.uk/science/dietarysurveys/ndnsdocuments/)

Health Survey for England  
[www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england](http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles-related-surveys/health-survey-for-england)

The Scottish Health Surveys  
[www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey](http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey)

Welsh Health Survey  
[wales.gov.uk/topics/statistics/theme/health/health-survey/?lang=en](http://wales.gov.uk/topics/statistics/theme/health/health-survey/?lang=en)

Northern Ireland  
[www.dhsspsni.gov.uk/index/stats\\_research/public\\_health.htm](http://www.dhsspsni.gov.uk/index/stats_research/public_health.htm)

Low Income Diet and Nutrition Survey 2004-05  
[www.food.gov.uk/science/dietarysurveys/lidnsbranch/](http://www.food.gov.uk/science/dietarysurveys/lidnsbranch/)

Household Food and Drink Waste in the UK, 2008  
[www.wrap.org.uk/retail/case\\_studies\\_research/report\\_household.html](http://www.wrap.org.uk/retail/case_studies_research/report_household.html)

Experience of household surveys in the UK and in other countries indicates that reported expenditure on a few items (notably tobacco and alcohol) is below the levels which might be expected by comparison with other sources of information. HM Revenue and Customs publish Alcohol Bulletin for alcoholic drinks which provides statistics to National Statistics standards on quantities of alcoholic drinks released for consumption.  
[www.uktradeinfo.com/index.cfm?task=bullAlcohol](http://www.uktradeinfo.com/index.cfm?task=bullAlcohol)

European Union level statistics on food  
[epp.eurostat.ec.europa.eu/portal/page/portal/food/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/food/introduction)  
 Provides an introduction to Food: From farm to fork statistics, where it is possible to access statistics for all 27 countries of the European Union, for example on 'Gross human apparent consumption of main food items'.

## 17. Living Costs and Food Survey

The Office for National Statistics (ONS) publish 'Family Spending' which is an annual report on all forms of household expenditure but does not cover quantities of purchases or as much detail on food and drink categories. Family Spending 2009 is available from the Office for National Statistics' website at: [www.statistics.gov.uk/StatBase/Product.asp?vlnk=361&Pos=1&ColRank=1&Rank=272](http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=361&Pos=1&ColRank=1&Rank=272)

The Office for National Statistics can also provide additional tabulations to meet specific LCF data requests. A charge will be made to cover the cost of providing additional information. Details can be obtained by e-mailing [socialsurveys@ons.gov.uk](mailto:socialsurveys@ons.gov.uk)

Anonymised microdata from the Living Costs and Food Survey (LCF), the Expenditure and Food Survey (EFS) and the Family Expenditure Survey (FES) are available from the United Kingdom Data Archive. Details on access arrangements and associated costs can be found at [www.data-archive.ac.uk](http://www.data-archive.ac.uk) or by telephoning 01206 872143.

Datasets available to download are listed on the website.

## 18. Definitions

### Definition of 'household purchases'

Household purchases include all food and drink brought into the household. The weights and volumes of food and drink apply to when the goods entered the household.

### Reporting of takeaways

Any food bought for consumption within the home is classed as household purchases. This includes for example, fish and chips; drive through brought home; home deliveries of: pizza, Chinese and Indian meals.

### Definition of 'Eating Out'

"Eating out" is defined as all food and drink that is consumed (by members of the household) having never been taken into the household. Included in the definition are:

- restaurant meals,
- canteen meals,
- fast food outlets (but not takeaways brought home),
- sandwiches - but not a picnic prepared at home and taken out,
- school dinners,
- pub drinks,
- eating at someone else's house.

## 19. Difference between purchased quantities and amounts consumed

Purchased quantities differ from actual food and drink consumption for a number of reasons.

Main causes of food waste:

- food may be discarded during food preparation (e.g. vegetable peelings) – unavoidable waste,
- food may be left on the plate at the end of a meal – ‘cooked or prepared too much’
- food may become inedible before it can be consumed and is therefore thrown away – ‘not used in time’.

Defra published a statistics release in July 2010 matching waste quantities of food to purchased quantities.

