FAMILY FOOD 2010

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1.1 The Survey

Family Food provides detailed statistics on purchases, expenditure and derived nutrient content of food purchases from a large household survey covering the United Kingdom. Foods are reported at a detailed level and patterns are related to demographic characteristics. This report presents statistics on food purchasing in 2010 and compares levels with previous years to provide trends, mostly over the last 4 years, although for some food types, statistics go back to the 1940s.

The annual report on 2010 is accompanied by a more detailed breakdown of the types of food purchases that can be found in the excel datasets. In addition there are a range of method papers on the Defra website.

1.2 Spending and purchases on food in 2010

In 2010 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out, rose 3.0 per cent to £39.23 per person per week. Household food purchases formed the largest share at £24.50 per person per week. When inflation is taken into account the amount spent was 1.9 per cent less than 2009 but an increase of 2.3 per cent since 2007.

A number of household food categories indicated a downward trend in purchases, including: 'milk and cream', carcase meat, fish, fruit and bread. An increase in purchases was seen in some categories in 2010 including; eggs, cheese, 'non-carcase meat and meat products' soft drinks and alcoholic drinks.

The amount of food eaten out is on a long term downward trend and showed significant decreases in 2010 in both alcohol and confectionery purchases.

1.3 Energy and nutrient intakes from food purchases

Food and drink purchases are converted into energy and nutrient intakes. A reduction of 0.5 per cent in 2010 re-affirms the downward trend in energy intake. Energy intake was 1.2 per cent lower in 2010 than in 2007. There were declines in intakes of saturated fatty acids and non-milk extrinsic sugars (NMES) in 2010. Saturated fatty acids were 2.4 per cent lower in 2010, with contribution to food energy now down to 14.2 per cent. NMES were 2.9 per cent lower in 2010, with contribution to food energy now down to 13.9 per cent. Compared to the reference nutrient intakes, only potassium, at 99 per cent, failed to reach at least 100 per cent of the requirement, where one is set.

1.4 Geographic comparisons

Estimates are made of food and drink purchases and nutrient intakes for the four countries of the United Kingdom and the nine Government Office Regions of England. However, apparent regional differences are often due to demographic differences.

Wales had the highest purchased quantities for 9 out of the 16 food groups while Northern Ireland had lowest levels for 8 out of the 16 groups, with differences as much as one and half times more than in the lowest purchasing country. There were far smaller variations in nutrient intakes across countries.

Rural areas tended to have higher food and drink purchases and associated higher energy and nutrient intakes.

1.5 Patterns and trends

5 A DAY downward trend

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. Purchases were 7.5 per cent lower in 2010 compared to 2007 and 8.7 per cent lower compared to 2006. 5 A DAY purchases peaked in 2006 and have fallen back to approximately 4.0 portions purchased per person per day in 2010. Households in the lowest income decile have consistently purchased smaller quantities of fruit and vegetables. They reduced their purchases by 20 per cent between 2007 and 2010, down to the equivalent of 2.7 portions per person per day.

Income links with healthy diet

The survey shows that low income is associated with lower levels of fruit, vegetables and fibre, and with higher levels of NMES (non-milk extrinsic sugars).

Income is associated with different levels of NMES in the diet. Households in income deciles 2 and 3 (low but not the lowest income) purchased foods with the highest amount of food energy derived from NMES. Households with the highest income, deciles 9 and 10, purchased foods with a lower amount of NMES. All income levels exceeded the recommended maximum level of 11 per cent of energy from NMES.

Households in income deciles 1, 2 and 3 purchased less fruit than other income deciles. This was a difference of 99 grams of fruit per person per day, just over one portion of 5 A DAY (80 grams), between the highest and lowest income groups.

Purchases of vegetables increased with income. The difference between the lowest and highest deciles equates to half a portion of vegetable purchases. Lower quantities of vegetables were purchased by those households in income deciles 1, 2, 3 and 5.

Purchases of food containing fibre increased with income. Fibre intake was higher in income groups 7, 8 and 10. Many in these income groups achieved the recommended average of 18 grams of fibre per day. There was a difference of 4 grams per person per day between the highest and lowest income groups.

Pressure on household budgets

In 2010 food price rises were slightly below all items CPI inflation which would suggest that the percentage spent on food would not increase, and this was the case. Averaged over all households in the UK, the percentage of spend going on food rose slowly from 2005-06 to 2009, and fell back slightly to 11.2 per cent in 2010. For low income households in the UK the percentage of spend going on food peaked in 2008 at 16.8 per cent before falling back in 2009 to 16.1 per cent and in 2010 to 15.8 per cent, possibly as low income households found ways to trade down to cheaper products.

Trading down

The Family Food concept of trading down is evidence based. Within the Family Food Survey, households responded to price rises by purchasing different products within a food group. We can measure the price they achieved by dividing their expenditure on these products by the combined quantity purchased (known as the unit value). The amount of food price inflation they offset is the Family Food measure of trading down.

- Trading down has been most prominent in cereals, pork, butter, eggs and potatoes and has saved about 10 per cent of the price. Trading down of 'food' overall between 2007 and 2010 is estimated to have been 4.0 per cent.

As well as trading down consumers can respond to price rises by buying less and/or spending more.

- Buying less has been most prominent in beef, lamb, fish, tea and fruit. On average consumers have bought about 10 per cent less of these categories.
- Spending more has been most prominent in bacon, butter, eggs, tea, coffee, and 'sugar and preserves'. On average consumers have spent about 20 per cent more on these items.

Introduction

Family Food provides detailed statistics on purchases, expenditure and derived nutrient content of food purchases from a large household survey covering the United Kingdom. Foods are reported at a detailed level and patterns are related to demographic characteristics. This report presents statistics on food purchasing in 2010 and compares levels with previous years to provide trends, mostly over the last 4 years, although for some food types, statistics go back to the 1940s.

Report structure:

- Chapter 1 presents estimates and recent trends in quantities of purchases and expenditure by different type of food and drink.
- Chapter 2 presents estimates of the energy and nutrient content of food purchases, including trends and a comparison against reference nutrient intakes.
- Chapter 3 presents country and regional estimates, where apparent differences are often due to differences in demographic characteristics such as income.
- Chapter 4 attributes differences in diet to regional and demographic characteristics of households. It covers patterns in purchases of fruit and vegetables, and patterns in intakes of sodium, Non-Milk Extrinsic Sugars (NMES) and saturated fatty acids.
- Chapter 5 examines trends in purchases of fruit and vegetables and trends in intakes of energy, fat, saturated fatty acids, NMES, sodium, fibre and alcohol.

Data in Family Food conforms fully to National Statistics standards.
http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
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.

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. The data is placed on the National Data Archive and is accessed by academics and used in research.

The Defra website provides links to a set of method papers which provide a background to the survey, its history, sampling, reliability and methods of calculating nutrient intakes. It provides links to other Government surveys in the UK related to health, diet and food, along with details of where to source information on consumption in European Union countries.

Chapter 1 UK trends in purchases and expenditure

1.1 Overview

In 2010 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out, rose 3.0 per cent to £39.23 per person per week. Household food purchases formed the largest share at £24.50 per person per week. When inflation is taken into account the amount spent was 1.9 per cent less than 2009 but an increase of 2.3 per cent since 2007.

A number of household food categories indicated a downward trend in purchases, including: 'milk and cream', carcase meat, fish, fruit and bread. An increase in purchases was seen in some categories in 2010 including; eggs, cheese, 'non-carcase meat and meat products' soft drinks and alcoholic drinks. The amount of food eaten out is on a long term downward trend and showed significant decreases in both alcohol and confectionery purchases. Household spending is showing increases in most categories. These trends will be examined in more detail in this chapter.

1.2 Household purchases (trends 2007 to 2010)

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. Table 1.1 shows the main food groups examined in this chapter but a more detailed breakdown of the types of foods purchased can be found in the excel datasets. (Family Food datasets)

Fruit and vegetables

Household purchases of fresh and processed fruit continued on a downward trend, falling a further 0.9 per cent in 2010. Since 2007 purchases of fresh fruit have fallen 12 per cent, equating to 100 grams per person per week; pure fruit juices fell 13 per cent over the same period equating to 48mls per person per week. Household purchases of fresh and processed vegetables overall remained little changed in 2010 but within this category 'fresh green vegetables' saw significant reductions; 4.5 per cent on 2009 and 15 per cent since 2007. While purchases have reduced, consumers spent 10 per cent more on fresh and processed vegetables and 4.3 per cent more on fresh and processed fruit over the same four year period.
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.

Between 3 and 4 per cent of all the fresh fruit and vegetables entering the household in 2010 came from free sources, mainly gardens and allotments. See Table 1.2 and Chart 1.1 for a more detailed breakdown.

Fats (including oils)[1]

Household purchases of 'fats' shows no significant change since 2007 other than margarine, specifically soft margarine, which has increased 23 per cent. Purchases of 'reduced and low fat spreads' increased by 3.8 per cent in 2010, but remain 6.8 per cent lower than in 2007. Purchases of butter rose 1.6 per cent returning to levels seen in 2008.

Milk and cream

There is a significant long term downward trend in purchases of whole milk. A 16 per cent decrease in 2010 takes levels to 18 per cent below those of 2007. This equates to a reduction of 80mls per person per week. There has been no change in purchases of skimmed milks over the same period suggesting that consumers are not converting to a lower fat variety. Purchases of cream increased in 2010 and are now showing an upward trend.

1 In the context of the Family Food Survey, 'margarine' includes any spread (either block or tub) that contains more than 62% fat.

Bread

Purchases of both white bread and 'brown and wholemeal bread' are continuing their downward trend having fallen 7.7 per cent and 6.4 per cent respectively since 2007. Purchases of 'other breads', which includes continental and specialty breads, increased 0.9 per cent in 2010 but remain 4.3 per cent lower than in 2007. Sandwiches are the only category showing an upward trend, rising 17 per cent since 2007, although they make up only a small proportion of total bread purchases.

Cheese

Household purchases of cheese dipped in 2008 but a small increase in both 2009 and 2010 has seen a return to around the same level as 2007. The amount consumers spent on cheese rose 17 per cent over the same period. Within this category natural cheese has consistently made up around 90 per cent of the total purchased and processed cheese the remaining 10 per cent. Cheddar type cheeses account for around half of all cheese purchases by weight at 66 grams per person per week.

Meat

Purchases of raw carcase meat fell by 10 per cent between 2007 and 2008 but have remained stable since then. Within this category, purchases of 'boned beef joints' and 'lamb joints' have declined, the greatest having fallen by 27 per cent and 35 per cent respectively since 2007. Purchases in the 'non-carcase meat and meat products' category generally increased in 2010, with only poultry showing a small decline (1.7 per cent). 'Meat based ready meals and convenience meat products' purchases showed the largest increase within the category, rising 6.6 per cent in 2010 and 9.2 per cent since 2007.

Fish

There is a significant downward trend in household purchases of fish, which fell 8.8 per cent between 2007 and 2010 to 151 grams per person per week. Purchases of white fish fell 11 per cent on 2009, 16 per cent since 2007. This is the largest individual category accounting for 14 per cent of all fish purchases. Sales of salmon remained fairly constant since 2007 and consistently make up around 8 per cent of total fish purchases. Whilst purchases have fallen, expenditure on fish has remained almost unchanged.

Confectionery and soft drinks

Household purchases of confectionery decreased in 2010 by 2.5 per cent but levels remain 1.8 per cent above those of 2007. Household purchases of soft drinks increased in 2010 by 2.4 per cent but within this category 'not low calorie' drinks fell by 5.8 per cent while 'low calorie' drinks increased by 23 per cent.

Alcoholic drinks

Household purchases of alcoholic drinks rose by 2.3 per cent in 2010. Although this follows a 5.5 per cent rise in 2009 levels remain 1.4 per cent lower than in 2007. Spend on alcoholic drinks rose by 6.4 per cent in 2010, a rise of 9.4 per cent on 2007. Intakes of alcohol are examined in Chapters 2 and 5.

Table 1.1: Quantities of household purchases of food and drink in the UK[2]

		2007	2008	2009	2010	RSE[a]	% change since 2009	% change since 2007	trend since 2007 [b]
							grams per person per week unless otherwise stated		
Milk and cream	(ml)	1984	1957	2003	1897	✓✓✓	-5.3	-4.3	↘
Liquid whole milk (including welfare and school milk)	(ml)	432	420	421	352	✓✓	-16.2	-18.4	↘
Skimmed milks	(ml)	1154	1145	1156	1156	✓✓✓	-0.0	+0.2	
Cream	(ml)	21	21	23	24	✓✓	+2.8	+9.6	↗
Cheese		119	111	116	118	✓✓✓	+1.7	-0.3	
Cheese, natural		106	99	105	107	✓✓✓	+1.6	+0.6	
Processed cheese		12	12	11	11	✓✓	+2.7	-8.1	
Carcase meat		235	211	212	211	✓✓✓	-0.6	-10.2	↘
Beef and veal		126	111	112	114	✓✓✓	+2.2	-9.5	↘
Mutton and lamb		55	45	46	44	✓	-6.2	-20	
Pork		54	55	54	53	✓✓	-1.7	-1.4	
Non-carcase meat and meat products		795	787	787	805	✓✓✓	+2.2	+1.2	
Bacon and ham (cooked or uncooked)		109	108	111	113	✓✓	+2.1	+3.8	
Poultry (cooked or uncooked)		251	250	246	242	✓	-1.7	-3.6	
Meat based ready meals and convenience meat products		148	145	151	161	✓✓✓	+6.6	+9.2	↗
Fish		165	161	158	151	✓✓✓	-4.5	-8.8	↘
White fish, fresh, chilled or frozen		24	24	23	20	✓	-11.2	-15.9	↘
Herrings and other blue fish, fresh, chilled or frozen		8	6	6	5		-4.7	-30.0	↘
Salmon, fresh, chilled or frozen		12	12	13	12	✓	-2.2	+6.2	
Eggs	(no.)	1.6	1.6	1.6	1.7	✓✓✓	+3.8	+6.2	↗
Fats		181	184	181	183	✓✓✓	+1.3	+1.2	
Butter		41	40	39	40	✓✓	+1.6	-4.4	
Margarine		19	22	24	23	✓✓	-2.7	+23.3	↗
Reduced and low fat spread		53	51	48	49	✓	+3.8	-6.8	↘
Sugar and preserves		125	127	125	126	✓✓	+0.9	+0.6	
Fresh and processed potatoes		781	776	761	742	✓✓✓	-2.4	-4.9	↘
Vegetables		1140	1118	1103	1107	✓✓✓	+0.4	-2.9	
Fresh green vegetables		224	203	201	192	✓✓✓	-4.5	-14.6	↘
Other fresh vegetables		566	557	552	565	✓✓✓	+2.4	-0.1	
Processed vegetables [d]		350	358	350	350	✓✓✓	-0.0	+0.1	
Fruit		1281	1199	1143	1133	✓✓✓	-0.9	-11.6	↘
Fresh fruit		855	790	762	755	✓✓✓	-0.8	-11.7	↘
Processed fruit and fruit products		426	409	381	378	✓✓✓	-0.9	-11.3	↘
Pure fruit juices	(ml)	340	325	302	296	✓✓	-2.1	-13.0	↘
Bread		677	659	656	634	✓✓✓	-3.4	-6.4	↘
White bread		304	301	297	281	✓✓✓	-5.3	-7.7	↘
Brown and wholemeal bread		176	168	173	164	✓✓✓	-4.9	-6.4	
Sandwiches		10	10	10	12	✓	+13.7	+16.6	↗
Cakes, buns and pastries		159	153	158	153	✓✓✓	-3.2	-4.0	
Biscuits and crispbreads		163	170	169	162	✓✓✓	-4.2	-0.4	
Other cereals and cereal products		536	535	548	556	✓✓✓	+1.5	+3.7	
Beverages		56	55	54	56	✓✓✓	+2.8	-0.3	
Soft drinks [c]	(ml)	1686	1682	1678	1718	✓✓✓	+2.4	+1.9	
Not low calorie	(ml)	1178	1192	1208	1139	✓✓	-5.8	-3.3	
Low calorie	(ml)	508	490	469	579	✓✓	+23	+14.0	
Confectionery		129	131	134	131	✓✓✓	-2.5	+1.8	
Alcoholic drinks	(ml)	772	706	744	762	✓✓	+2.3	-1.4	

(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 2007, see website for more details.

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

(d) includes frozen, canned and dried vegetables.

2 For a more detailed breakdown go to: Family Food datasets

1.3 Home-grown food

Between 3 and 4 per cent of fresh fruit and vegetables entering the household in 2010 came from free sources, mainly gardens and allotments. Fresh beans, which include broad, runner, and French varieties, had the highest proportion with 31 per cent being home-grown. Home-grown fruit and vegetables have been relatively constant across the last four years.

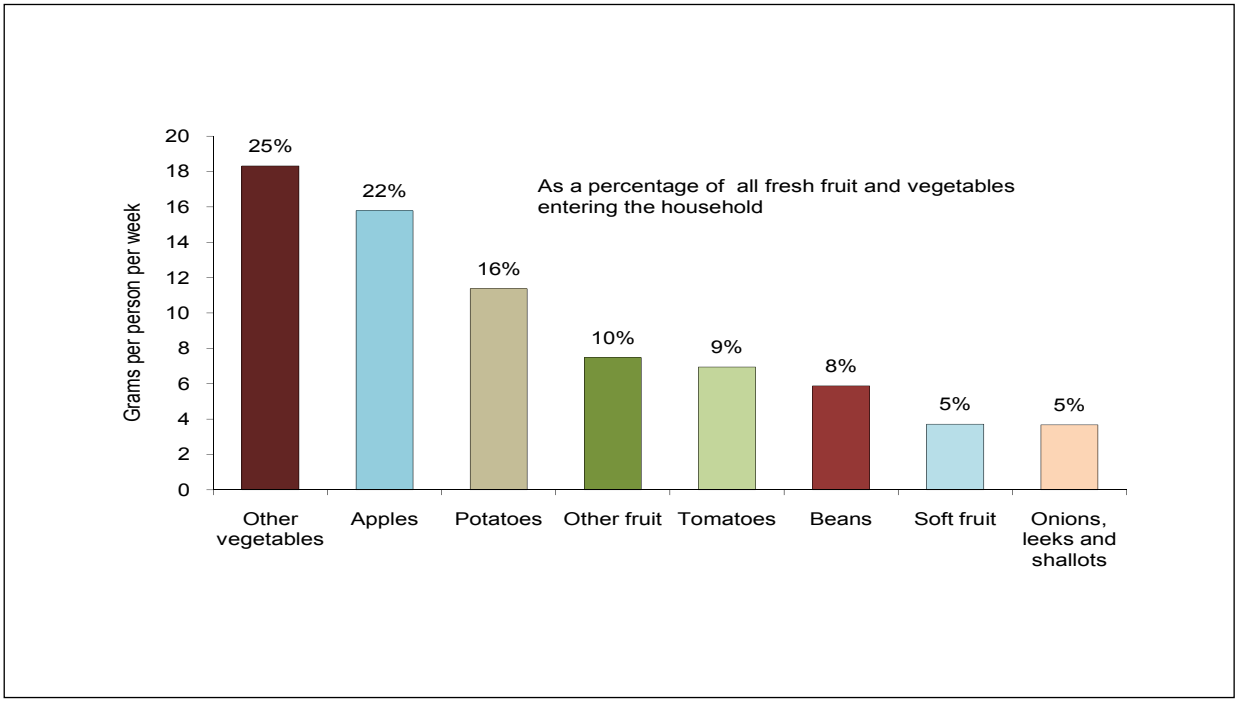
Table 1.2: Percentage of household food home-grown in gardens or allotments

	2007	2008	2009	2010
Beans	30	28	29	31
Potatoes	3	2	3	2
Onions, leeks and shallots	3	4	3	3
Tomatoes	6	4	6	7
All other vegetables	4	3	3	3
Apples	6	6	5	10
Soft fruit	13	13	8	8
All other fruit	1	1	1	1
Overall percentage	3.4	2.9	3.3	3.6
Eggs	2.4	3.2	5.1	5.6

The total amount of home-grown fruit and vegetables in grams per person per week is 73 grams, compared to 1940 grams for all household purchases of fresh fruit and vegetables (including potatoes). Processed fruit and vegetables e.g. frozen chips and canned baked beans are excluded from the totals. 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 31 per cent of all fresh beans entering the household in 2010, although they only account for around 8 per cent of all home grown fruit and vegetables by weight, as shown in Chart 1.1.