Other reasons why purchased quantities do not match:

- food purchased by the household may also be consumed by visitors to the house,
- food purchased by the household may also be used as pet food (note pet food is excluded from the survey)
- food purchased may have a long shelf life (e.g. tinned beans, frozen peas) and could be consumed in a different year.

### Difference in format

Purchased quantities are recorded in the form in which they are bought. For example purchased quantities of flour, fat, eggs and sugar are recorded as such, even if they are later used to bake a cake. If a ready-made cake is bought then it is recorded as cake.

## 20. Feedback

The Defra team producing this report and managing the quality of the food statistics would welcome feedback to [familyfood@defra.gsi.gov.uk](mailto:familyfood@defra.gsi.gov.uk)

Note: In October 2010 responsibility for nutrition policy in England transferred from Food Standards Agency to Department of Health. There has been no change to arrangements in Scotland, Wales and Northern Ireland. Where Food Standards Agency is referred to in this report it is under the administration that was in place during 2009.



# Family Food 2009

## Annex C: The Family Food Committee

Defra are extremely grateful to the Family Food Committee whose advice on the conduct of the Family Food Module and quality assurance of the annual report is invaluable. The committee are selected from the devolved administrations, Department of Health, Food Standards Agency, Office for National Statistics, nutrition professionals and the food industry. The committee members are not paid a fee for their time spent advising Defra on the survey report.

Jim Holding (Chair)  
Department for Environment, Food and Rural Affairs

Dr Laura Keyse  
Office For National Statistics

Andrew Barnard  
Office For National Statistics

Dr Michael Nelson  
Kings College, London

Gaynor Bussell  
Dietitian

Sheela Reddy  
Department Of Health

Professor Judith Buttriss  
British Nutrition Foundation

Melanie Ruffell  
Food And Drink Federation

Professor Andrew Chesher  
University College, London

Gillian Swan  
Food Standards Agency

Dermot Donnelly  
Northern Ireland Statistics and Research Agency

Karen Tonks  
Tesco Stores Ltd

Dr Giles Horsfield  
Office For National Statistics

Professor Martin Wiseman  
University Of Southampton

Dr Kathy Johnston  
Scottish Government

## Annex D: Data Downloads

Datasets in Excel format are available at:

[www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm](http://www.defra.gov.uk/evidence/statistics/foodfarm/food/familyfood/documents/index.htm)

The Family Food datasets are Excel spreadsheets containing data for years 2001-02 onwards. The UK household consumption and the UK household expenditure spreadsheets show data for 1974 onwards.

Information is available at United Kingdom for both household and eating out on:

- purchases,
- expenditure and
- nutrient intakes.

There is a further breakdown by:

UK regions

Scotland, Wales, Northern Ireland, English Government Regional Office,  
Rural and Urban England, Wales and Scotland

Gross income quintile

Household composition

Age group of household reference person

Age at which household reference person ceased full-time education

Ethnic origin of household reference person

Socio-economic classification of household reference person

Occupation of household reference person

Economic activity of household reference person

### Economic and Social Data Service

Survey data for the Expenditure and Food Survey (2000-01 to 2007) and subsequently the Living Costs and Food Survey (2008 and 2009) is available to download via Data Archive on the Economic and Social Data Service website:

[www.esds.ac.uk/findingData/efsTitles.asp](http://www.esds.ac.uk/findingData/efsTitles.asp)

National Food Survey data from 1974 to 2000 is available from:

[www.esds.ac.uk/findingData/nfsTitles.asp](http://www.esds.ac.uk/findingData/nfsTitles.asp)

## Household and eating out food & drink codes

Some types of food and drink have been grouped together within each of the categories in this report for ease of reference. This Annex lists foods that make up the food and drink types. Data for purchases quantities and expenditure and household food types

### Household Food Codes

- Milk and milk products excluding cheese
- Cheese
- Carcase meat
- Non-carcase meat and meat products
- Fish
- Eggs
- Fats
- Sugar and preserves
- Fresh and processed potatoes
- Fresh and processed vegetables, excluding potatoes
- Fresh and processed fruit
- Bread
- Flour
- Cakes, buns and pastries
- Biscuits and crispbreads
- Other cereals and cereal products
- Beverages
- Other food and drink
- Soft drinks
- Confectionery
- Alcoholic drinks

### Eating out purchases

- Indian, Chinese or Thai food
- Meat and meat products
- Fish and fish products
- Cheese and egg dishes or pizza
- Fresh and processed potatoes
- Vegetables
- Salads
- Rice, pasta or noodles
- Soups
- Breakfast cereals
- Fresh and processed fruit
- Yoghurt and fromage frais
- Bread

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Sandwiches  
Other food products  
Beverages  
Soft drinks including milk  
Alcoholic drinks  
Confectionery  
Ice cream, desserts and cakes  
Biscuits  
Crisps, nuts and snacks



## Household Food Codes

### Milk and milk products excluding cheese

- Whole milk including UHT milk, Sterilised, Pasteurised/homogenised and Welfare milk
- Fully skimmed milk
- Semi-skimmed milk
- Condensed or evaporated milk
- Infant milks
- Instant dried milk
- Yoghurt and fromage frais
- Dairy desserts - not frozen
- Dried milk products
- Milk drinks and other milks
- Non-dairy milk substitutes
- Cream

### Cheese

- Hard cheese
- Cottage cheese
- Soft natural cheese
- Processed cheese

### Carcase meat

- Beef joints
- Beef steak
- Minced beef
- All other beef and veal
- Mutton
- Lamb joints
- Lamb chops
- All other lamb
- Pork joints
- Pork chops
- Pork fillets and steaks
- All other pork

### Non-carcase meat and meat products

- Liver
- All offal other than liver
- Bacon and ham, cooked or uncooked
- Chicken/Turkey cooked or uncooked - whole or pieces
- Corned beef
- Other cooked meat
- Canned meat and canned meat products
- Other poultry, uncooked (including frozen)
- Other fresh, chilled and frozen meat
- Sausages, uncooked - pork/beef/other
- Meat pies and sausage rolls, ready to eat
- Meat pies, pasties and puddings, frozen or not frozen
- Burgers, frozen or not frozen
- Complete meat-based ready meals
- Other convenience meat products
- Pate and delicatessen type sausage
- Meat pastes and spreads
- Takeaway meat pies and pasties
- Takeaway burger and bun

Takeaway kebabs  
Takeaway chicken  
Takeaway sausages and saveloys  
Takeaway meat based meals  
Takeaway miscellaneous meats

## Fish

White fish, fresh, chilled or frozen  
Herrings and other blue fish, fresh, chilled or frozen  
Salmon, fresh, chilled or frozen  
Blue fish, dried or salted or smoked  
White fish, dried, salted or smoked  
Shellfish  
Takeaway fish  
Salmon, tinned  
Other tinned or bottled fish  
Ready meals and other fish products - frozen or not frozen  
Takeaway fish meals and fish products

## Eggs

## Fats

Butter  
Margarine  
Lard, cooking fat  
Olive oil  
Other vegetable and salad oils  
Reduced fat spreads  
Low fat spreads  
Suet and dripping  
Imitation cream

## Sugar and preserves

Sugar  
Jams and fruit curds  
Marmalade  
Syrup, treacle  
Honey

## Fresh and processed potatoes

Fresh new potatoes  
Fresh baking potatoes  
Other fresh potatoes  
Chips and takeaway chips  
Instant potato  
Canned potatoes  
Crisps and potato snacks  
Other potato products, frozen or not frozen

## Fresh and processed vegetables, excluding potatoes

Fresh cabbages  
Fresh brussels sprouts  
Fresh cauliflower  
Fresh leafy salads  
Fresh peas  
Fresh beans  
Fresh carrots  
Fresh turnips and swede  
Other fresh root vegetables  
Fresh onions, leeks and shallots  
Fresh cucumbers