There has been a significant increase in the percentage of eggs entering the household from free sources. In 2010 5.6 per cent of all eggs entering the household were free or home-produced; more than double the amount in 2007.

Chart 1.1: Breakdown of home-grown fruit and vegetables 2010



'Other vegetables' account for a quarter of the total volume of home-grown fruit and vegetables. This category includes: marrow, courgettes, aubergine, pumpkin, cabbage, lettuce, cucumber, carrots plus other fresh root vegetables such as: parsnips, beetroot, radishes, turnip and swede.

1.4 Household spending

The average weekly expenditure on all household food and drinks in 2010 was £27.57 per person, an increase of 3.1 per cent on 2009. Total expenditure on household food and non-alcoholic drink rose by 2.7 per cent since 2009 and is now 10.7 per cent higher than in 2007 (2.3 per cent higher when adjusted for the effects of inflation). Table 1.3 shows that there have been significant upward trends between 2007 and 2010 in household expenditure on:

- Eggs - spending increased 25 per cent;
- Sugar and preserves - spending increased 24 per cent;
- Butter - spending increased 19 per cent and
- Beverages - spending increased 17 per cent.

There is a significant 4 year downward trend on the amount spent on pure fruit juices, down 9.1 per cent since 2007, although 2010 did show an increase of 3.6 per cent on 2009.

Chapter 5 examines in more detail the effects of food price rises on household spending.

Table 1.3: Expenditure on food and drink in the UK, 2007-2010

	2007	2008	2009	2010	RSE[a]	% change since 2009	% change since 2007	sig[b]
Number of households in sample	6141	5845	5825	5263				
Number of persons in sample	14647	13890	13760	12196				
Food Price Inflation	4.5	9.2	5.3	3.1				
Household Expenditure					*pence per person per week*			
Milk and cream	171	187	200	189	✓✓✓	-5.6	+10.4	yes
Liquid whole milk	25	27	28	24	✓✓	-16.9	-4.1	
Cheese	68	70	75	79	✓✓	+5.4	+16.5	yes
Carcase meat	121	122	127	130	✓✓	+3.0	+7.6	yes
Non-carcase meat and meat products	393	406	423	441	✓✓✓	+4.3	+12.3	yes
Fish	116	115	117	117	✓✓✓	-0.1	+1.0	
Eggs	23	26	27	28	✓✓✓	+4.6	+24.7	yes
Fats and oils	41	49	47	50	✓✓✓	+5.4	+20.5	yes
Butter	14	16	15	16	✓✓	+9.3	+19.0	yes
Sugar and preserves	17	19	20	21	✓✓	+8.4	+23.7	yes
Fresh and processed potatoes	108	109	111	113	✓✓✓	+2.0	+4.9	yes
Fruit and vegetables excluding potatoes	411	411	419	441	✓✓✓	+5.3	+7.2	yes
Vegetables excluding potatoes	209	210	218	230	✓✓✓	+5.4	+10.0	yes
Fruit	202	201	200	211	✓✓✓	+5.2	+4.3	yes
Fresh apples	23	22	23	23	✓✓✓	-2.1	-3.8	
Pure fruit juices	36	35	32	33	✓✓	+3.6	-9.1	yes
Cereals	409	439	452	461	✓✓✓	+2.0	+12.8	yes
Bread	108	117	118	116	✓✓✓	-1.1	+7.7	yes
Beverages	43	44	48	51	✓✓✓	+5.3	+16.9	yes
Soft drinks	79	81	85	89	✓✓✓	+5.5	+13.1	yes
Confectionery	83	87	93	96	✓✓✓	+3.4	+14.8	yes
Alcoholic drinks	281	262	289	307	✓✓	+6.4	+9.4	yes
Beers	20	17	21	21	✓	+2.1	+8.4	
Lagers and continental beers	47	45	48	48	✓✓	+0.0	+0.9	
All household food and non-alcoholic drink	2214	2300	2386	2450	✓✓✓	+2.7	+10.7	yes
All household food and drink	2495	2562	2675	2757	✓✓✓	+3.1	+10.5	yes
Eating Out Expenditure								
total expenditure on alcoholic drink eaten out	341	304	308	312	✓✓	+1.4	-8.4	
total expenditure on food and drink eaten out (exc alc drks)	796	816	826	854	✓✓✓	+3.4	+7.2	yes
total expenditure on food and drink eaten out	1137	1120	1133	1166	✓✓✓	+2.8	+2.6	
Expenditure on all food and drink	3632	3683	3808	3923	✓✓✓	+3.0	+8.0	yes

(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 2007 is statistically significant (if the change is more than twice its standard error).

1.5 Trends in spending in real terms

Table 1.4 shows expenditure in real terms, which means that the values are adjusted to remove the effects of 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 £26.39 per person per week on household food and drink. This is not directly comparable with the 2010 figure of £24.50 as it does not include spending on confectionery and soft drinks, and excludes Northern Ireland. It does show that spending in real terms was lower in 2010 than in 1975.

The Retail Price Index (RPI) (a measure of inflation) rose by 3.4 per cent between 2007 and 2009 and by 4.6 per cent between 2009 and 2010. Removing this overall rise in prices of 8.2 per cent from the changes in expenditure on food and drink shows how expenditure in real terms changed since 2007:

- household spending on food and drink up by 2.1 per cent,
- eating out spending down by 5.2 per cent,
- spending on all alcoholic drinks down by 7.9 per cent,
- spending on alcoholic drinks bought outside the home down by 15.3 per cent.

Chapter 5 examines in more detail the effects of food price rises on household spending.

Table 1.4: UK expenditure on food and drink at constant 2010 prices

	1975 [a] [c]	1985 [a] [c]	1995 [a] [b]	2007	2008	2009	2010	% change since 2009	% change since 2007
Retail price index (1975 = 100)	100	277	436	604	629	625	654	4.6	8.2
					£ per person per week				
Household food and drink			26.43	25.81	25.49	26.75	26.36	-1.5	2.1
Food and drink eaten out			8.36 [d]	11.76	11.14	11.33	11.14	-1.7	-5.2
All food and drink			34.79	37.57	36.63	38.08	37.50	-1.5	-0.2
Household food and drink exc. alcohol	25.22	22.38	23.85	22.90	22.88	23.86	23.42	-1.9	2.3
Food and drink eaten out exc. alcohol			6.18 [d]	8.24	8.12	8.26	8.16	-1.2	-0.9
All food and drink exc. alcohol			30.03	31.14	31.00	32.12	31.58	-1.7	1.4
% eaten out			21%	26%	26%	26%	26%		
Household alcoholic drink			2.57	2.91	2.61	2.89	2.94	1.7	1.1
Eaten out alcoholic drink			2.18 [d]	3.52	3.02	3.08	2.98	-3.1	-15.3
All alcoholic drinks			4.75	6.43	5.63	5.96	5.92	-0.8	-7.9
% of alcoholic drinks eaten out			46%	55%	54%	52%	50%		

(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.

1.6 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 1.5. This data indicates a downward trend in most major groups since 2007. Expenditure on takeaway food brought home fell a little in 2008 and 2009 but an increase in 2010 takes levels back to those of 2007 at an average of £1.72 per person per week.

Table 1.5: UK household purchased quantities and expenditure on takeaway food

Purchases	2007	2008	2009	2010	RSE [a]	% change since 2009	% change since 2007	trend since 2007 [b]
	grams per person per week							
Total Meat	64	58	57	59	✓✓	3.8	-7.8	↘
Total Fish	12	11	11	10	✓✓	-11.4	-14.4	↘
Total Vegetables	50	47	47	45	✓✓	-3.7	-10.8	↘
Total Bread	5	4	4	5	✓	14.9	-4.1	
Total Other cereals [c]	45	40	38	42	✓✓	10.8	-7.3	
Total Miscellaneous	3	3	2	2	✓	1.8	-35.7	↘

Expenditure	2007	2008	2009	2010	RSE [a]	% change since 2009	% change since 2007
	pence per person per week						
Total Meat	71	67	67	73	✓✓	8.3	1.6
Total Fish	19	18	19	17	✓✓	-9.4	-7.5
Total Vegetables	27	27	27	26	✓✓	-2.4	-3.6
Total Bread	7	7	6	7	✓	18.8	9.8
Total Other cereals [c]	45	40	39	46	✓✓	17.8	1.7
Total Miscellaneous	3	3	3	3	✓	-1.3	-12.6
Total	172	161	161	172			

(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 2007, see website for more details.

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

1.7 Eating out purchases

Measured in grams, the amount of eating out was 11 per cent lower in 2010 than in 2007, although the year on year decrease has slowed. In terms of money spent in actual prices (not adjusted for inflation) it was 2.6 per cent higher at £11.66 per person per week for all food and alcoholic drinks. Food and non alcoholic drinks spending was £8.54. Spending on alcoholic drink increased slightly in 2010 but remains 8.4 per cent lower than in 2007. See Table 1.3.

There are downward trends in purchases of most categories of eating out food and drink since 2007. The most significant reductions in amounts bought include confectionery down 23 per cent, alcoholic drinks down 18 per cent, 'crisps, nuts and snacks' down 17 per cent and soft drinks (including milk drinks) down 10 per cent. 'Indian, Chinese or Thai food' increased 10.0 per cent between 2009 and 2010 but there are no categories with a significant upward trend since 2007. See Table 1.6.

Table 1.6: UK eating out purchased quantities of food and drink, 2007 to 2010

		2007	2008	2009	2010	RSE[a]	% change since 2009	% change since 2007	trend since 2007[b]
Number of households in sample		6141	5845	5825	5263				
Number of persons in sample		14647	13890	13760	12196				
Eating Out Purchases						*grams per person per week unless otherwise stated*			
Alcoholic drinks									
average across whole population	ml	503	443	449	413	✓✓	-8.0	-17.9	↘
average excluding under 14's	ml	604	532	538	494	✓✓	-8.3	-18.2	↘
Soft drinks inc. milk drinks	ml	312	291	286	279	✓✓✓	-2.5	-10.5	↘
Other food products [c]		132	116	127	144	✓✓	+13.2	+9.2	
Beverages	ml	133	124	120	117	✓✓	-2.2	-12.0	↘
Meat and meat products		77	78	76	75	✓✓✓	-0.4	-2.5	
Sandwiches		76	73	67	67	✓✓✓	-0.4	-11.6	↘
Fresh and processed potatoes		67	66	65	62	✓✓✓	-3.9	-7.5	↘
Indian, Chinese or Thai food		34	31	28	31	✓	+10.0	-7.8	
Vegetables		29	29	28	26	✓✓	-9.2	-12.5	↘
Ice cream, desserts and cakes		26	26	26	25	✓✓	-4.7	-4.8	
Cheese and egg dishes or pizza		22	23	21	22	✓✓	+5.4	-1.4	
Salads		17	19	17	17	✓✓	+2.0	-0.9	
Rice, pasta or noodles		14	14	14	15	✓✓	+2.0	+3.3	
Fish and fish products		13	13	14	14	✓✓	-0.9	+2.6	
Fresh and processed fruit		14	13	12	12	✓✓	-0.7	-17.2	↘
Confectionery		13	12	11	10	✓✓	-12.4	-22.7	↘
Soups		10	10	9	8	✓	-1.2	-18.6	↘
Bread		8	8	7	7	✓✓	-5.6	-12.4	↘
Crisps, nuts and snacks		8	8	7	7	✓✓	-5.8	-17.5	↘
Biscuits and chocolate		3	3	3	3	✓	-5.5	-7.5	
Yoghurt and fromage frais		3	2	2	2		+1.7	-15.9	
Breakfast cereals		1	0	1	0	×	-25.8	-31.2	

(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 2007, see website for more details.

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

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Chapter 2 UK trends in energy and nutrient intakes

2.1 Overview

Food and drink purchases 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.

A reduction in 2010 reaffirms the downward trend in energy intake. Energy intake was 1.2 per cent lower in 2010 than in 2007. Total intakes of saturated fatty acids are on a downward trend since 2007 having fallen 3.1 per cent over this period. Compared to the reference nutrient intakes, only potassium fails to reach at least 100 per cent of the requirement, where one is set. The nutrient composition codes do take into account the inedible portion of foods, e.g. fish heads, banana peels; they do not take into account food purchased but not eaten.

2.2 Nutrient Conversion

Estimated nutrient intakes are calculated from food purchases using nutrient composition data supplied by the Department of Health (DH). The majority of the data are from the DH's nutrient analysis programme, supplemented by values from manufacturers and retailers. Methodology paper, 'Reference nutrient intakes' 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.

2.3 Reference Nutrient Intakes

Many tables in this chapter compare intakes derived from the survey with Reference Nutrient Intakes[1]. These 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 methodology paper 'Reference nutrient intakes'.

2.4 Key dietary indicators

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

This chapter presents the estimated energy and nutrient content of food purchases across the UK and trends since 2007. Chapter 3 presents country and regional estimates, where apparent differences are often due to variations in demographic characteristics such as income. Chapter 4 attributes differences in intakes to regional and demographic characteristics of households. It covers sodium, Non-Milk Extrinsic Sugars (NMES), fibre and saturated fatty acids. Chapter 5 examines in more detail the trends in these dietary indicators and compares average intakes with recommended levels.

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

Energy

Based on food purchases, total energy intake per person fell 0.5 per cent in 2010. Although the downward movement since 2007 is not statistically significant there is a clear picture of a longer term downward trend. Total energy intake for 2010 was 2292 kcal per person per day.

Energy from eating out fell sharply between 2006 and 2008 although with rises in 2009 and 2010 there is no evidence of a downward trend. Average energy intake from eating out was 3.8 per cent lower in 2010 than in 2007 at 258 kcal per person per day. Eating out accounted for an average of 11 per cent of energy intake per person in 2010.

Sodium (excluding table salt)

There was a small increase (0.2%) in the total intake of sodium in 2010 although levels are still 0.6 per cent lower than in 2007. Eating out accounted for 12 per cent of sodium intakes, broadly in line with eating out as a percentage of total energy intake. Despite a rise of 5.2 per cent in 2010, eating out intake remains 2.5 per cent lower than in 2007. Major contributors to household intake of sodium in 2010 include; 'non-carcase meat and meat products', bread and 'other cereals and cereal products'. The contribution that these food groups make to energy intake is shown in Table 2.3.

The figures do not include purchases of table salt since table 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 estimate.

Non-milk extrinsic sugars

NMES are defined as sugars not naturally incorporated into the cellular structure of foods, apart from lactose in milk. NMES 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. 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 NMES as measured as a percentage of food and drink energy (excluding alcohol) fell by 2.4 per cent in 2010. This reverses the rises of 2008 and 2009 and takes levels to just below those of 2007. The household food groups that contribute the most to total NMES intakes can be seen in Table 2.4, they are 'sugar and preserves', 'soft drinks' and 'confectionery'. The percentage of eating out food and drink energy (excluding alcohol) from NMES has fallen 11 per cent since 2007 and is on a downward trend, driven by reductions in soft drinks, alcoholic drinks, confectionery and 'ice-cream, desserts and cakes'; it now accounts for around 8.3 per cent of total NMES intakes.

Saturated fatty acids

Total intakes of saturated fatty acids are on a downward trend since 2007 having fallen 3.1 per cent over this period. The percentage of food and drink energy (excluding alcohol) derived from saturated fatty acids declined to 14.2 per cent in 2010; See Tables 2.1 and 2.2. The percentage of energy derived from saturated fatty acids from eating out has remained relatively stable at around 13.3 to 13.5 per cent of energy from food and drink (excluding alcohol).

Fibre

There has been virtually no change in fibre intake since 2007 with an increase of just 0.6 per cent. Intakes of fibre from both household and eating out combined are 15.3 grams per person per day. Household food purchases account for 88 per cent of daily fibre intakes.

Alcohol

Alcohol intake was unchanged in 2010, compared with 2009, at 10.2 grams per person per day, but it was 2.1 per cent lower than in 2007. Eating out intake of alcohol fell by 6.9 per cent in 2010 and is 14 per cent lower than in 2007 and showing a significant downward trend. In 2010 intake of alcohol from eating out accounted for just over 25 per cent of total alcohol intake.

Other nutrients

There is an upward trend over the last 4 years in intakes of monounsaturated fatty acids, and downward trends in cholesterol, zinc, magnesium, potassium, niacin equivalent, vitamin B_6 and folate.