Fresh mushrooms  
 Fresh tomatoes  
 Fresh vegetable stewpack, stirfry pack etc.  
 Fresh stem vegetables  
 Fresh marrow, courgettes, aubergine, pumpkin and other vegetables  
 Fresh herbs  
 Tomatoes, canned or bottled  
 Peas, canned  
 Baked beans in sauce  
 Other canned beans and pulses  
 Other canned vegetables  
 Dried pulses other than air-dried  
 Air-dried vegetables  
 Tomato puree and vegetable purees  
 Vegetable juices eg tomato juice, carrot juice  
 Frozen peas  
 Frozen beans  
 Ready meals and other vegetable products, frozen or not frozen  
 All vegetable takeaway products  
 Other frozen vegetables

#### Fresh and processed fruit

Fresh oranges  
 Other fresh citrus fruits  
 Fresh apples  
 Fresh pears  
 Fresh stone fruit  
 Fresh grapes  
 Other fresh soft fruit  
 Fresh bananas  
 Fresh melons  
 Other fresh fruit  
 Tinned peaches, pears and pineapples  
 All other tinned or bottled fruit  
 Dried fruit  
 Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits  
 Nuts and edible seeds  
 Peanut butter  
 Pure fruit juices

#### Bread

White bread  
 Brown, wholemeal and granary bread  
 Rolls - white, brown or wholemeal  
 Malt bread and fruit loaves  
 Vienna and French bread  
 Starch reduced bread and rolls  
 Continental breads eg garlic, ciabatta, bagel, naan  
 Sandwiches  
 Sandwiches from takeaway  
 Takeaway breads

#### Flour

##### Cakes, buns and pastries

Cakes and pastries, not frozen  
 Takeaway pastries  
 Buns, scones and teacakes

##### Biscuits and crispbreads

- Chocolate biscuits
- Sweet biscuits (not chocolate) and cereal bars
- Cream crackers and other unsweetened biscuits
- Crispbread

## Other cereals and cereal products

- Oatmeal and oat products
- Muesli
- High fibre breakfast cereals
- Sweetened breakfast cereals
- Other breakfast cereals
- Canned or fresh carton custard
- All canned milk puddings
- Puddings
- Rice - dried, cooked or takeaway
- Invalid foods, slimming foods and sports foods
- Infant cereal foods
- Cakes and pastries - frozen
- Canned, dried and fresh pasta
- Takeaway pasta and noodles
- Pizzas, frozen and not frozen
- Takeaway pizza
- Cake, pudding and dessert mixes
- Cereal snacks
- Quiches and flans, frozen and not frozen
- Takeaway crisps, savoury snacks, popcorn, popadums, prawn crackers
- Other cereals

## Beverages

- Tea
- Coffee beans and ground coffee
- Instant coffee
- Coffee essences
- Tea and coffee from takeaway
- Cocoa and chocolate drinks
- Malt drinks and chocolate versions of malted drinks

## Other food and drink

- Mineral or spring waters
- Baby foods
- Soups - canned or cartons
- Soups - dehydrated or powdered
- Soups - from takeaway
- Salad dressings
- Other spreads and dressings
- Pickles
- Sauces
- Takeaway sauces and mayonnaise
- Stock cubes and meat and yeast extracts
- Jelly squares or crystals
- Ice cream tub or block
- Ice cream cornets, choc-ices, lollies with ice cream
- Ice lollies, sorbet, frozen mousse, frozen yoghurt
- Takeaway ice cream, ice cream products, milkshakes
- Soya and novel protein foods (e.g. Quorn)
- Salt
- Other takeaway food brought home

**Soft drinks**

Soft drinks, concentrated, low calorie or not low calorie

Soft drinks, not concentrated, low calorie or not low calorie

**Confectionery**

Chocolate bars

Chewing gum

Mints and boiled sweets

Fudges, toffees, caramels

Takeaway confectionery

**Alcoholic drinks**

Beers

Lagers and continental beers

Ciders and perry

Wine and champagne

Spirits with mixer

Fortified wines

Spirits, liqueurs and cocktails

Alcopops

## Eating out purchases

### Indian, Chinese or Thai food

- Meat or fish-based curry with or without sauce
- Vegetable or fruit-based curry
- Dhal and dhal dishes
- Samosas
- Other Indian dishes
- Indian breads
- Indian buffet or shared meal
- Chinese or Thai meat or fish-based dishes
- Chop suey and fu yung dishes
- Chinese or Thai vegetable-based main course dishes
- Spring rolls
- Other Chinese or Thai dishes
- Chinese or Thai buffet or shared meal

### Meat and meat products

- Steak - without sauce (e.g. braised, sirloin)
- Roast meat with sauce or gravy
- Pork chops with sauce or gravy
- Lamb chops with sauce or gravy
- Spare ribs
- Bacon, gammon or ham
- All offal including liver, kidney, tongue
- Chicken or turkey with sauce or gravy
- Chicken or turkey in breadcrumbs or batter
- Duck with sauce or gravy
- Game with sauce or gravy
- Burgers
- Kebabs - all types
- Sausages and sausage rolls
- Hot dogs and sausage sandwiches
- Meat pies (pastry or potato topped) and pasties
- Meat and vegetable stews, casseroles or hotpots
- Chicken or turkey stews, casseroles or hotpots
- Meat-based oven baked dishes e.g. lasagne, cannelloni, moussaka
- Paté

### Fish and fish products

- White fish - grilled, steamed, baked or boiled
- White fish - fried (including in batter or breadcrumbs)
- Trout, tuna and salmon
- Herring, mackerel, sardines
- Shellfish
- Kippers and other smoked fish e.g. smoked salmon
- Fish, processed, in breadcrumbs (e.g. fishfingers, fish cakes, scampi)
- Fish burgers (in bun)
- Fish based pie or other dish (e.g. paella, kedgerree, tuna pasta bake)

### Cheese and egg dishes or pizza

- Cottage cheese including with pineapple
- Soft, continental or processed cheese e.g. brie
- Cheddar, blue or other hard cheese and unspecified 'cheese'
- Quiche and cheese pies or pasties
- Other cheese dishes e.g. (Welsh rarebit, cheese and biscuits)
- Pizza

Eggs - boiled or poached  
 Eggs - scrambled, fried, omelettes or unspecified 'egg'  
 Other egg dishes (e.g. egg mayonnaise)

#### Fresh and processed potatoes

Chips and French fries - from fast food outlet or served with meal  
 Potatoes - boiled, mashed, roast  
 Sautéed potatoes, potato croquettes, hash browns etc.  
 Baked or jacket potatoes  
 Other potato dishes (e.g. wedges, potato salad)

#### Vegetables

Lettuce and cress  
 Green vegetables e.g. spinach, cabbage, sprouts  
 Peppers - raw or cooked  
 Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers  
 Peas and sweetcorn  
 Baked beans and other beans or pulses  
 Tomato - fresh, cooked or processed  
 Carrots  
 Onions - raw or cooked  
 Other root vegetables or tubers (e.g. turnip, parsnip, radish, beetroot)  
 Mushrooms  
 Mixed vegetables or unspecified 'vegetable'  
 Other vegetables (e.g. artichoke, asparagus)  
 Vegetables in batter or breadcrumbs (e.g. onion rings)  
 Onion and other vegetable bhajis and pakora  
 Vegetarian burger, bean burger, vegetarian sausage, nut roast  
 Oven baked vegetable dishes (e.g. vegetable lasagne, cannelloni, moussaka)  
 Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter  
 Vegetable-based stews and casseroles and vegetable based pies

#### Salads

Mixed salad, with or without dressing  
 Green salad, with or without dressing  
 Vegetable or fruit and nut salad  
 Pasta, rice, mixed bean or cereal-based salads  
 Meat salad (e.g. beef, lamb, chicken salads)  
 Fish salad (e.g. tuna, salmon salads)  
 Cheese salad including ploughmans  
 Egg salad  
 Other salads (e.g. Greek, Florida, Russian)  
 Salad buffet or buffet meal where items not specified

#### Rice, pasta or noodles

Fried rice and risotto  
 All cooked rice (e.g. boiled, pilau, savoury)  
 Pasta - not filled and plain noodles  
 Pasta - filled (e.g. ravioli, tortellini)  
 Noodles with meat, vegetables etc.