Table 2.1 UK average energy and nutrient intakes from all food and drink

		2007	2009	2010	% change since 2009	% change since 2007	Trend since 2007	% from food eaten out in 2010
Total energy and nutrient intakes [a]								*average intake per person per day*
Energy	kcal	2320	2304	2292	-0.5	-1.2		11.2
	MJ	9.7	9.6	9.6	-0.5	-1.2		11.2
Energy excluding alcohol	kcal	2247	2233	2221	-0.5	-1.2		10.8
Total Protein	g	80.4	78.6	78.6	+0.0	-2.2		12.1
Fat	g	96	95	95	-0.3	-0.4		12.2
Fatty acids:								
Saturates	g	36.3	36.0	35.1	-2.4	-3.1	↘	10.1
Monounsaturates	g	35.4	36.0	37.0	+2.9	+4.4	↗	13.1
Polyunsaturates	g	17.6	17.2	17.1	-0.3	-3.0		14.2
Cholesterol	mg	273	262	257	-1.8	-5.9	↘	14.8
Carbohydrate [b]	g	284	282	279	-0.9	-1.6		9.2
Total sugars	g	129	129	125	-2.8	-2.8	↘	7.4
Non-milk extrinsic sugars	g	84	85	82	-2.9	-1.8		8.3
Starch	g	154	153	153	+0.4	-0.7		10.8
Fibre [c]	g	15.2	15.2	15.3	+0.7	+0.6		11.6
Alcohol	g	10.5	10.2	10.2	+0.4	-2.1		25.3
Calcium	mg	985	983	965	-1.8	-2.0		7.7
Iron	mg	12.0	11.9	11.9	+0.7	-0.3		10.7
Zinc	mg	9.6	9.3	9.4	+0.4	-2.1	↘	11.7
Magnesium	mg	293	289	289	+0.1	-1.6	↘	10.4
Sodium [d]	g	2.84	2.82	2.83	+0.2	-0.6		12.0
Potassium	g	3.28	3.23	3.21	-0.4	-2.1	↘	12.0
Thiamin	mg	1.69	1.67	1.67	-0.0	-0.9		12.7
Riboflavin	mg	1.93	1.92	1.89	-1.3	-2.0		8.0
Niacin equivalent	mg	34.9	34.3	34.4	+0.3	-1.6	↘	13.3
Vitamin B_6	mg	2.5	2.5	2.5	+1.1	-2.5	↘	14.3
Vitamin B_{12}	µg	6.5	6.4	6.4	-0.0	-2.2		9.4
Folate	µg	308	299	302	+0.7	-2.0	↘	14.1
Vitamin C	mg	79	79	80	+1.4	+0.8		11.6
Vitamin A:								
Retinol	µg	523	530	542	+2.3	+3.7		8.6
β-carotene	µg	2283	2191	2299	+4.9	+0.7		17.1
Retinol equivalent	µg	906	897	927	+3.3	+2.4		12.1
Vitamin D	µg	3.16	3.07	3.12	+1.8	-1.3		11.0
Vitamin E	mg	11.98	12.22	12.36	+1.1	+3.1		13.9
								as a percentage of food and drink energy excluding alcohol
Fat	%	38.3	38.5	38.6	+0.3	+0.8		
Fatty acids:								
saturates	%	14.5	14.5	14.2	-1.9	-1.9		
monounsaturates	%	14.2	14.5	15.0	+3.5	+5.6		
polyunsaturates	%	7.1	6.9	6.9	+0.2	-1.9		
Carbohydrate	%	47.3	47.4	47.2	-0.4	-0.4		
Non-milk extrinsic sugars	%	14.0	14.2	13.9	-2.4	-0.6		
Protein	%	14.3	14.1	14.2	+0.6	-1.1		

Table 2.1 continues over the page

Table 2.1 continued

		2007	2009	2010	% change since 2009	% change since 2007	Trend since 2007	% from food eaten out in 2010
					as a percentage of weighted reference nutrient intake (f)			
Energy [e]	%	110	110	107	-2.2	-2.8		
Energy exc alcohol [e]	%	107	106	104	-2.3	-2.8		
Protein	%	175	171	170	-0.5	-2.7		
Calcium	%	143	143	140	-2.0	-2.0		
Iron	%	116	115	115	-0.5	-1.2		
Zinc	%	120	117	117	-0.2	-2.6		
Magnesium	%	110	109	107	-1.2	-2.7		
Sodium [d]	%	190	189	187	-1.4	-1.9		
Potassium	%	103	101	99	-2.3	-3.9		
Thiamin	%	200	199	197	-0.8	-1.5		
Riboflavin	%	169	168	165	-1.6	-2.3		
Niacin equivalent	%	250	246	245	-0.3	-2.1		
Vitamin B_6	%	207	200	196	-2.0	-5.3		
Vitamin B_{12}	%	470	460	458	-0.5	-2.6		
Folate	%	163	159	158	-0.4	-3.1		
Vitamin C	%	206	205	205	+0.1	-0.5		
Vitamin A (retinol equivalent)	%	145	144	149	+3.0	+2.1		

(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 2.2 UK average energy and nutrient intakes from household and eating out food and drink

		2010 Household	% change since 2007 Household	Trend since 2007	2010 Eating out	% change since 2007 Eating out	Trend since 2007
Total energy and nutrient intakes [a]						*average intake per person per day*	
Energy	kcal	2035	-0.9		258	-3.8	
	MJ	8.5	-0.9		1.1	-3.8	
Energy excluding alcohol	kcal	1981	-1.0		240	-2.9	
Total Protein	g	69.1	-2.5		9.5	-0.3	
Vegetable Protein	g	42.0	-2.5	↘			
Animal Protein	g	27.1	-2.5	↘			
Fat	g	84	-0.3		12	-1.3	
Fatty acids:							
Saturates	g	31.6	-3.2	↘	3.6	-2.1	
Monounsaturates	g	32.1	5.1	↗	4.9	-0.3	
Polyunsaturates	g	14.7	-3.2		2.4	-1.7	
Cholesterol	mg	219	-6.7	↘	38	-0.9	
Carbohydrate [b]	g	253	-1.1		26	-5.7	↘
Total sugars	g	116	-2.1		9	-11.1	↘
Non-milk extrinsic sugars	g	76	-0.5		7	-14.0	↘
Starch	g	137	-0.5		17	-2.4	
Fibre [c]	g	13.0	0.7		2.0	-0.2	
Alcohol	g	7.6	2.7		2.6	-13.9	↘
Calcium	mg	891	-1.9		75	-3.9	
Iron	mg	10.7	-0.2		1.3	-0.4	
Zinc	mg	8.3	-2.4	↘	1.1	0.4	
Magnesium	mg	259	-1.4		30	-3.8	
Sodium [d]	g	2.49	-0.30		0.34	-2.5	
Potassium	g	2.83	-2.33	↘	0.39	-0.7	
Thiamin	mg	1.46	-1.10		0.21	0.4	
Riboflavin	mg	1.74	-1.85		0.15	-4.2	
Niacin equivalent	mg	29.8	-1.4		4.6	-3.1	
Vitamin B_6	mg	2.1	-2.5	↘	0.4	-2.6	
Vitamin B_{12}	µg	5.8	-2.5		0.6	0.3	
Folate	µg	259	-2.0	↘	43	-2.5	
Vitamin C	mg	71	0.7		9	1.2	
Vitamin A:							
Retinol	µg	496	4.2		47	-0.7	
β-carotene	µg	1905	-0.0		394	4.5	
Retinol equivalent	µg	815	2.4		112	2.2	
Vitamin D	µg	2.78	-1.3		0.34	-1.5	
Vitamin E	mg	10.64	4.0	↗	1.72	-2.2	
					as a percentage of food and drink energy excluding alcohol		
Fat	%	38.0	0.7		43.8	1.7	
Fatty acids:							
Saturates	%	14.3	-2.2		13.4	0.9	
Monounsaturates	%	14.6	6.1		18.2	2.7	
Polyunsaturates	%	6.7	-2.3		9.1	1.2	
Carbohydrate	%	48.0	-0.2		40.4	-2.8	
Non-milk extrinsic sugars	%	14.3	0.5		10.6	-11.4	
Protein	%	13.9	-1.6		15.9	2.7	

Table 2.2 continues over the page

Table 2.2 continued

		2010 Household	% change since 2007 Household	Trend since 2007	2010 Eating out	% change since 2007 Eating out	Trend since 2007
					as a percentage of weighted Reference Nutrient Intake [f]		
Energy [e]	%	95	-2.6		12	-3.7	
Energy excluding alcohol [e]	%	93	-2.8		11	-2.9	
Protein	%	150	-3.1		21	-0.3	
Calcium	%	129	-1.9		11	-3.7	
Iron	%	102	-1.3		12	-0.1	
Zinc	%	103	-2.9		14	0.4	
Magnesium	%	96	-2.6		11	-3.7	
Sodium [d]	%	164	-1.9		23	-2.3	
Potassium	%	87	-4.4		12	-0.6	
Thiamin	%	172	-1.8		25	0.5	
Riboflavin	%	152	-2.1		13	-4.1	
Niacin equivalent	%	212	-2.0		33	-3.1	
Vitamin B_6	%	167	-5.8		29	-2.6	
Vitamin B_{12}	%	415	-2.9		43	0.3	
Folate	%	136	-3.2		23	-2.4	
Vitamin C	%	181	-0.7		24	1.1	
Vitamin A (retinol equivalent)	%	130	2.0		18	2.2	

(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.

2.5 Major sources of energy from household food purchases

A third of energy from household purchases (673 kcal per person per day) is derived from a combination of:

- Bread - 10.3 per cent (209 kcal);
- Other cereal products (such as oat products, breakfast cereal, rice, pasta and pizza) - 12.1 per cent (246 kcal) and
- Non-carcase meat and meat products - 10.7 per cent (218 kcal).

Table 2.3 Contribution to total household energy intakes from selected foods

	Energy - kcal	% of household food and drink energy[(a)]
Non-carcase meat and meat products		*average per person per day*
Meat based ready meals and convenience meat products	40	2.0
Chicken - whole or part	33	1.6
Sausages, uncooked - pork	25	1.2
Meat pies, pasties and puddings - frozen or not frozen	21	1.1
Bacon and ham, uncooked	20	1.0
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	9	0.4
Cooked poultry (excluding canned)	8	0.4
All other non-carcase meat and meat products	27	1.3
Total	218	10.7
Bread		
White bread (inc premium and softgrain)	89	4.4
Other bread	70	3.4
Brown and wholemeal bread	51	2.5
Total	209	10.3
Other cereals and cereal products		
Breakfast cereals	69	3.4
Other cereal convenience foods	45	2.2
Pasta	38	1.8
Rice	37	1.8
Pizza	28	1.4
Oatmeal and oat products	12	0.6
All other cereals and cereal products	17	0.9
Total	246	12.1

(a) includes energy from alcoholic drinks

A further third of energy intake from household purchases (624 kcal per person per day) is derived from a combination of:

- Fats – 8.7 per cent (177 kcal);
- Milk, yoghurt and fromage frais, milk desserts and cream - 8.3 per cent (168 kcal);
- Biscuits – 5.3 per cent (109 kcal);
- Processed vegetables and potatoes (including frozen, canned and dried) - 6.3 per cent (128 kcal) and
- Confectionery – 4.0 per cent (82 kcal).

The remaining third of daily energy from household food and alcoholic drinks (700 kcal), comes from a range of foods including, carcase meat, fresh fruit and vegetables, fish, cheese, fresh potatoes, soft drinks and alcoholic drinks, as detailed in Table 2.4.

Table 2.4 Intakes from different types of household foods

	Energy	Fat	Saturated fatty acids	Calcium	Iron	Non-milk extrinsic sugars	Sodium	Folate	Vitamin C	β-carotene	Vitamin A (Retinol equiv.)
										average per person per day	
	kcal	grams	grams	mg	mg	grams	mg	µg	mg	µg	µg
Milk and cream [a]	168	7.3	4.5	332	0.2	3.0	129	18.3	3.8	40	89
Cheese	60	5.0	3.1	102	0.0	0.0	113	4.9	0.0	24	54
Carcase meat	57	3.9	1.6	2	0.4	0.0	19	2.9	0.0	0	1
Non-carcase meat and meat products	218	13.8	5.0	32	1.2	0.1	553	11.9	2.3	72	169
Fish	31	1.4	0.3	15	0.2	0.0	77	3.1	0.1	4	3
Eggs	16	1.1	0.3	7	0.2	0.0	17	6.0	0.0	0	23
Fats and oils	177	19.5	6.0	4	0.0	0.2	87	13.6	0.0	84	153
Sugar and preserves	64	0.0	0.0	3	0.1	16.9	4	0.1	0.3	1	0
Fresh potatoes	43	0.1	0.0	3	0.2	0.0	4	19.4	3.4	0	0
Fresh green vegetables	5	0.1	0.0	10	0.2	0.0	2	14.9	2.9	96	16
Other fresh vegetables	18	0.2	0.0	16	0.4	0.0	9	19.3	6.3	1063	177
Processed vegetables	128	5.2	0.9	24	0.9	0.9	206	20.1	6.6	256	47
Fresh fruit	45	0.3	0.1	11	0.2	0.0	3	8.2	16.0	29	5
Processed fruit	50	2.1	0.4	10	0.3	5.7	15	10.0	15.4	10	2
Bread	209	2.4	0.6	130	1.7	0.1	430	27.3	0.0	1	6
Flour	29	0.1	0.0	8	0.2	0.0	0	1.3	0.0	0	0
Cakes, buns and pastries	75	3.1	1.3	17	0.3	4.9	65	2.5	0.2	4	13
Biscuits	109	5.0	2.5	27	0.5	5.5	77	2.6	0.0	3	1
Other cereal products [b]	246	4.9	1.6	74	2.4	4.3	238	43.0	0.6	49	22
Beverages	6	0.1	0.0	7	0.2	0.7	7	8.8	0.0	0	2
Other food [c]	79	4.3	1.3	23	0.4	5.8	396	14.0	0.7	102	18
Soft drinks	56	0.0	0.0	9	0.0	15.0	17	2.5	12.1	63	10
Confectionery	82	3.4	1.9	21	0.2	11.2	18	1.9	0.0	5	5
Alcoholic drinks	61	0.0	0.0	7	0.3	1.2	7	2.7	0.0	0	0
Total household intake	**2035**	**84**	**32**	**891**	**11**	**76**	**2491**	**259**	**71**	**1905**	**815**
										percentage of total intake per person per day from household purchases	
	%	%	%	%	%	%	%	%	%	%	%
Milk and cream [a]	8	9	14	37	2	4	5	7	5	2	11
Cheese	3	6	10	11	0	0	5	2	0	1	7
Carcase meat	3	5	5	0	4	0	1	1	0	0	0
Non-carcase meat and meat products	11	16	16	4	11	0	22	5	3	4	21
Fish	2	2	1	2	2	0	3	1	0	0	0
Eggs	1	1	1	1	2	0	1	2	0	0	3
Fats and oils	9	23	19	0	0	0	3	5	0	4	19
Sugar and preserves	3	0	0	0	1	22	0	0	0	0	0
Fresh potatoes	2	0	0	0	2	0	0	7	5	0	0
Fresh green vegetables	0	0	0	1	2	0	0	6	4	5	2
Other fresh vegetables	1	0	0	2	3	0	0	7	9	56	22
Processed vegetables	6	6	3	3	8	1	8	8	9	13	6
Fresh fruit	2	0	0	1	2	0	0	3	23	2	1
Processed fruit	2	3	1	1	3	7	1	4	22	1	0

Table 2.4 continues over the page

Table 2.4 continued

	Energy	Fat	Saturated fatty acids	Calcium	Iron	Non-milk extrinsic sugars	Sodium	Folate	Vitamin C	β-carotene	Vitamin A (Retinol equiv.)
Bread	10	3	2	15	16	0	17	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	5	6	8	3	4	7	3	1	0	0	0
Other cereal products [b]	12	6	5	8	23	6	10	17	1	3	3
Beverages	0	0	0	1	2	1	0	3	0	0	0
Other food [c]	4	5	4	3	4	8	16	5	1	5	2
Soft drinks	3	0	0	1	0	20	1	1	17	3	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, cous cous, 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.

2.6 Comparison of household and eating out intakes with Reference Nutrient Intakes

Table 2.5 shows that based on the food and drink purchases recorded, average energy and micronutrient intakes were all above the weighted reference nutrient intakes (RNI) in 2010 with the exception of potassium (99%). Vitamin B_{12} shows the highest intake at 458 per cent of the RNI. Average energy intake including alcohol was 7 per cent above the weighted Estimated Average Requirement (EAR). Average energy intake excluding alcohol was also above the weighted EAR at 104 per cent.

Table 2.5 Energy and nutrient intakes in the UK in 2010 as a percentage of weighted Reference Nutrient Intakes

		Nutrient intakes in 2010			Intake as a percentage of weighted Reference Nutrient Intake [a]		
		Household	Eaten Out	Total	Household	Eaten Out	Total
							per person per day
Energy [b]	kcal	2035	258	2292	95	12	107
Energy excluding alcohol [b]	kcal	1981	240	2221	93	11	104
Protein	g	69.1	9.5	78.6	150	21	170
Calcium	mg	891	75	965	129	11	140
Iron	mg	10.7	1.3	11.9	102	12	115
Zinc	mg	8.3	1.1	9.4	103	14	117
Magnesium	mg	259	30	289	96	11	107
Sodium [c]	g	2.49	0.34	2.83	164	23	187
Potassium	g	2.83	0.39	3.21	87	12	99
Thiamin	mg	1.46	0.21	1.67	172	25	197
Riboflavin	mg	1.74	0.15	1.89	152	13	165
Niacin equivalent	mg	29.8	4.6	34.4	212	33	245
Vitamin B_6	mg	2.1	0.4	2.5	167	29	196
Vitamin B_{12}	µg	5.8	0.6	6.4	415	43	458
Folate	µg	259	43	302	136	23	158
Vitamin C	mg	71	9	80	181	24	205
Vitamin A (retinol equivalent)	µg	815	112	927	130	18	149

(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.

2.7 Nutrient intakes from eating out

Eating out accounted for 11 per cent of total energy intake in 2010. Excluding energy intake from free meals and unspecified meals, over half of the total energy from eating out is derived from a combination of meat and meat products, alcoholic drinks, sandwiches and potatoes (including chips); See Table 2.6.
The estimation methods for unspecified meals were introduced in the 2005-06 Family Food report and are described in the method paper 'Free food and unspecified meals estimation'
Chapter 1 presents the estimates of quantities and spending on eating out for the last four years.