#### Soups

Meat & fish soups  
 Vegetable based soups  
 Chinese soups, consommé (e.g. meat, fish or vegetable)

#### Breakfast cereals

Muesli and oat crunch cereals  
 Other high fibre breakfast cereals (e.g. Allbran, Weetabix)  
 Sweetened breakfast cereals (e.g. Frosties, Sugar Puffs)  
 Hot breakfast cereals (e.g. porridge, Ready Brek)

Other breakfast cereals (e.g. Cornflakes, Rice Krispies, Special K)

## Fresh and processed fruit

All citrus fruit (e.g. orange, grapefruit)

Bananas

Apples

Pears

Stone fruit (e.g. apricot, plum, peach, cherry, avocado)

Grapes

Soft fruit or berries (e.g. strawberries, blackberries)

Melon

Pineapple

Fresh fruit salad

Other fresh fruit (e.g. kiwi, passion)

Free school fruit

Dried fruit (e.g. sultanas, raisins)

Tinned, stewed, baked or processed fruit

## Yoghurt and fromage frais

### Bread

White bread, toasted or untoasted

Brown or wholemeal bread, toasted or untoasted

Rolls, baguettes etc. White, brown or wholemeal

Garlic bread

Croissant

Continental breads (e.g. pitta, ciabatta, focaccio)

Muffins, crumpets

Fried bread, including croutons

Other bread, rolls, toast, unspecified 'bread' etc.

### Sandwiches

Meat based sandwich

Chicken or turkey-based sandwich

Bacon and egg-based sandwich

Fish-based sandwich

Cheese-based sandwich

Egg based sandwich

Vegetable-based sandwich

Sweet-filled sandwich

Unspecified sandwiches

### Other food products

Cheese or cream based sauce (e.g. carbonara, cauliflower cheese)

Meat-based sauce (e.g. bolognese, chilli con carne)

Fish or seafood based sauce

Tomato based sauce containing vegetables, including ratatouille

Other savoury sauce

Sweet sauce (e.g. syrup, treacle, chocolate sauce)

Fruit or vegetable-based condiments

Other condiments or sauces

Salad dressings and dips

Mayonnaise

Coleslaw

Fruit filling e.g. peaches for pancakes

Vegetable filling

Cheese filling including cheddar cheese, cottage cheese

Fish-based filling (e.g. tuna mayonnaise)



Butter and margarine  
 Jam, marmalade and honey  
 Cream - single, double, sour etc.  
 Custard  
 Sugar (as an addition to tea, coffee etc.)  
 Commercial baby food in a jar or can  
 Yorkshire puddings and dumplings  
 Unspecified meal (e.g. 'meal', 'school meal' or 'meal at work')

#### Beverages

Coffee (e.g. black or white)  
 Tea (e.g. White, black, herbal or fruit)  
 Hot chocolate or cocoa

#### Soft drinks including milk

Mineral water  
 Soft drink (including carbonates and still)  
 Pure fruit juices  
 Vegetable juices (e.g. tomato juice, carrot juice)  
 Milk as a drink  
 Milk on cereal  
 Milkshake and flavoured milk  
 Free school milk

#### Alcoholic drinks

Spirits  
 Liqueurs  
 Cocktails  
 Spirits or liqueurs with mixer (e.g. gin & tonic, Bacardi & coke)  
 Table wine  
 Sparkling wines (e.g. Champagne) and wine with mixer (e.g. Bucks Fizz)  
 Fortified wine (e.g. sherry, port, vermouth)  
 Cider or perry  
 Alcoholic soft drinks (alcopops), and ready-mixed bottled drinks  
 Bitter  
 Lager or other beers  
 Round of drinks, alcohol not otherwise specified

#### Confectionery

Solid, unfilled chocolate bars and sweets  
 Filled chocolate-coated bars and sweets (e.g. Mars, Snickers, Minstrels)  
 Single chocolate (after dinner)  
 Chewing gum and bubble gum  
 Mints (e.g. Polo, Extra Strong)  
 Boiled sweets, jellies  
 Toffee or fudge, (e.g. chocolate éclairs, caramels)  
 Pick 'n' mix, nougat, liquorice and other sweets