Table 2.6 Intakes from different types of food eaten out

	Energy	Fat	Saturated fatty acids	Calcium	Iron	Non-milk extrinsic sugars	Sodium	Folate	Vitamin C	β carotene	Vitamin A (Retinol equiv.)
											average per person per day
	kcal	grams	grams	mg	mg	grams	mg	µg	mg	µg	µg
Indian, Chinese and Thai meals or dishes	15	0.7	0.1	4	0.2	0.2	29	1.3	0.1	7	1.7
Meat and meat Products	24	1.4	0.5	7	0.1	0.0	54	1.9	0.2	25	10.4
Fish and fish products	4	0.2	0.0	1	0.0	0.0	5	0.4	0.0	0	0.5
Cheese and egg dishes and pizza	7	0.4	0.2	4	0.0	0.0	11	2.3	0.1	5	4.7
Potatoes	16	0.7	0.1	1	0.1	0.0	3	4.2	1.4	0	0.5
Vegetables	3	0.1	0.0	2	0.0	0.0	8	1.4	0.3	40	6.9
Salads	2	0.1	0.0	1	0.0	0.0	3	0.8	0.4	18	3.5
Rice, pasta and noodles	3	0.0	0.0	0	0.0	0.0	1	0.1	0.0	0	0.1
Soups	1	0.0	0.0	0	0.0	0.0	5	0.3	0.0	0	0.0
Breakfast cereals	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Fruit	1	0.0	0.0	0	0.0	0.0	0	0.1	0.2	1	0.1
Yoghurt	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0
Bread	3	0.1	0.1	1	0.0	0.0	6	0.3	0.0	1	1.3
Sandwiches	19	0.9	0.3	11	0.1	0.0	42	2.2	0.2	12	6.3
Beverages	1	0.1	0.0	2	0.0	0.1	1	0.3	0.0	0	0.5
Soft drinks including milk	12	0.1	0.0	5	0.0	2.6	3	0.6	1.0	1	0.9
Alcoholic drinks	25	0.0	0.0	4	0.1	1.7	4	4.9	0.3	0	0.0
Confectionery	6	0.2	0.1	2	0.0	0.9	1	0.1	0.0	0	0.2
Ice cream, desserts and cakes	12	0.6	0.3	3	0.0	0.7	9	0.4	0.1	3	4.6
Biscuits	2	0.1	0.0	0	0.0	0.1	1	0.1	0.0	0	0.0
Crisps, nuts and snacks	5	0.3	0.1	0	0.0	0.1	7	0.3	0.0	0	0.1
All Food & Drink Eaten Out (a)	**160**	**6.3**	**2.1**	**49**	**0.7**	**6.5**	**193**	**22**	**4.2**	**115**	**42**
	As a percentage of total intake per person per day from food and drink purchased for consumption outside the home										
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Indian, Chinese and Thai meals or dishes	9	12	7	8	20	3	15	6	2	6	4
Meat and meat Products	15	23	27	13	17	0	28	8	4	22	25
Fish and fish products	3	3	2	2	2	0	3	2	0	0	1
Cheese and egg dishes and pizza	4	7	7	9	6	0	6	11	3	4	11
Potatoes	10	11	5	2	7	0	2	19	33	0	1
Vegetables	2	2	1	3	5	1	4	6	6	34	16
Salads	1	2	2	2	2	0	1	3	10	16	8
Rice, pasta and noodles	2	1	0	1	1	0	1	1	0	0	0
Soups	0	0	0	0	1	0	3	1	0	0	0
Breakfast cereals	0	0	0	0	0	0	0	0	0	0	0
Fruit	0	0	0	0	0	1	0	1	5	0	0
Yoghurt	0	0	0	1	0	0	0	0	0	0	0
Bread	2	2	4	3	2	0	3	1	0	1	3
Sandwiches	12	15	14	22	14	0	22	10	5	11	15
Beverages	1	1	2	4	2	2	1	1	1	0	1
Soft drinks including milk	7	1	2	10	1	40	1	3	23	1	2
Alcoholic drinks	16	0	0	8	9	25	2	22	6	0	0
Confectionery	4	4	7	4	2	13	1	0	0	0	0
Ice cream, desserts and cakes	7	10	13	6	4	11	4	2	1	3	11
Biscuits	1	1	2	1	1	2	0	0	0	0	0
Crisps, nuts and snacks	3	5	6	1	2	1	4	2	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

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Chapter 3 Geographic Comparisons

3.1 Overview

This chapter presents estimates of food and drink purchases and nutrient intakes for the four countries of the United Kingdom and the nine Government Office Regions of England.

Wales had the highest purchased quantities for 9 out of the 16 food groups while Northern Ireland had lowest levels for 8 out of the 16 groups, with differences as much as one and half times more than in the lowest purchasing country. There were far smaller variations in nutrient intakes across countries. Rural areas tended to have higher food and drink purchases and associated higher energy and nutrient intakes.

Apparent regional differences are often due to demographic differences. Chapter 4 attributes differences in diet to regional and demographic characteristics of households. It covers patterns in purchases of fruit and vegetables, and patterns in intakes of sodium, Non-Milk Extrinsic Sugars (NMES), fibre and saturated fatty acids.

There is variation in the sample size between each of the four countries of the United Kingdom and between one year and the next; notably in 2010 Northern Ireland had a significantly reduced sample size of 147 participating households. In order to balance out such variations, this chapter concentrates on three year averages between 2008 and 2010.

3.2 UK country comparisons

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 nine regions of England, plus Wales, Scotland and Northern Ireland, making 12 NUTS 1 regions in all. For more information on NUTS codes see: http://www.statistics.gov.uk/geography/nuts.asp

Household purchases

Averaged over the three years to 2010, Wales featured as highest ranked country in 9 of the 16 food groups shown; (See Table 3.1). These 9 groups included:
'Milk and cream', fish, 'vegetables excluding potatoes', fruit and alcoholic drinks.

Northern Ireland featured as the lowest ranked country in 8 of the 16 food groups; cheese, fish, eggs, 'sugar and preserves', 'vegetables excluding potatoes', fruit, beverages and alcoholic drinks. In three of these groups, fish, 'vegetables excluding potatoes' and alcoholic drinks, the highest was nearly one and a half times the amount of the lowest.
England did not rank as highest in any of the 16 food groups but ranked lowest in purchases of 'milk and cream', 'other meat and meat products', cereals, soft drinks and confectionery.

Table 3.1: Purchases of selected foods by UK country - 3 year average

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample		13300	798	1512	1323			
Average age of HRP		53	55	52	52			
Average number of adults per household		2	2	2	2			
Average number of children per household		0.5	0.4	0.4	0.5			
Average gross weekly household income (£)		701	606	682	585			
Household purchases	*grams per person per week unless otherwise stated*							
Milk and cream	(ml)	1935	2105	1997	2086	England	Wales	1.1
Cheese		116	117	117	90	N. Ireland	Scotland	1.3
Carcase meat		213	224	179	231	Scotland	N. Ireland	1.3
Non-carcase meat and meat products		781	880	832	872	England	Wales	1.1
Fish		159	161	145	118	N. Ireland	Wales	1.4
Eggs	(no.)	1.6	1.7	1.7	1.6	N. Ireland	Scotland	1.1
Fats and oils		184	192	171	173	Scotland	Wales	1.1
Sugar and preserves		126	147	124	100	N. Ireland	Wales	1.5
Potatoes		747	813	745	1084	Scotland	N. Ireland	1.5
Vegetables excluding potatoes		1126	1186	977	867	N. Ireland	Wales	1.4
Fruit		1161	1196	1163	1010	N. Ireland	Wales	1.2
Total cereals		1560	1616	1675	1705	England	N. Ireland	1.1
Beverages		56	56	50	48	N. Ireland	Wales	1.2
Soft drinks [(a)]	(ml)	1631	1866	2152	1843	England	Scotland	1.3
Alcoholic drinks	(ml)	740	783	744	564	N. Ireland	Wales	1.4
Confectionery		129	151	152	135	England	Scotland	1.2
Eating out purchases	*grams per person per week unless otherwise stated*							
Indian, Chinese and Thai meals		30	25	29	33	Wales	N. Ireland	1.3
Meat and meat products		76	76	73	94	Scotland	N. Ireland	1.3
Fish and fish products		14	12	15	9	N. Ireland	Scotland	1.6
Cheese and egg dishes and pizza		22	19	20	19	Wales	England	1.2
Potatoes		64	69	61	79	Scotland	N. Ireland	1.3
Vegetables excluding potatoes		28	32	20	23	Scotland	Wales	1.6
Sandwiches		68	56	82	71	Wales	Scotland	1.5
Ice creams, desserts and cakes		25	21	29	30	Wales	N. Ireland	1.4
Beverages	(ml)	121	106	125	112	Wales	Scotland	1.2
Soft drinks including milk	(ml)	277	257	344	403	Wales	N. Ireland	1.6
Alcoholic drinks	(ml)	436	472	392	463	Scotland	Wales	1.2
Confectionery		11	11	13	16	England	N. Ireland	1.5

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

Nutrient intakes

Whilst there are variations in the average amount of different foods purchased in the four UK countries, there is little variation in the nutrient intakes derived from these purchases (See Table 3.2), indicating that there are different ways to achieve the same dietary outcomes.
The largest variations in nutrient intakes are in vitamin A and vitamin E where Wales has the largest intakes. For vitamin A the intake in Wales is 17 per cent higher than in Northern Ireland. For vitamin D the intake in Wales is 19 per cent higher than in Scotland; this is in line with higher purchases in Wales of 'other fresh vegetables', 'non-carcase meat and meat products' and 'fats and oils' which contain higher levels of these nutrients.

Scottish and Welsh households had the highest intake of NMES at 14.8 per cent of food energy per day, compared to the recommended maximum level of 11 per cent. By comparison, intakes in England and Northern Ireland were 14.1 per cent and 13.7 per cent respectively of daily food energy intake.
England and Wales had a higher percentage of energy from total fat intake than Scotland and Northern Ireland. As a percentage of daily energy intake, it is recommended that saturated fats should make up no more than 11 per cent. At between 14.4 and 14.6 per cent of daily energy intake, saturated fat intake exceeds this recommendation in all four countries.

Alcohol

When measured in millilitres, Welsh households purchased the highest volume of alcoholic drinks, both for household consumption and eating out, (See Table 3.1). However, when measured in grams per person per day, it was Scottish households that had the highest intake of alcohol, (See Table 3.2) indicating they purchased drinks containing higher alcohol content.

Eating out

Notable statistics on eating out from Table 3.1 show that Northern Ireland had the highest purchases of food eaten out in 6 out of the 12 food categories, including 'meat and meat products', soft drinks, potatoes and confectionery, but the lowest purchases of 'fish and fish products'. Scotland had the highest purchases of sandwiches and the lowest purchases of alcoholic drinks when measured in millilitres.

Table 3.2: Energy and nutrient intakes by country - 3 year average

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample		13300	798	1512	1323			
Average age of HRP		53	55	52	52			
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	0.5			
Average gross weekly household income (£)		701	606	682	585			
Total energy & nutrient intakes [a]				*intake per person per day*				
Energy	kcal	2264	2353	2357	2332	England	Scot	1.04
	MJ	9.5	9.9	9.9	9.8	England	Scot	1.04
Energy intake excluding alcohol	kcal	2195	2283	2281	2270	England	Wales	1.04
Total Protein	g	77.8	81.3	79.7	81.7	England	NI	1.05
Fat	g	94	97	96	95	England	Wales	1.04
Fatty acids:								
Saturates	g	35.3	37.1	36.9	36.2	England	Wales	1.05
Monounsaturates	g	35.4	36.6	36.0	35.5	England	Wales	1.03
Polyunsaturates	g	17.2	17.4	17.0	16.8	NI	Wales	1.04
Cholesterol	mg	261	274	265	266	England	Wales	1.05
Carbohydrate [b]	g	276	288	292	290	England	Scot	1.06
Total sugars	g	126	137	134	126	England	Wales	1.08
Non-milk extrinsic sugars	g	83	90	90	83	England	Wales	1.09
Starch	g	150	151	157	164	England	NI	1.09
Fibre [c]	g	15.0	15.6	15.0	15.2	England	Wales	1.04
Alcohol	g	9.9	10.1	10.8	8.8	NI	Scot	1.23
Calcium	mg	964	1020	1011	1007	England	Wales	1.06
Iron	mg	11.7	12.3	12.1	12.0	England	Wales	1.05
Zinc	mg	9.2	9.7	9.4	9.6	England	Wales	1.05
Magnesium	mg	286	297	293	287	England	Wales	1.04
Sodium [d]	g	2.76	2.92	3.00	2.96	England	Scot	1.08
Potassium	g	3.19	3.32	3.21	3.28	England	Wales	1.04
Thiamin	mg	1.65	1.74	1.69	1.77	England	NI	1.07
Riboflavin	mg	1.89	2.01	1.92	1.95	England	Wales	1.07
Niacin equivalent	mg	34.0	35.5	34.6	35.7	England	NI	1.05
Vitamin B_6	mg	2.4	2.6	2.5	2.7	England	NI	1.10
Vitamin B_{12}	µg	6.3	6.6	6.4	6.3	NI	Wales	1.06
Folate	µg	298	313	294	302	Scot	Wales	1.07
Vitamin C	mg	78	81	80	76	NI	Wales	1.06
Vitamin A:								
Retinol	µg	532	570	536	486	NI	Wales	1.17
β-carotene	µg	2236	2380	2164	2102	NI	Wales	1.13
Retinol equivalent	µg	906	966	898	843	NI	Wales	1.15
Vitamin D	µg	3.03	3.46	2.90	3.04	Scot	Wales	1.19
Vitamin E	mg	12.12	12.17	12.06	11.95	NI	Wales	1.02

Table 3.2 continues over the page

Table 3.2 continued

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
					Percentage contributions of macronutrients to energy intake excluding alcohol			
Fat	%	38.5	38.4	37.9	37.6	NI	England	1.02
Fatty acids:								
Saturates	%	14.5	14.6	14.6	14.4	NI	Wales	1.02
Monounsaturates	%	14.5	14.4	14.2	14.1	NI	England	1.03
Polyunsaturates	%	7.0	6.8	6.7	6.6	NI	England	1.06
Carbohydrate	%	47.2	47.3	48.0	47.9	England	Scot	1.02
Non-milk extrinsic sugars	%	14.1	14.8	14.8	13.7	NI	Wales	1.08
Protein	%	14.2	14.3	14.0	14.4	Scot	NI	1.03
					As a percentage of weighted reference nutrient intake (f)			
Energy [e]	%	108	112	112	111	England	Scot	1.04
Energy excluding alcohol [e]	%	105	109	109	108	England	Wales	1.04
Protein	%	170	175	175	179	England	NI	1.06
Calcium	%	140	148	147	146	England	Wales	1.06
Iron	%	114	119	115	115	England	Wales	1.04
Zinc	%	116	121	119	121	England	NI	1.05
Magnesium	%	108	111	111	108	England	Wales	1.03
Sodium [d]	%	185	194	201	199	England	Scot	1.09
Potassium	%	100	102	101	103	England	NI	1.03
Thiamin	%	196	206	201	210	England	NI	1.07
Riboflavin	%	165	175	169	171	England	Wales	1.06
Niacin equivalent	%	244	255	248	256	England	NI	1.05
Vitamin B_6	%	198	210	201	217	England	NI	1.10
Vitamin B_{12}	%	458	473	463	453	NI	Wales	1.04
Folate	%	158	164	156	161	Scot	Wales	1.05
Vitamin C	%	202	208	209	198	NI	Scot	1.05
Vitamin A (retinol equivalent)	%	146	155	145	136	NI	Wales	1.14

(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.

Spending

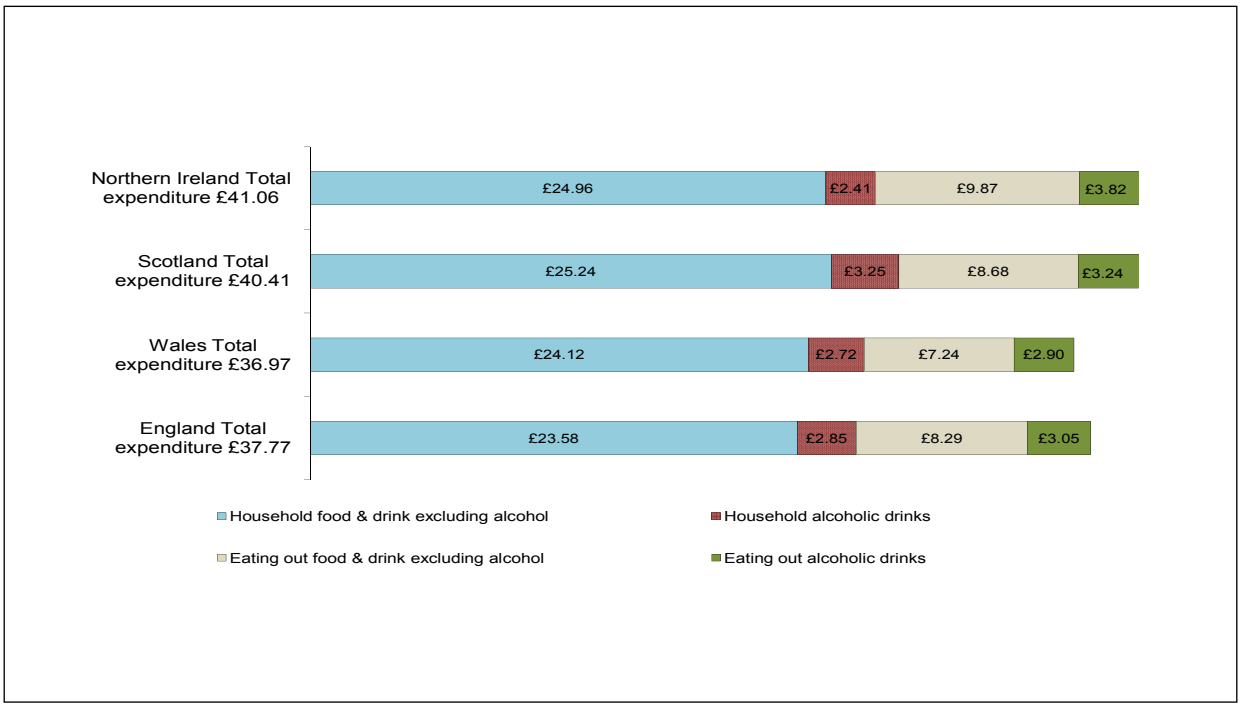
Spending on all food and drink was highest in Northern Ireland at £41.06 per person per week compared to Wales who spent the least at £36.97. The same pattern was evident with expenditure on eating out; Northern Ireland was the highest at £13.69 and Wales the lowest at £10.14. For household purchases it was Scottish households who had the highest spend at £28.49 compared to English households who spent the least at £26.43.

No account has been taken of possible variations in the cost of living between countries.

Table 3.3: Spending by UK countries - 3 year average 2008-2010

	England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample	13300	798	1512	1323			
Average age of HRP	53	55	52	52			
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	0.5			
Average gross weekly household income (£)	701	606	682	585			
Household expenditure							*pounds per person per week*
Household food & drink excluding alcohol	23.58	24.12	25.24	24.96	England	Scotland	1.1
Household alcoholic drinks	2.85	2.72	3.25	2.41	NI	Scotland	1.4
all food & drink	26.43	26.83	28.49	27.37	England	Scotland	1.1
Eating out expenditure							
Eating out food & drink excluding alcohol	8.29	7.24	8.68	9.87	Wales	NI	1.4
Eating out alcoholic drinks	3.05	2.90	3.24	3.82	Wales	NI	1.3
all food & drink	11.34	10.14	11.92	13.69	Wales	NI	1.4
Total expenditure							
all food & drink excluding alcohol	31.87	31.36	33.92	34.84	Wales	NI	1.1
alcoholic drinks	5.89	5.61	6.49	6.22	NI	Scotland	1.2
all food & drink	37.77	36.97	40.41	41.06	Wales	NI	1.1

Chart 3.1: Spending on food and alcohol by UK countries - 3 year average 2008-2010



Northern Ireland had the highest level of spending on alcoholic drinks consumed outside the home at £3.82 per person per week but spent the least on household supplies of alcohol at £2.41. Scotland had the highest overall spend on alcohol at £6.49 per person per week.

3.3 England regional comparisons

In 2010 the population of England, made up from nine regions, formed 84 per cent of the total UK population. These nine regions merit examination in their own right.

Detailed population statistics can be found at:
http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15106.

Household purchases

Vegetable purchases (excluding fresh and processed potatoes) were highest in the South West at 1241 grams per week and lowest in the North West at 974 grams per person per week. The South West was also the highest in a number of other food groups including: 'milk and cream', cheese, carcase meat and eggs. See Table 3.4.

Fruit purchases were highest in London (1337 grams per person per week), 1.4 times higher than in the North East (944 grams per person per week) which was the lowest. London also had the largest purchases of fish, 30 grams per person per week higher than the lowest levels in the South West. London was lowest in ten of the household food categories including cheese, potatoes, soft drinks, alcoholic drinks and confectionery.

Eating out

The biggest differential in eating out purchases in English regions is in the 'Indian, Chinese and Thai meals' category; people living in London purchased 47 grams per week whilst those in the North East and South West purchased less than half this amount at 21 grams per week, on average. People in 'Yorkshire and the Humber' and in London purchased the most fish and fish products at 17 grams per week, above the average for England which was 14 grams.

Table 3.4: Purchases of selected foods by region - 3 year average, highest and lowest

	Lowest region	Lowest value		Highest region	Highest value		Ratio of lowest to highest
Household purchases					*grams per person per week unless otherwise stated*		
Milk and cream	London	1674	(ml)	South West	2083	(ml)	1.2
Cheese	London	96		South West	141		1.5
Carcase meat	East Midlands	189		South West	228		1.2
Non-carcase meat and meat products	London	692		North West	824		1.2
Fish	South West	146		London	176		1.2
Eggs	West Midlands	1	(no.)	South West	2	(no.)	1.2
Fats and oils	North East	162		South West	196		1.2
Sugar and preserves	London	111		South West	143		1.3
Potatoes	London	564		West Midlands	851		1.5
Vegetables exlcuding potatoes	North West	974		South West	1241		1.3
Fruit	North East	944		London	1337		1.4
Total cereals	London	1448		South West	1650		1.1
Beverages	London	46		South West	62		1.3
Soft drinks [(a)]	London	1260	(ml)	East Midlands	1810	(ml)	1.4
Alcoholic drinks	London	522	(ml)	North East	930	(ml)	1.8
Confectionery	London	96		North East	142		1.5
Eating out purchases					*grams per person per week unless otherwise stated*		
Indian, Chinese and Thai meals	North East	21		London	47		2.3
Meat and meat products	North East	70		North West	83		1.2
Fish and fish products	North West	12		Yorkshire & the Humber	17		1.5
Cheese and egg dishes and pizza	South West	21		North East	25		1.2
Potatoes	East	59		East Midlands	72		1.2
Vegetables exlcuding potatoes	Yorkshire & the Humber	26		East Midlands	33		1.3
Sandwiches	West Midlands	57		London	79		1.4
Ice creams, desserts and cakes	West Midlands	21		East	29		1.4
Beverages	West Midlands	104	(ml)	East Midlands	141	(ml)	1.4
Soft drinks including milk	South West	239	(ml)	London	307	(ml)	1.3
Alcoholic drinks	London	360	(ml)	North East	597	(ml)	1.7
Confectionery	South East	10		North West	12		1.2
Household expenditure					*Pence per person per week*		
Total all food & drink excluding alcohol	North East	2122		South East	2522		1.2
Total alcoholic drinks	London	245		North West	311		1.3
Total all food & drink	North East	2399		South East	2832		1.2
Eating out expenditure					*Pence per person per week*		
Total all food & drink excluding alcohol	North East	664		London	1053		1.6
Total alcoholic drinks	South West	279		North West	334		1.2
Total all food & drink	North East	984		London	1384		1.4

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

Table 3.5: Purchases of selected foods by region - 3 year average 2008-2010

		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Number of households in sample		13300	730	1771	1460	1211	1467	1546	1413	2186	1516
Average age of HRP		53	54	53	53	53	53	53	51	53	55
Average number of adults per household		1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8
Average number of children per household		0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.4
Average gross weekly household income (£)		701	547	606	578	667	625	742	936	822	659
HOUSEHOLD PURCHASES										*grams per person per week unless otherwise stated*	
Milk and cream	(ml)	1935	1939	2001	1966	2083	1905	1963	1674	1898	2083
Cheese		116	98	105	108	127	106	128	96	129	141
Carcase meat		213	219	205	197	189	218	226	206	227	228
Non-carcase meat and meat products		781	809	824	796	778	799	789	692	788	789
Fish		159	157	154	155	158	155	164	176	156	146
Eggs	(no.)	2	2	2	2	2	1	2	2	2	2
Fats and oils		184	162	183	174	193	193	178	194	172	196
Sugar and preserves		126	118	117	124	139	136	127	111	125	143
Potatoes		747	798	755	771	791	851	724	564	749	823
Vegetables excluding potatoes		1126	1006	974	1065	1185	1070	1177	1188	1185	1241
Fruit		1161	944	1003	1035	1180	998	1266	1337	1243	1284
Total cereals		1560	1566	1536	1539	1605	1613	1609	1448	1539	1650
Beverages		56	51	54	54	61	58	58	46	59	62
Soft drinks [a]	(ml)	1631	1688	1636	1606	1810	1733	1730	1260	1716	1671
Alcoholic drinks	(ml)	740	930	832	823	813	693	729	522	725	762
Confectionery		129	142	136	134	137	136	136	96	125	138
EATING OUT PURCHASES										*grams per person per week unless otherwise stated*	
Indian, Chinese and Thai meals		30	21	26	28	27	31	29	47	32	21
Meat and meat products		76	70	83	75	77	75	73	77	76	74
Fish and fish products		14	12	12	17	14	12	13	17	13	12
Cheese and egg dishes and pizza		22	25	21	22	23	22	22	24	22	21
Potatoes		64	64	66	69	72	65	59	62	60	62
Vegetables excluding potatoes		28	28	26	26	33	28	27	28	28	31
Sandwiches		68	73	67	75	67	57	70	79	69	58
Ice creams, desserts and cakes		25	24	21	25	27	21	29	28	26	29
Beverages	(ml)	121	132	105	125	141	104	127	118	125	127
Soft drinks including milk	(ml)	277	297	301	276	285	267	252	307	265	239
Alcoholic drinks	(ml)	436	597	525	464	465	463	386	360	363	404
Confectionery		11	11	12	11	11	10	10	10	10	11
HOUSEHOLD EXPENDITURE										*pence per person per week*	
Total all food & drink excluding alcohol		2358	2122	2239	2211	2357	2245	2514	2371	2522	2500
Total alcoholic drinks		285	278	311	269	295	252	286	245	310	311
Total all food & drink		2643	2399	2551	2481	2652	2497	2800	2616	2832	2811
EATING OUT EXPENDITURE										*pence per person per week*	
Total all food & drink excluding alcohol		829	664	769	770	786	691	877	1053	881	799
Total alcoholic drinks		305	320	334	295	293	296	298	331	286	279
Total all food & drink		1134	984	1103	1065	1079	987	1176	1384	1167	1078

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

Nutrient intakes

Given that the South West features highest in a number of food groups for purchases of household supplies and that London features as the lowest, it follows that they often feature in the same position for nutrient intakes as well as total energy. Polyunsaturates, alcohol, vitamin D and vitamin E are the only nutrients for which the South West does not feature highest.

As a percentage of total energy intakes, London had the highest total intake of fats at 39 per cent. Within this category London had the highest levels of monounsaturates and polyunsaturates but the lowest level of saturated fat. As a percentage of energy intake, London had the lowest intake of NMES at 12.7 per cent compared to East Midlands at 14.5 per cent.

Table 3.6: Energy and nutrient intakes by region - 3 year average 2008-2010

ENGLAND & REGIONS		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Number of households in sample		13300	730	1771	1460	1211	1467	1546	1413	2186	1516
Average age of HRP		53	54	53	53	53	53	53	51	53	55
Average number of adults per household		1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8
Average number of children per household		0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.4
Average gross weekly household income (£)		701	547	606	578	667	625	742	936	822	659
TOTAL ENERGY & NUTRIENT INTAKES [a]										*intake per person per day*	
Energy	kcal	2264	2227	2251	2242	2340	2281	2331	2171	2273	2396
	MJ	9.5	9.3	9.4	9.4	9.8	9.6	9.8	9.1	9.5	10.0
Energy excluding alcohol	kcal	2195	2148	2171	2172	2267	2214	2263	2116	2204	2325
Total Protein	g	77.8	76.8	77.6	77.1	79.3	77.2	80.0	75.0	78.2	80.9
Fat	g	94	90	93	93	96	94	97	92	95	100
Fatty acids:											
Saturates	g	35.3	34.7	35.0	35.2	36.3	34.8	36.7	31.9	36.1	38.4
Monounsaturates	g	35.4	34.1	35.4	35.1	36.3	35.5	36.7	35.4	36.1	37.8
Polyunsaturates	g	17.2	15.7	17.0	16.7	17.4	17.4	17.1	18.3	16.8	17.6
Cholesterol	mg	261	257	257	259	260	250	267	251	260	273
Carbohydrate [b]	g	276	273	271	273	288	282	285	264	275	293
Total sugars	g	126	122	122	124	133	126	132	113	128	136
Non-milk extrinsic sugars	g	83	81	81	82	88	85	86	72	84	89
Starch	g	150	151	149	149	155	156	153	150	146	156
Fibre [c]	g	15.0	14.2	14.3	14.7	15.6	15.0	15.5	14.9	15.2	16.1
Alcohol	g	9.9	11.3	11.4	10.0	10.4	9.5	9.8	7.8	9.8	10.1
Calcium	mg	964	951	964	962	1021	963	1002	853	969	1035
Iron	mg	11.7	11.3	11.5	11.7	12.2	11.7	12.2	11.2	12.0	12.5
Zinc	mg	9.2	9.1	9.2	9.2	9.4	9.1	9.5	8.8	9.3	9.7
Magnesium	mg	286	279	279	281	297	282	295	276	291	303
Sodium [d]	g	2.76	2.79	2.81	2.80	2.87	2.77	2.88	2.44	2.84	2.94
Potassium	g	3.19	3.13	3.14	3.17	3.32	3.17	3.29	3.05	3.24	3.40
Thiamin	mg	1.65	1.60	1.63	1.63	1.71	1.65	1.71	1.57	1.67	1.75
Riboflavin	mg	1.89	1.84	1.88	1.89	1.97	1.85	1.96	1.72	1.91	2.02
Niacin equivalent	mg	34.0	33.6	33.8	33.6	34.7	33.6	35.1	32.7	34.3	35.1
Vitamin B_6	mg	2.4	2.4	2.4	2.4	2.6	2.5	2.5	2.3	2.5	2.6
Vitamin B_{12}	µg	6.3	6.4	6.4	6.4	6.5	6.1	6.6	6.0	6.4	6.6
Folate	µg	298	283	289	294	310	294	309	288	305	322
Vitamin C	mg	78	70	73	73	81	72	82	83	81	83

Table 3.6 continues over the page

Table 3.6 continued

ENGLAND & REGIONS		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Vitamin A:											
Retinol	µg	532	523	499	537	523	496	578	491	562	584
β-carotene	µg	2236	2145	2105	2211	2334	2111	2331	2185	2292	2459
Retinol equivalent	µg	906	882	853	907	913	850	968	856	946	995
Vitamin D	µg	3.03	2.89	3.06	3.02	3.24	3.04	3.25	2.83	3.07	3.17
Vitamin E	mg	12.12	11.25	12.02	11.91	12.49	12.40	12.23	12.89	12.01	12.50
Percentage contributions of macronutrients to energy intake excluding alcohol											
Fat	%	38.5	37.9	38.7	38.5	38.2	38.1	38.5	39.0	38.9	38.8
Fatty acids:											
Saturates	%	14.5	14.5	14.5	14.6	14.4	14.2	14.6	13.6	14.8	14.9
Monounsaturates	%	14.5	14.3	14.7	14.5	14.4	14.4	14.6	15.0	14.7	14.6
Polyunsaturates	%	7.0	6.6	7.0	6.9	6.9	7.1	6.8	7.8	6.9	6.8
Carbohydrate	%	47.2	47.7	46.9	47.2	47.7	47.8	47.3	46.8	46.8	47.2
Non-milk extrinsic sugars	%	14.1	14.1	13.9	14.1	14.5	14.3	14.3	12.7	14.3	14.4
Protein		14.2	14.3	14.3	14.2	14.0	14.0	14.1	14.2	14.2	13.9
As a percentage of weighted reference nutrient intake (f)											
Energy [e]	%	108	106	107	105	111	108	111	103	108	113
Energy excluding alcohol [e]	%	105	102	103	102	107	105	108	100	104	110
Protein	%	170	167	170	166	173	168	177	162	170	175
Calcium	%	140	137	140	139	148	140	146	123	140	150
Iron	%	114	109	111	112	119	114	116	109	117	122
Zinc	%	116	114	115	114	117	114	120	110	116	121
Magnesium	%	108	104	105	104	112	105	112	103	109	113
Sodium [d]	%	185	185	188	185	191	184	194	162	188	195
Potassium	%	100	97	98	98	104	98	104	94	100	105
Thiamin	%	196	189	194	192	203	196	204	186	197	207
Riboflavin	%	165	161	165	164	172	161	172	149	166	176
Niacin equivalent	%	244	241	243	239	248	241	252	233	246	251
Vitamin B_6	%	198	195	197	194	207	199	204	183	198	207
Vitamin B_{12}	%	458	461	462	457	468	436	480	429	456	475
Folate	%	158	149	153	155	164	155	165	152	160	170
Vitamin C	%	202	180	188	189	208	185	212	214	210	214
Vitamin A (retinol equivalent)	%	146	142	137	145	147	136	157	137	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.

Alcohol

Purchases of alcoholic drinks for household consumption were highest in the North East at 1.8 times higher than London. Purchases for eating out were also highest in the North East at 1.7 times higher than London. In terms of spending on alcoholic drinks, the North West was highest for both household purchases and those bought outside the home with spending of £3.11 and £3.34 respectively. London was ranked second highest in terms of eating out expenditure at £3.31 per person per week.

Intake of alcohol in grams followed the same pattern as both purchases and expenditure, with the North East and North West being the highest at just above 11 grams per person per day; around 1.5 times higher than that of London at 7.8 grams.

Spending

Household expenditure on all food and drink was highest in the South East at £28.32 per person per week compared to the lowest spend which was in the North East at £23.99 per person. Eating out expenditure as a percentage of overall food and drink spending was highest in London at 35 per cent and lowest in the South West and West Midlands at 28 per cent. In England as a whole people spent 30 per cent of their food and drink expenditure on eating out purchases. The percentage of spending on alcoholic drinks outside the household is highest in London at 57 per cent and lowest in the South West at 47 per cent.

Table 3.7: 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%		52%		30%	
North East	24%	8	54%	3	29%	6
North West	26%	5	52%	5	30%	2
Yorkshire and The Humber	26%	4	52%	4	30%	3
East Midlands	25%	6	50%	7	29%	7
West Midlands	24%	9	54%	2	28%	8
East	26%	3	51%	6	30%	4
London	31%	1	57%	1	35%	1
South East	26%	2	48%	8	29%	5
South West	24%	7	47%	9	28%	9

3.4 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:
http://www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/rural-urban-definition-and-la/rural-urban-definition--england-and-wales-/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:
http://www.scotland.gov.uk/Publications/2004/06/19498/38784
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.

Household purchases

Across GB households in rural areas purchased more food for household supplies in each of the 16 household food categories than households in urban areas. The pattern was not entirely reversed for eating out where rural households purchased more of some food types than urban households, including more eating out fish, potatoes, vegetables, ice creams, desserts and cakes. The energy content of food and drink purchases was 5 per cent higher in rural than urban households and nutrient intakes were generally higher.
Households in rural areas of Wales had the highest purchases in most food and drink categories and Scottish urban the lowest. The largest proportional difference was for purchases of 'sugar and preserves' which was 1.7 times higher in rural Wales at 188 grams per person compared to Scottish urban households at 111 grams. Purchases of beverages and carcase meat were both around 1.5 times higher in rural Wales compared to urban Scotland. Rural areas of England had the highest purchases of cheese and alcoholic drinks but the lowest purchases of 'other meat and meat products' and soft drinks. See Table 3.8 for a more detailed breakdown.

Spending

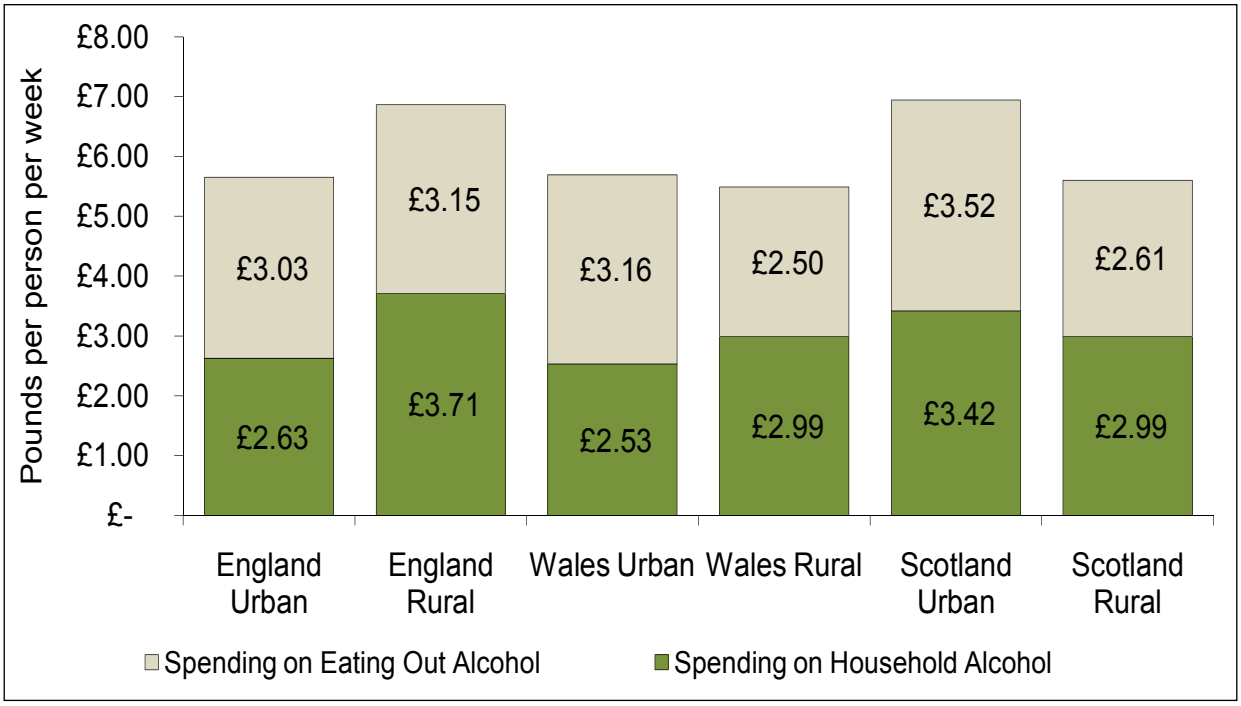
In general, households in rural areas spent more than households in urban areas on household food and drink. England Urban areas had the lowest level of average spending per person per week on household food and drink over the 3 year period of £25.80; Scotland rural areas had the highest at £28.97. Chart 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 was highest in Scottish urban areas at £6.95 per person per week, and lowest in Welsh rural areas at £5.49 per person per week; See Chart 3.2.