#### Ice cream, desserts and cakes

Ice cream  
 Iced lollies and sorbets  
 Doughnut  
 Cream pastries (e.g. chocolate éclairs, profiteroles)  
 Cream sponge or gâteau  
 Rich chocolate cake or chocolate gâteau  
 Fruit and other pies or pastries  
 Fruit cake  
 Other sponge cakes or desserts  
 Custard desserts or sweet soufflé  
 Meringue desserts including pavlova

- Cheesecake
- Fool, trifle and mousse desserts
- Jelly
- Milk and rice puddings including tapioca, semolina
- Other cakes and desserts, unspecified
- Waffles and pancakes
- Teacakes, scones, currant buns, iced buns

### Biscuits

- Fully-coated chocolate biscuits or wafers
- Sweet biscuits including half-coated chocolate biscuits
- Cereal bars and cereal based cakes
- Savoury biscuits

### Crisps, nuts and snacks

- Nuts, nut products and seeds
- Potato crisps or snacks including unspecified 'crisps', prawn crackers
- Cornsnacks, based on maize
- Wheat based savoury snack
- Popcorn
- Other savoury snacks (including hors d'oeuvres)

## Glossary

### General

Term	Meaning
Household Reference Person (HRP)	The HRP is the person who either owns the household accommodation, or is legally responsible for the rent of the accommodation, or has the household accommodation by virtue of their employment or personal relationship to the owner who is not a member of the household. If more than one person meets these criteria the HRP will be the one with the higher income. If the incomes are the same then the eldest is chosen.
Retail Price Index (RPI)	The Retail Price Index is a statistical measure of a weighted average of prices of a specified set of goods and services. It is used as an indicator of inflation, which is the percentage change in the index compared with the same month one year previously.

### Nutrients

Term	Meaning
Macronutrients	Major nutrients that are consumed in largest amounts and provide bulk energy, protein, carbohydrate and fat.
Micronutrients	A substance needed only in small amounts for normal body function e.g. vitamins and minerals.
Sodium	Sodium Chloride in the diet is more commonly known as salt. It is the sodium in salt that can be bad for health. Too high an intake of sodium can raise blood pressure, which triples the risk of developing heart disease or having a stroke at any age. Salt is approximately equal to sodium multiplied by 2.5.
Non-milk extrinsic sugar (NMES)	These sugars are more likely to damage teeth than other types of sugar. Products that contain this sugar include fruit juices and honey and 'added sugars', which comprise recipe and table sugars. NMES are found in a wide range of foods, the main sources in the diet being table sugar, confectionery, soft drinks and fruit juices and biscuits and cakes.
Fibre	Non-starch polysaccharides as determined by the Englyst method.
COMA	Committee on Medical Aspects of Food and Nutrition Policy (COMA).
Scientific Advisory Committee on Nutrition (SACN)	A UK-wide advisory committee set up to replace COMA. It advises UK health Departments as well as the Food Standards Agency.
Dietary Reference Values (DRV)	Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991.

## Nutrients (continued)

Term	Meaning
Reference Nutrient Intakes (RNI)	Reference Nutrient Intake (RNI) values for protein, vitamins and minerals are set for each age/sex group at a level of intake considered likely to be sufficient to meet the requirements of 97.5% of the group.
Estimated Average Requirement (EAR)	Estimates of energy intake required to meet the average needs of the group to which they apply. About half the people in the group will usually need more energy than EAR and half the people will need less.

## Statistical Terms

Term	Meaning
Main effect regression	A statistical technique that does not allow the effect of an explanatory variable (e.g. age) to change when another explanatory variable (e.g. region) changes.
Multiple regression modelling	A statistical technique that predicts values of one variable (e.g. intake of fat) on the basis of two or more other variables (e.g. age, region and income).
Equivalised income	The income a household needs to attain a given standard of living will depend on its size and composition. Equivalisation means adjusting a household's income for size and composition so that the incomes of all households are on a comparable basis. To calculate equivalised income using the McClements equivalence scale, each member of the household is first given an equivalence value. The head of household is given a value of 0.61. Each additional adult is given a smaller value to reflect the economies of scale achieved when people live together. Economies of scale arise when households share resources such as water and electricity, which reduces the living costs per person. Children are given smaller values depending on their age to take account of their lower living costs. Two adult cohabiting households are taken as the reference group and achieve a value of one.