Table 3.8: Purchases of selected foods by urban/rural breakdown - 3 year average 2008-2010

		GB Urban	GB Rural	England Urban	England Rural	Wales Urban	Wales Rural	Scotland Urban	Scotland Rural
Number of households in sample		11923	3687	10444	2856	463	335	1016	496
Average age of HRP		52	56	52	56	53	58	50	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	0.5	0.4	0.4	0.4
Average gross weekly household income (£)		669	776	675	795	581	661	644	777
HOUSEHOLD PURCHASES									*grams per person per week unless otherwise stated*
Milk and cream	(ml)	1905	2103	1898	2081	1995	2218	1934	2107
Cheese		112	131	111	132	115	121	111	130
Carcase meat		205	230	208	231	205	245	170	201
Non-caracse meat and meat products		789	796	781	780	907	836	816	851
Fish		156	164	157	165	146	172	144	145
Eggs	(no.)	2	2	2	2	2	2	2	2
Fats and oils		181	192	183	190	188	199	158	198
Sugar and preserves		121	148	121	145	126	188	111	147
Potatoes		741	782	741	773	822	804	711	804
Vegetables excluding potatoes		1090	1208	1100	1231	1168	1234	941	1058
Fruit		1126	1291	1126	1299	1151	1321	1117	1246
Total cereals		1565	1602	1555	1582	1638	1576	1644	1726
Beverages	(ml)	53	61	54	61	47	70	48	53
Soft drinks [(a)]	(ml)	1683	1705	1635	1612	2011	1719	2108	2235
Alcoholic drinks	(ml)	710	860	701	895	791	796	774	704
Confectionery		130	140	127	138	160	137	151	153
EATING OUT PURCHASES									*grams per person per week unless otherwise stated*
Indian, Chinese and Thai meals		31	27	31	27	29	21	31	27
Meat and meat products		76	74	76	77	79	75	78	63
Fish and fish products		13	15	13	15	10	15	14	17
Cheese and egg dishes and pizza		22	21	23	22	18	19	23	14
Potatoes		63	66	63	67	68	73	64	58
Vegetables excluding potatoes		27	30	28	31	30	36	22	17
Sandwiches		69	68	69	68	57	57	86	76
Ice creams, desserts and cakes		24	30	24	30	20	26	29	31
Beverages	(ml)	121	119	122	118	94	130	124	128
Soft drinks including milk	(ml)	288	259	282	258	284	219	370	293
Alcoholic drinks	(ml)	434	437	431	460	530	395	419	332
Confectionery		11	11	11	11	12	9	12	14
HOUSEHOLD EXPENDITURE									*pence per person per week*
Total all food & drink excluding alcohol		2332	2528	2318	2519	2364	2483	2483	2598
Total alcoholic drinks		268	357	263	371	253	299	342	299
Total all food & drink		2600	2884	2580	2890	2617	2782	2825	2897
EATING OUT EXPENDITURE									*pence per person per week*
Total all food & drink excluding alcohol		817	864	814	888	727	753	889	828
Total alcoholic drinks		307	302	303	315	316	250	352	261
Total all food & drink		1123	1166	1117	1204	1043	1004	1242	1089

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

Chart 3.2: Average spending on alcoholic drinks in urban/rural areas



Nutrient intakes

Comparing percentage contributions of macronutrients to energy intake excluding alcohol there were small differences across rural and urban areas. The percentage of energy from fat was lowest in Scottish urban areas at 37.8 per cent and highest in English rural areas at 38.7 per cent. The biggest proportional differences were in Vitamin A intakes, with Welsh rural regions being the highest at 659 µg retinol per person per day compared to an urban Scotland average of 508 µg. See Table 3.9 for more detailed breakdown.

Table 3.9: Energy and nutrient intakes by urban/rural breakdown - 3 year average 2008-2010

		Urban (GB)	Rural (GB)	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
Number of households in sample		11923	3687	10444	2856	463	335	1016	496
Average age of HRP		52	56	52	56	53	58	50	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	0.5	0.4	0.4	0.4
Average weekly income of HRP		669	776	675	795	581	661	644	777
Total energy and nutrient intake [a]									intake per person per day
Energy	kcal	2266	2371	2256	2357	2386	2338	2325	2459
	MJ	9.5	9.9	9.4	9.9	10.0	9.8	9.7	10.3
Energy intake excluding alcohol	kcal	2209	2301	2190	2273	2316	2267	2246	2390
Total Protein	g	77.6	80.9	77.3	80.5	81.4	80.7	78.3	82.6
Fat	g	94	98	94	98	99	96	94	102
Fatty acids:									
Saturates	g	35.0	37.8	34.8	37.6	37.0	37.3	35.8	39.1
Mono-unsaturates	g	35.7	37.1	35.6	36.9	37.6	36.2	35.7	38.3
Poly-unsaturates	g	17.3	17.1	17.3	17.0	18.0	16.4	16.6	18.1
Cholesterol	mg	257	272	256	270	267	275	257	276
Carbohydrate [b]	g	277	288	276	285	292	287	289	303
including Total sugars	g	125	136	124	135	136	141	131	141
Non-milk extr sugars	g	82	89	81	88	91	92	88	93
starch	g	152	151	152	150	156	145	157	162
Fibre [c]	g	14.9	15.7	14.9	15.7	15.7	15.7	14.8	15.8
Alcohol	g	9.5	11.6	9.4	12.0	10.0	10.2	11.4	9.9
Calcium	mg	956	1026	951	1019	1012	1025	986	1057
Iron	mg	11.7	12.4	11.6	12.4	12.5	12.2	11.9	12.6
Zinc	mg	9.2	9.7	9.2	9.6	9.6	9.7	9.2	9.8
Magnesium	mg	284	301	283	301	295	301	290	302
Sodium [d]	g	2.77	2.92	2.75	2.90	2.98	2.86	2.96	3.11
Potassium	g	3.17	3.37	3.17	3.37	3.32	3.36	3.16	3.36
Thiamin	mg	1.65	1.73	1.64	1.73	1.77	1.69	1.66	1.77
Riboflavin	mg	1.86	2.01	1.86	2.00	1.98	2.04	1.88	2.02
Niacin Equivalent	mg	33.8	35.4	33.7	35.2	35.8	35.1	34.0	36.0
Vitamin B_6	mg	2.4	2.6	2.4	2.6	2.7	2.6	2.4	2.6
Vitamin B_{12}	µg	6.3	6.7	6.3	6.7	6.4	7.0	6.3	6.7
Folate	µg	295	317	295	318	315	314	286	313
Vitamin C	mg	77	83	77	83	81	82	79	84
Vitamin A:									
Retinol	µg	520	583	522	574	529	659	508	592
Carotene	µg	2182	2449	2188	2453	2323	2495	2060	2397
Retinol equivalent	µg	886	993	888	985	916	1075	853	993
Vitamin D	µg	3.01	3.30	3.00	3.30	3.44	3.53	2.87	3.10
Vitamin E	mg	12.29	12.10	12.30	12.04	12.83	11.51	11.90	12.85

Table 3.9 continues over the page

Table 3.9 continued

		Urban (GB)	Rural (GB)	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
									Percentage contributions of macronutrients to energy intake excluding alcohol
Fat	%	38.5	38.6	38.6	38.7	38.5	38.2	37.8	38.5
Fatty acids:									
Saturates	%	14.3	14.9	14.3	14.9	14.4	14.8	14.4	14.7
Mono-unsaturates	%	14.6	14.6	14.6	14.6	14.6	14.4	14.3	14.4
Poly-unsaturates	%	7.1	6.7	7.1	6.7	7.0	6.5	6.6	6.8
Carbohydrate	%	47.3	47.1	47.2	47.0	47.4	47.5	48.2	47.6
Non-milk extr sugars	%	14.0	14.6	13.9	14.5	14.7	15.3	14.7	14.6
Total Protein	%	14.1	14.1	14.1	14.2	14.1	14.2	13.9	13.8
									As a percentage of weighted reference nutrient intake (f)
Energy [e]	%	108	112	107	111	113	111	110	116
Energy exc alcohol [e]	%	104	108	104	107	109	107	106	113
Protein	%	169	174	169	174	176	172	168	178
Calcium	%	139	147	138	147	147	148	143	153
Iron	%	113	122	112	121	121	121	113	123
Zinc	%	115	120	115	120	120	121	116	122
Magnesium	%	107	112	107	112	111	111	107	112
Sodium	%	185	192	184	191	198	188	195	205
Potassium	%	99	103	99	104	103	103	97	103
Thiamin	%	195	204	195	204	209	200	196	209
Riboflavin	%	163	174	163	174	172	177	163	175
Niacin equivalent	%	243	252	242	252	256	251	243	257
Vitamin B_6	%	197	206	196	206	214	205	194	209
Vitamin B_{12}	%	453	478	453	477	460	495	445	476
Folate	%	156	166	156	167	166	164	149	164
Vitamin C	%	200	213	199	214	210	211	202	216
Vitamin A (retinol equivalent)	%	142	158	143	157	146	171	136	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.

Eating out

Rural areas of Wales had the lowest number of incidences for eating out in food categories: ‘Indian, Chinese and Thai meals’, sandwiches, soft drink and confectionery. Purchases of vegetables were twice as high in rural Wales at 36 grams per person per week compared to rural Scotland at 17 grams. Total spending on eating out was lowest households in rural Wales at £10.04 per person per week, compared to the highest – Scottish urban at £12.42. Urban Wales had the highest purchases of alcoholic drinks but urban Scotland had the highest expenditure.

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Chapter 4 Demographic Comparisons

4.1 Overview

This chapter examines 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 (NMES), fruit and vegetables and fibre.

The analyses find that sodium intake increases with the age of the Household Reference Person (HRP) up to 70 years old. Intake of saturated fatty acids increases with age and is higher in households with a white British HRP than other ethnicities. Intake of NMES is lowest among high income households and higher where the HRP is under 40 or over 80 years old. Fruit purchases and vegetable purchases rise strongly with both income and age..

Chapter 3 presents country and regional estimates, where apparent differences are often due to differences in demographic characteristics such as income. Chapter 5 examines long term trends in purchases of fruit and vegetables and trends in intakes of energy, fat, saturated fatty acids, NMES, sodium, fibre and alcohol.

4.2 Statistical Method

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

A simple form of multiple regression is used with no attempt 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 composition and incomes.

The analyses in this chapter include both household and eating out food and drink purchases. The only exception is when considering fruit and vegetables, for which only household purchases are analysed. When looking at 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: http://www.statistics.gov.uk/geography/nuts.asp and Chapter 3 for regional comparisons.

This chapter uses the concept of the Household Reference Person (HRP) to categorise the data; see glossary for a detailed definition. Equivalised income is used as a measure of standard of living rather 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.

4.3 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 HRP	40-50 years
Ethnicity of HRP	White British
Equivalised income	Income decile 4

4.4 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 per cent of food energy to diet. Chapter 2 shows that the current percentage exceeds this target.
Percentage of energy intake derived from non-milk extrinsic sugars	Contributes no more than 11 per cent of food energy to diet. Chapter 2 shows that the current percentage is well above this target.
Fruit	400g of fruit and vegetables. Chapter 1 shows an 11.6 per cent drop in purchases of fruit since 2007. Analysis in Chapter 5 shows that the UK population did not achieve 5 A DAY fruit and vegetables in 2010.
Vegetables	400g of fruit and vegetables. Chapter 1 shows a 2.9 per cent drop in purchases of vegetables since 2007. Analysis in Chapter 5 shows that the UK population did not achieve 5 A DAY fruit and vegetables in 2010.
Fibre	Average intake of 18 grams. Chapter 2 shows that intake did not reach this target in 2010.

Results of each analysis concentrate on the demographic variables that showed the most correlation; hence each section may focus on different variables (age, region, ethnic origin, etc). Intakes are calculated from combined household and eating out purchases: See Chapter 2 for UK averages.

4.5 Sodium

Sodium intake analysis from this survey excludes the contribution from table salt and therefore is an underestimate of total intake. On average, people obtained 2.83 grams of sodium per day from household and eating out purchases in 2010.
The data analysed for sodium content by various demographics is based on the baseline characteristics mentioned in section 4.3.
The approximate 95 per cent confidence interval for the baseline group ranged between 3.2 grams and 3.4 grams per person per day. We are confident that the estimate of 3.3 grams is within plus or minus 0.1 grams per person per day.

Group for comparison: Baseline household (as per Table 4.1), with a sodium intake of 3.32 grams per person per day.

Chart 4.1a: Sodium by **income** (baseline characteristics other than income) 2010

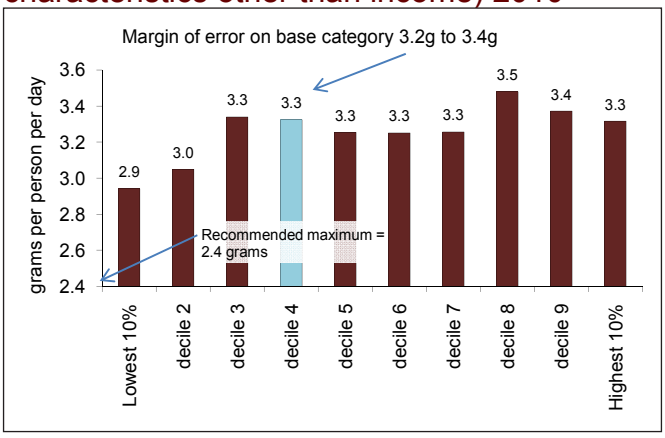
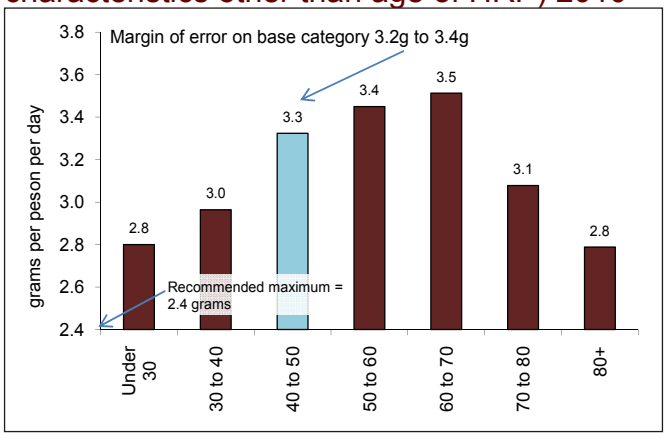


Chart 4.1b: Sodium by **age of HRP** (baseline characteristics other than age of HRP) 2010



Equivalised income

Households with baseline characteristics other than income purchased foods with sodium content in the range of 2.9 grams to 3.5 grams per person per day. This was a difference of 0.6 grams per person per day between the highest and lowest groups.

Income is only a minor factor associated with sodium intake. Levels are fairly constant over most income deciles. The lowest twenty per cent of households by equivalised income purchased foods with the lowest sodium content at 2.9 grams and 3.0 grams per person per day. This was a difference of either 0.3 grams or 0.4 grams per person per day lower than the estimate of sodium intake for the baseline group. In all cases sodium intake (excluding table salt) was above the recommended maximum level.

Age

Households with baseline characteristics other than age of HRP purchased foods with sodium content in the range of 2.8 grams to 3.5 grams per person per day. This was a difference of 0.7 grams per person per day between the highest and the lowest groups.

The sodium content of purchased foods increased between the ages of 40 and 70. Households where the HRP was under 30 or over 80 years old purchased foods with the lowest content of sodium at 2.8 grams, which was 0.5 grams below the baseline estimate. Households where the HRP was aged between 60 and 70 years old purchased foods with the highest amount of sodium content at 3.5 grams per person per day. All age groups exceeded the recommended maximum level of 2.4 grams per person per day. The analysis from this survey excludes the contribution from table salt.

Region

In 2010, households in Scotland and Northern Ireland purchased foods with higher sodium content than those in England and Wales, a similar geographic pattern to 2009.

4.6 Saturated fatty acids

On average, people obtained 14.2 per cent of food energy from saturated fatty acids in 2010 based on combined household and eating out purchases: See Chapter 2 for UK averages.

The approximate 95 per cent confidence interval for the baseline group ranged between 13.7 per cent and 14.2 per cent of food energy derived from saturated fatty acids. We are confident that the estimate of 14 per cent is within plus 0.2 per cent or minus 0.3 per cent.

Group for comparison: Baseline household (as per Table 4.1), with daily energy intake derived from saturated fatty acids of 14.0 per cent.

Chart 4.2a: per cent of energy from saturated fatty acids by **age of hrp** (baseline characteristics other than age) 2010

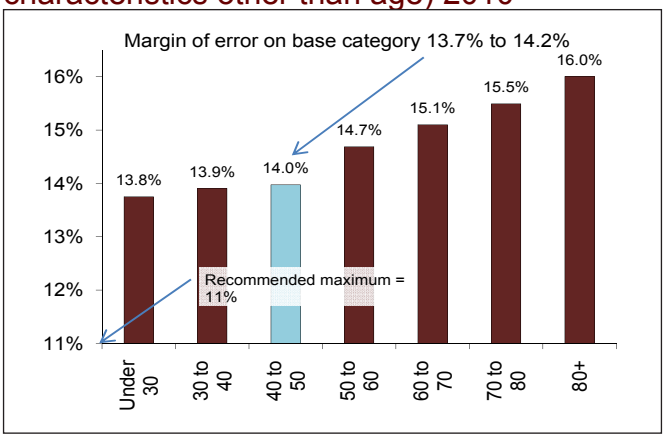
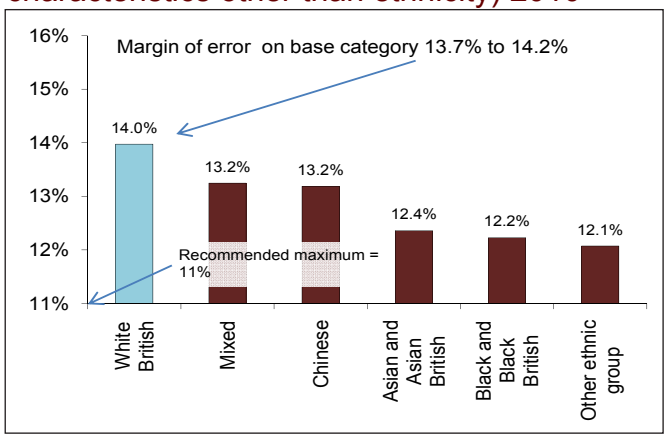


Chart 4.2b: per cent of energy from saturated fatty acids by **ethnicity of hrp** (baseline characteristics other than ethnicity) 2010



Age

Households with baseline characteristics other than age of the HRP purchased foods with energy derived from saturated fatty acids in the range of 13.8 per cent to 16 per cent. This was a difference of 2.2 percentage points between the highest and lowest groups.

The proportion of food energy intake derived from saturated fatty acids rose with the age of the HRP. Households where the HRP was under 30 years old had the lowest energy intakes from saturated fatty acids at 13.8 per cent in 2010, 0.2 per cent below the baseline group. This was still higher than the recommended maximum level of 11 per cent. Households where the HRP is over 80 years old derived the greatest percentage of energy from saturated fatty acids at 16 per cent in 2010. This was 2 percentage points above the baseline group. Results from the National Diet and Nutrition Survey report that; “mean intakes of saturated fat exceed the recommended level for all age groups and the mean saturated fat intake for adults 19 to 64 years old was 12.8 per cent of food energy.”

Ethnicity

Households with baseline characteristics other than ethnic origin purchased foods with energy derived from saturated fatty acids in the range of 12.1 per cent to 14 per cent. This was a difference of 1.9 percentage points between the highest and lowest groups.

The proportion of food energy intake derived from saturated fatty acids varied with ethnic origin of the HRP. Comparing the other ethnic group households with the baseline estimate for households of White British origin, the percentage of energy from saturated fatty acids for ‘other ethnic groups’ was estimated to be 1.9 per cent lower at 12.1 per cent. This was still above the recommended maximum level. White British households obtained 14 per cent of their energy intake from saturated fatty acids in 2010, well above the recommended maximum level of 11 per cent.

Region

Variation across all regions was no more than 0.8 percentage points. The margin of error was within 0.5 percentage points of the baseline estimate therefore regional differences in food energy derived from saturated fatty acids are not significant.

4.7 Non-milk extrinsic sugars (NMES)

On average, people obtained 13.9 per cent of food energy from NMES in 2010, based on combined household and eating out purchases: See Chapter 2 for UK averages.

Group for comparison: Baseline household (as per Table 4.1), with energy derived from NMES at 13.6 per cent.

The approximate 95 per cent confidence interval for the baseline group ranged between 13.1 per cent and 14 per cent of food energy derived from NMES. We are confident that the estimate of 13.6 per cent is within plus 0.4 per cent or minus 0.5 per cent per person per day

Chart 4.3a: per cent of energy from NMES by **income** (baseline characteristics other than income) 2010

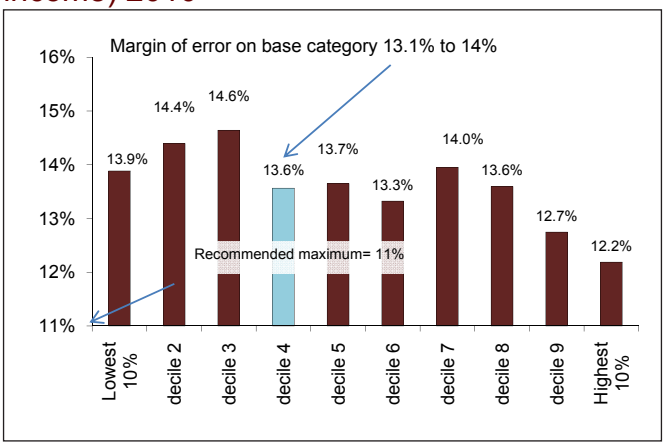
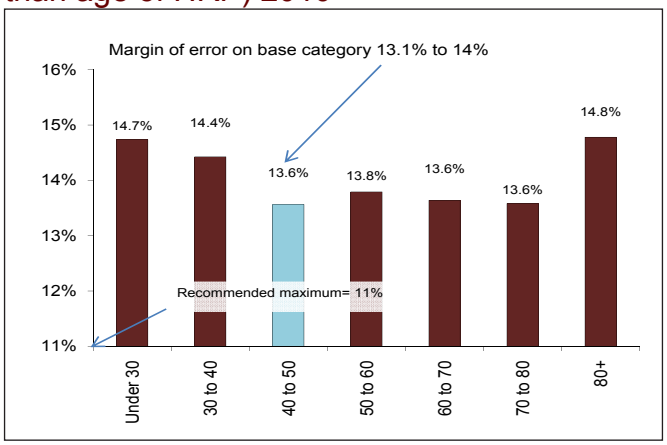


Chart 4.3b: per cent of energy from NMES by **age of HRP** (baseline characteristics other than age of HRP) 2010



Equivalised Income

Households with baseline characteristics other than income purchased foods with energy derived from NMES in the range of 12.2 per cent to 14.6 per cent. This was a difference of 2.4 percentage points between the highest and lowest groups.

Households in income deciles 2 (at 14.4 per cent) and 3 (at 14.6 per cent) purchased foods with the highest amount of food energy derived from NMES. Food purchases containing lower amounts of energy from NMES were seen in income decile groups 4 to 8 where this averaged around 13.6 per cent. Households with the highest income, deciles 9 (at 12.7 per cent) and 10 (at 12.2 per cent) purchased foods with a lower amount of NMES. All income levels exceeded the recommended maximum level of 11 per cent of energy from NMES.

Age

Households with baseline characteristics other than age of the HRP purchased foods with energy derived from NMES in the range of 13.6 per cent to 14.8 per cent. This was a difference of 1.2 percentage points between the highest and lowest groups.

Households where the age of the HRP was under 40 or over 80 years old purchased foods with the highest (around 14.6 per cent) amount of energy derived from NMES. Between the ages of 40 and 80 years old, these household groups derived lower amounts of food energy from NMES. The National Diet and Nutrition Survey reports that; “the mean NMES intakes exceeded recommended levels for children aged 4 to 18 years old and adults aged 19 to 64 years old. Soft drinks were the largest contributor to NMES intake for children aged 4 to 18 years old.”

Ethnicity

In both 2009 and 2010 Asian and Chinese households had lower intakes of NMES. In 2010, the percentage of energy from NMES was estimated to be below the recommended maximum level of 11 per cent.

Region

Variation across all regions was 2.3 percentage points. The margin of error was within 0.9 percentage points of the baseline estimate therefore regional differences in food energy derived from NMES are not significant.

4.8 Fruit

On average, people purchased 162 grams of fresh and processed fruit per person per day in 2010 (including nuts) which is based on the weekly purchase total of 1133 grams: See Chapter 1, Table 1.1.

This analysis excludes nuts, fruit contained in composite products (e.g. fruit pudding) and all fruit eaten out; but includes all purchases of fresh and processed (e.g. dried, frozen and canned) fruit, including fruit juice.
Group for comparison: Baseline household (as per Table 4.1), with fruit purchases of 164 grams per person per day.

The approximate 95 per cent confidence interval for the baseline group ranged between 152 grams and 175 grams of fruit purchases per person per day. We are confident that the estimate of 164 grams is within plus 11 grams or minus 12 grams of fruit per person per day.

Chart 4.4a: fruit purchases by **income** (baseline characteristics other than income) 2010

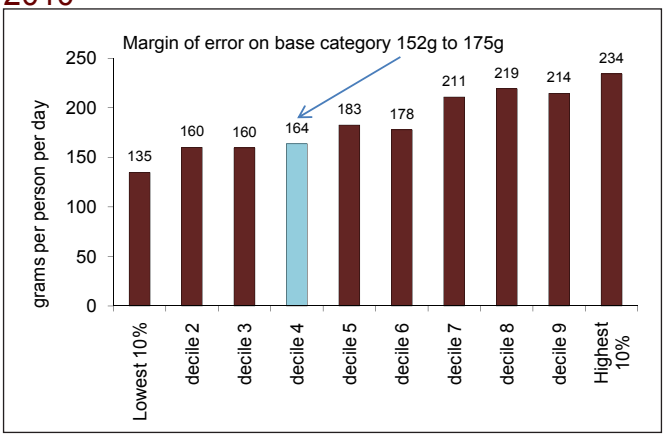
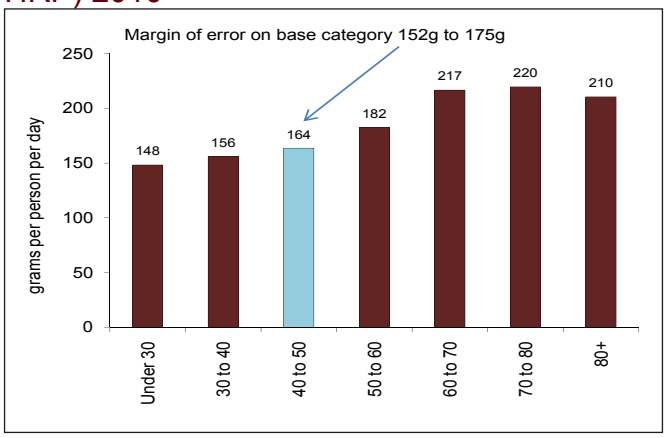


Chart 4.4b: fruit purchases by **age of HRP** (baseline characteristics other than age of HRP) 2010



Equivalised Income

Households with baseline characteristics other than income purchased fruit ranging between 135 grams and 234 grams per person per day. This was a difference of 99 grams of fruit per person per day, just over one portion (80 grams), between the highest and lowest groups.

Households in income deciles 1, 2 and 3 purchased less fruit than other income deciles. Fruit purchases were highest in income decile 10 at 234 grams (or 2.9 portions), whereas households in the lowest income decile purchased 135 grams of fruit, fewer than 2 portions of fruit per person per day. Comparing fruit purchases with the baseline characteristics showed that purchases rose with income.

Age

Households with baseline characteristics other than age of the HRP purchased fruit in the range of 161 grams to 228 grams per person per day. This was a difference of 67 grams of fruit between the highest and lowest groups.

Households where the age of the HRP was under 40 years old purchased less fruit than people aged between 40 and 80 years old. Fruit purchases tend to increase with age until around 80 years old after which they decrease.

Region

Regionally in 2010 the pattern was fairly similar to 2009. The margin of error was within 23 grams of the baseline estimate for fruit therefore regional differences are not significant.

4.9 Vegetables

On average, people purchased 158 grams of vegetables per person per day in 2010, based on the weekly purchase total of 1107 grams: See Chapter 1, Table 1.1.

This analysis includes all purchases of vegetables apart from: potatoes, vegetables contained in composite products (e.g. vegetable curry) and all vegetables eaten out.

Group for comparison: Baseline household (as per Table 4.1), with vegetable purchases of 200 grams per person per day.

The approximate 95 per cent confidence interval for the baseline group ranged between 190 grams and 209 grams of vegetable purchases per person per day. We are confident that the estimate of 200 grams is within plus 9 grams or minus 10 grams of vegetables per person per day.

Chart 4.5a: vegetable purchases by **income** (baseline characteristics other than income) 2010

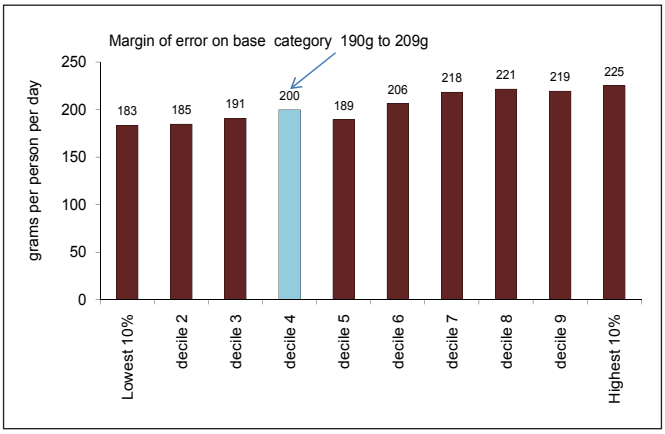
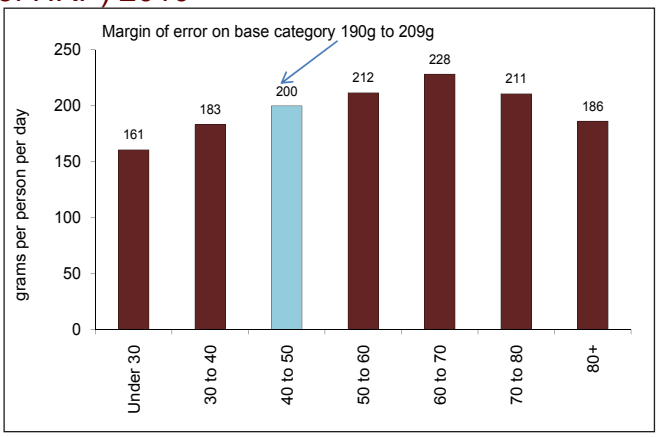


Chart 4.5b: vegetable purchases by **age of HRP** (baseline characterisitics other than age of HRP) 2010



Equivalised Income

Households with baseline characteristics other than income purchased vegetables in the range of 183 grams and 225 grams per person per day. This was a difference of 42 grams of vegetables per person per day, just over half a portion, between the highest and lowest groups.

Purchases of vegetables increased with income. The difference between the lowest and highest deciles equates to half a portion of vegetable purchases. Lower quantities of vegetables were purchased by those households in income deciles 1, 2, 3 and 5.

Age

Households with baseline characteristics other than age of the HRP purchased vegetables ranging between 161 grams and 228 grams per person per day. This was a difference of 67 grams, close to one portion of vegetables, between the highest and lowest groups.

Up to the age of 70 years old vegetable purchases increased. Households with the HRP under 30 years old purchased the lowest amount of vegetables at 161 grams, equating to two portions per person per day. Households with the HRP aged 60 to 70 years old purchased almost 3 portions of vegetables per person per day.

Region

Variation across the regions was no more than 58 grams of vegetables per person per day. The margin of error was within 19 grams of the baseline estimate for vegetables therefore regional differences are not significant.

According to the Department of Health's report 'The Health Survey for England (HSE) 2009', it was reported that; "fruit and vegetable consumption varied with age among both sexes; it was lowest among those aged 16-24 (17 per cent of men and 18 per cent of women this age ate five or more portions), and generally increased with age until the oldest age group, where consumption was slightly lower than those aged 55-74. As in previous years, higher consumption was also associated with higher income, and vice versa; 32 per cent of men and 37 per cent of women in the highest income quintile had consumed five or more portions, but only 18 per cent of men and 19 per cent of women in the lowest quintile had done so."
Although the age groupings in the HSE report are slightly different to those used in Family Food, the same patterns were evident in both.

4.10 5 A Day – Fruit and vegetables

Equivalised income and age of HRP

Analysing fruit and vegetables together indicates that some demographic groups are purchasing 5 A DAY. In the baseline group, those in income deciles 7 to 10 and age bands 60 to 80 years old are estimated as meeting the 5 a day portion recommendation. From 80 years on, fruit and vegetable portions declined slightly. The least amount of fruit and vegetable purchases were households where the age of the HRP were below 30 years old at 3.3 portions.

4.11 Fibre

On average, people obtained 15.3 grams of fibre per day from combined household and eating out purchases in 2010. Since 2007 the amount of fibre intake remains virtually unchanged, but still below the recommendation of an average of 18 grams of fibre intake per adult per day: See Chapter 2 for UK averages.

Group for comparison: Baseline household (as per Table 4.1), with fibre intake of 16.2 grams per person per day.

The approximate 95 per cent confidence interval for the baseline group ranged between 15.6 grams and 16.7 grams per person per day. We are confident that the estimate of 16.2 grams is within plus 0.5 grams or minus 0.6 grams per person per day.

Chart 4.6a: Fibre by **income** (baseline characteristics other than income) 2010

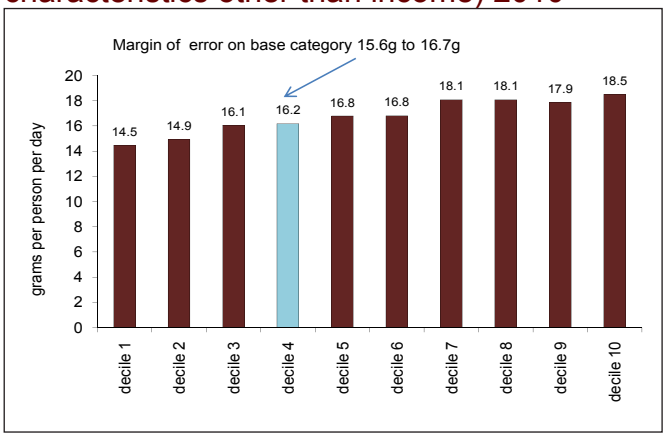
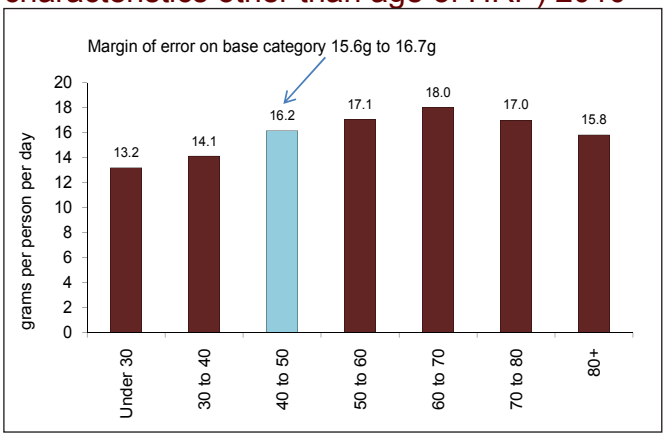


Chart 4.6b: Fibre by **age of HRP** (baseline characteristics other than age of HRP) 2010



Equivalised income

Households with baseline characteristics other than income purchased foods with a fibre content in the range of 14.5 grams to 18.5 grams per person per day. This was a difference of 4 grams per person per day between the highest and lowest groups.

Purchases of food containing fibre increased with income. Fibre intake was higher in income groups 7, 8 and 10. These income groups achieved the recommended average of 18 grams of fibre per day.

Age

Households with baseline characteristics other than age of HRP purchased foods containing fibre in the range of 13.2 grams to 18 grams per person per day. This was a difference of 4.8 grams between the highest and lowest groups.

Up to the age of 70 years old, purchases of foods containing fibre increased. Households with the HRP aged below 40 years old purchased food containing lower amounts of fibre. Households with the HRP aged between 60 and 70 years old purchased foods with the highest amount of fibre at 18 grams per person per day. This age group met the recommended average fibre intake of 18 grams per person per day.

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Chapter 5 Dietary Trends

5.1 Overview

This chapter examines the effects of recent changes in food purchasing patterns on indicators of healthy diet, and presents reliable evidence on levels of trading down. The Family Food Survey is a key data source for dietary indicators because it is strong on trends, with annual updates on a consistent basis since 2001 and comparable estimates for many years previously.

Chapter 4 attributes differences in diet to regional and demographic characteristics of households. It covers patterns in purchases of fruit and vegetables, and patterns in intakes of sodium, Non-Milk Extrinsic Sugars (NMES), fibre and saturated fatty acids.

Trading down to lower quality products has been a consumer response to food price rises of 20 per cent between 2007 and 2010, with as much as 10 per cent saved for some food groups. Purchases of 5 A DAY are on a downward trend over the last four years driven mainly by reductions in fruit purchases. Energy intake continues on its slow downward trend and there were some positive signs of better diet in terms of reductions in saturated fatty acids and NMES.

5.2 Effects of food price rises

Food prices from 2007 to 2010

Food prices rose in real terms from September 2007, peaking in February 2009, before steadying at a new higher level in 2010 some 9.5 per cent higher in real terms than in 2007.

Table 5.1 shows changes in average annual food prices for key food groups. Between 2007 and 2010 average annual food prices rose by 20 per cent while average annual all items inflation (CPI) rose 9.3 per cent. All types of food and drink were subject to real terms price rises.

The increase in food prices was driven by commodity price rises, fuel price rises and the weakening of sterling against the euro.

In 2010 the average annual rise in food prices was 3.0 per cent, slightly below all items CPI. The highest rises in price were recorded against butter, tea, fruit, soft drinks and fish. Smallest rises in price (including some drops) were recorded against bacon, milk, beef and bread.

Table 5.1: Food price evolution, 2007=100

	2001-02	2007	2008	2009	2010	% change since 2007	% change since 2009
All Items Consumer Price Index	90	100	104	106	109	+9.3	+3.3
CPI food items	90	100	110	116	120	+20	+3.0
Bread	79	100	115	119	119	+19	+0.2
Cereals	94	100	113	121	123	+23	+1.7
Biscuits and cakes	93	100	111	115	120	+20	+4.0
Beef	94	100	115	124	124	+24	-0.5
Lamb	85	100	109	122	128	+28	+5.2
Pork	91	100	115	124	128	+28	+3.6
Bacon	94	100	109	115	113	+13	-1.3
Poultry	98	100	113	116	116	+16	+0.0
Fish	88	100	107	113	119	+19	+6.1
Butter	88	100	123	121	138	+38	+14.2
Cheese	91	100	115	120	122	+22	+1.9
Eggs	78	100	127	131	136	+36	+3.5
Milk	81	100	114	122	121	+21	-0.9
Tea	100	100	106	118	133	+33	+12.8
Coffee and hot drinks	93	100	104	112	113	+13	+0.7
Soft drinks	94	100	102	105	112	+12	+6.3
Sugar and preserves	83	100	106	120	121	+21	+1.3
Sweets and chocolates	81	100	107	115	122	+22	+6.1
Potatoes	97	100	111	116	118	+18	+1.8
Vegetables	85	100	108	115	118	+18	+2.5
Fruit	98	100	107	112	121	+21	+8.0
of which fresh fruit	100	100	106	113	114	+14	+1.2
Alcoholic drinks	100	100	103	108	111	+11	+3.2

Consumers' expenditure estimates

Estimates for Q2 2011 of consumers' expenditure (properly known as Household Final Consumption Expenditure) were published in October 2011 by the Office for National Statistics. Data from the Living Costs and Food Survey are a key input for these estimates.

Data on quantities of purchases are not used in these estimates. Instead a volume trend is obtained by deflating trend estimates of expenditure on a food group by price changes for the food group. This provides estimates of changes in volume of purchases where volume changes include both quantity changes and quality changes. The inclusion of quality changes allows a way of estimating the scale of trading down to lower quality products.

Table 5.2 indicates that the volume of food purchases, incorporating reductions in quality, fell by 10 per cent between Q2 2007 and Q2 2011 (as indicated by its index reducing from 100 to 90). This quantifies the extent of trading down to lower quality food products at about 10 per cent over this extended period, assuming that calorie intakes have not changed significantly over the period. It also indicates that further trading down was taking place in 2011. More detailed estimates in the next section show that trading down may be only as much as 10 per cent for certain types of foods.

The Consumers' Expenditure estimates indicate volume of fruit purchases, incorporating reductions in quality, fell by 22 per cent between Q2 2007 and Q2 2011. However, the effect on 5 A DAY will be less because quality reductions due to trading down do not necessarily reduce 5 A DAY consumption.

Table 5.2: Volume reductions in food purchases (quantity plus quality)

	Food and non-alcoholic beverages	Fruit
	Q2 2007=100	**Q2 2007=100**
2007 Q2	100	100
2008 Q2	99	99
2009 Q2	94	97
2010 Q2	94	86
2011 Q2	90	78

Household final consumption expenditure, Chained volume measures - seasonally adjusted

Trading Down, Buying Less and Spending More

The Family Food concept of trading down is evidence based. For foods within a given food code prices have risen, as shown by RPI or CPI. Within the Family Food Survey, households responded to price rises by purchasing different products within the given food code. We can measure the price they achieved by dividing their expenditure on these products by the combined quantity purchased (known as the unit value). The amount of the price rise they have offset is the Family Food measure of trading down. This is calculated by deflating the Family Food unit value for a food code by the CPI price rise for the food code.

Table 5.3 shows how consumers have reacted to price rises between 2007 and 2010 for different types of food and drink, including estimates of trading down. The table shows the true change in price (measured by CPI) and how the consumer has responded to this by a combination of buying less, spending more and trading down.

- Trading down has been most prominent in cereals, pork, butter, eggs and potatoes and has saved about 10 per cent of the price. Trading down of 'food' overall between 2007 and 2010 is estimated to have been 4.0 per cent.
- Buying less has been most prominent in beef, lamb, fish, tea and fruit. On average consumers have bought about 10 per cent less of these categories.
- Spending more has been most prominent in bacon, butter, eggs, tea, coffee, and 'sugar and preserves'. On average consumers have spent about 20 per cent more on these items.

Table 5.3: Trading down measured by deflated unit value

Percentage changes between 2007 and 2010					
	Price rise	Quantity purchased	Expenditure	Trading Down (deflated unit value)	Main consumer reaction
Food	+20	-4.1	10.4	-4.0	
Bread	+19	-6.4	7.7	-3.2	
Cereals	+23	3.7	16.4	-9.1	trading down
Biscuits & cakes	+20	-2.2	11.8	-4.7	
Beef	+24	-9.5	8.5	-3.1	buying less
Lamb	+28	-20.5	3.8	-2.1	buying less
Pork	+28	-1.4	9.3	-13.5	trading down
Bacon	+13	9.9	19.8	-3.6	spending more
Poultry	+16	-3.6	11.8	0.3	
Fish	+19	-8.8	1.0	-6.8	
Butter	+38	-4.4	19.0	-10.1	trading down and spending more
Cheese	+22	-0.3	16.5	-4.1	
Eggs	+36	6.2	24.7	-10.9	trading down and spending more
Milk	+21	-4.3	10.4	-5.0	
Tea	+33	-8.2	16.7	-4.3	buying less and spending more
Coffee & hot drinks	+13	-0.3	16.9	3.6	spending more
Soft Drinks	+12	1.9	13.1	-0.6	
Sugar & preserves	+21	0.6	23.7	1.8	spending more
Sweets & chocolates	+22	1.8	14.8	-7.4	trading down
Potatoes	+18	-6.7	-2.3	-12.0	trading down
Vegetables	+18	-2.9	10.0	-4.3	
Fruit	+21	-11.6	4.3	-1.9	buying less
of which fresh fruit	+14	-11.7	5.7	5.7	buying less

Price elasticities

A thorough analysis of the effects of both price changes and income changes on demand for foods is being carried out by Reading University using Family Food data from 2001 to 2009. The study will provide estimates of price and income elasticities of demand for foods, including cross-price elasticities. There will be detailed coverage of fruit, vegetable and meat categories, and estimates of the initial and the long term consumer reactions to price and income shocks. The study will show where elasticities have changed over recent years. Once finalised, it will be published on the Defra website alongside Family Food reports.

Indicator of affordability of food

The relative affordability of food can be measured by the share of the household budget going on food, i.e. the percentage of total household spending that goes on household food purchases. If the percentage increases, food is placing a greater burden on spending. Low income households are of particular concern because they tend to have a greater percentage of spend going on food.

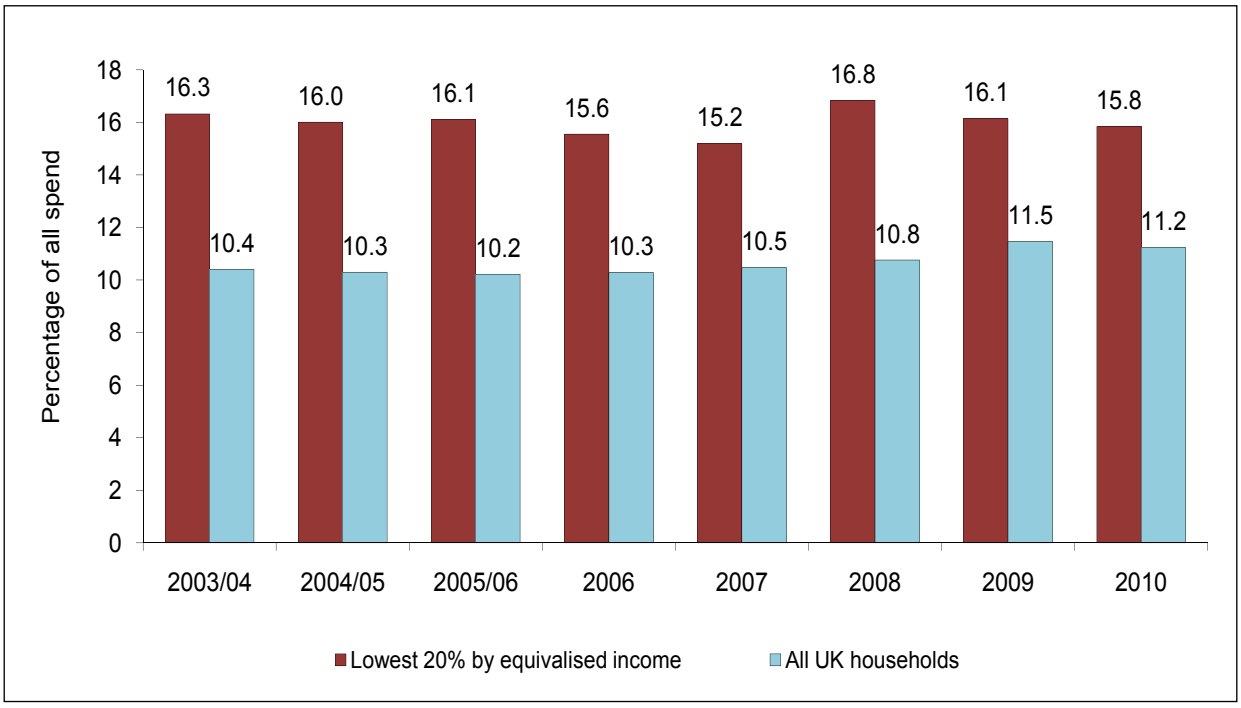
Chart 5.1 shows that averaged over all households 11.2 per cent of spend went on food in 2010, while for low income households it was higher at 15.8 per cent.

Averaged over all households in the UK, the percentage of spend going on food rose slowly from 2005-06 to 2009, and fell back slightly to 11.2 per cent in 2010. The increases since 2005-06 indicate that food is exerting greater pressure on the household budget.

For low income households in the UK the percentage of spend going on food peaked in 2008 at 16.8 per cent before falling back in 2009 and 2010 to 15.8 per cent, possibly as low income households found ways to trade down to cheaper products.

In 2010 food price rises were slightly below all items CPI inflation which would suggest that the percentage spent on food would not increase, and this was the case. In 2011, however, food prices have been rising faster than all items CPI inflation, suggesting the percentage will rise slightly in 2011.

Chart 5.1: Percentage of spend going on food and non-alcoholic drinks



5.3 Trends in healthy eating

Government advice on healthy eating is primarily in terms of the "eatwell plate" and the 5 A DAY message. Both recommend a significant increase on current consumption of fruit and vegetables. Family Food provides reliable evidence on trends which are examined in detail here.

Reducing levels of obesity is an important Government policy and Family Food provides reliable evidence on trends in energy intake. This analysis is limited to energy intake since Family Food does not capture information on energy expenditure.

Fruit and vegetables

Increasing the consumption of fruit and vegetables is a Government policy. Family food provides evidence of trends in consumption using household purchases as a proxy for consumption. This relies on the reasonable assumption that household waste rates of fruit and vegetables remain relatively stable.

Chart 5.2a shows the long term trend of increasing consumption of fruit stopped in 2005 from when it has declined sharply. This trend is apparent in fresh and processed fruit and in fruit juice.

Chart 5.2b also shows a long term decline in fresh green vegetables countered by an increasing trend in other fresh vegetables.

Chart 5.2a: Trends in fruit purchases

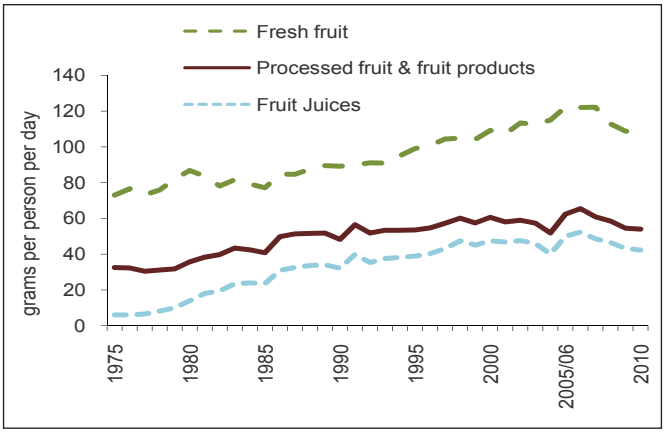
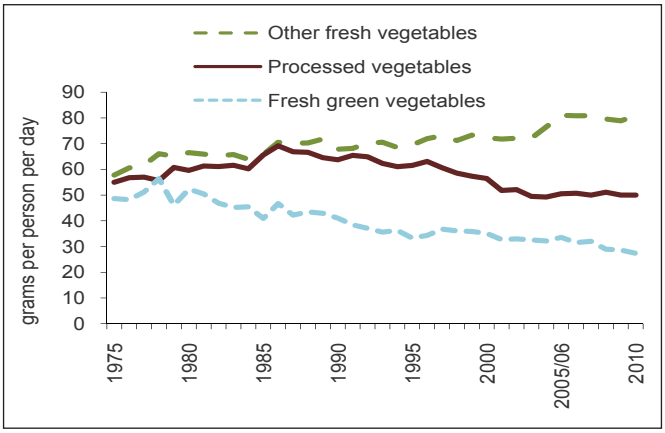


Chart 5.2b: Trends in vegetable purchases



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.

Table 5.4 shows that fruit and vegetables are down 7.5 per cent since 2007 and on a downward trend. Most categories of fruit are on a downward trend since 2007, along with most categories of fresh green vegetables. There is no clear evidence of a declining or rising trend in other fresh vegetables, although carrots and 'turnips and swedes' are on downward trends.

The trading down analysis above showed that the consumer response to higher fruit prices was shown to be one of buying less rather than trading down. The consumer response to higher vegetable prices shows some evidence of trading down, but also a willingness to pay more. The price elasticities analysis above indicates that fruit is seen as a luxury item that can be reduced when food prices rise.

Table 5.4: Household purchases of fruit and vegetables

	grams per person per week in 2010	RSE[a]	%change since 2007	trend[b]
Fruit and vegetables excluding potatoes	2240	✓✓✓	-7.5	↘
Fruit	1133	✓✓✓	-11.6	↘
Vegetables	1107	✓✓✓	-2.9	
Fresh fruit	755	✓✓✓	-11.7	↘
Fresh oranges	47	✓✓	-20.2	↘
Other fresh citrus fruits	72	✓✓	-19.8	↘
Fresh apples	156	✓✓	-12.7	↘
Fresh pears	43	✓✓	-4.0	
Fresh stone fruit	56	✓✓	-18.6	↘
Fresh grapes	57	✓✓	-8.8	↘
Other fresh soft fruit	47	✓✓	-1.9	
Fresh bananas	204	✓✓✓	-11.0	↘
Fresh melons	30	✓	-16.7	↘
Other fresh fruit	44	✓✓	+11.2	
Processed fruit	378	✓✓✓	-11.3	↘
Fresh green vegetables	192	✓✓✓	-14.6	↘
Fresh cabbages	36	✓✓	-15.4	↘
Fresh brussels sprouts	12	✓	-11.7	
Fresh cauliflower	57	✓✓	-21.4	↘
Leafy salads fresh	56	✓✓✓	-5.5	
Fresh peas	5	✓	-24.7	↘
Fresh beans	19	✓	-17.5	↘
Other fresh vegetables	565	✓✓✓	-0.1	
Fresh carrots	102	✓✓✓	-6.8	↘
Fresh turnips and swede	17	✓	-20.1	↘
Other fresh root vegetables	41	✓✓	+9.5	
Fresh onions, leeks and shallots	110	✓✓	+3.3	
Fresh cucumbers	42	✓✓	-1.6	
Fresh mushrooms	35	✓✓✓	-4.4	
Fresh tomatoes	93	✓✓✓	-2.2	

(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 2007.

Eatwell Plate

The primary message on healthy eating is the "eatwell plate". The eatwell plate shows the types and proportions of foods that should be eaten to make a well-balanced, healthy diet. The eatwell plate balance does not need to be achieved at every meal; it is a guide to getting the balance right over time such as each day, or over the course of a week. The eatwell plate includes snacks as well as meals. Food and drink purchases for household supplies were grouped approximately into the five eatwell plate groups. Based on these groupings, Chart 5.3b compares the average UK diet to the eatwell categories.

5 A DAY purchases

Family Food provides an approximate estimate of 5 A DAY consumption, based on average purchases of all fruit and vegetables, which reveals trends towards 5 A DAY for the whole UK population and for demographic and regional subgroups.

The approach is approximate for a number of reasons:

- it is based on purchases rather than consumption,
- it excludes purchases not taken into the household,
- it excludes fruit and vegetables in composite meals,
- it includes all processed fruit, fruit juice and nuts, and
- it assumes 80 grams per portion for all ages and all produce.

Chart 5.3a shows the peak in 5 A DAY purchases in 2006 and the subsequent decline to 4.0 portions purchased per day. Households in the lowest income decile have consistently purchased smaller quantities of fruit and vegetables. They reduced their purchases by 20 per cent between 2007 and 2010, down to the equivalent of 2.7 portions per person per day.

Chart 5.3a: Trends in 5 A DAY purchases

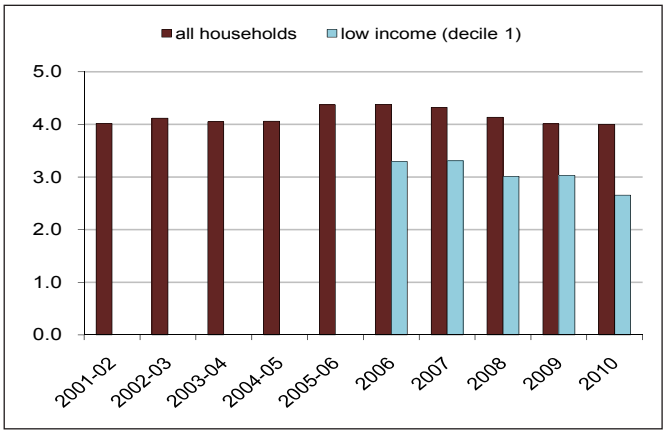


Chart 5.3b: Eatwell plate comparison

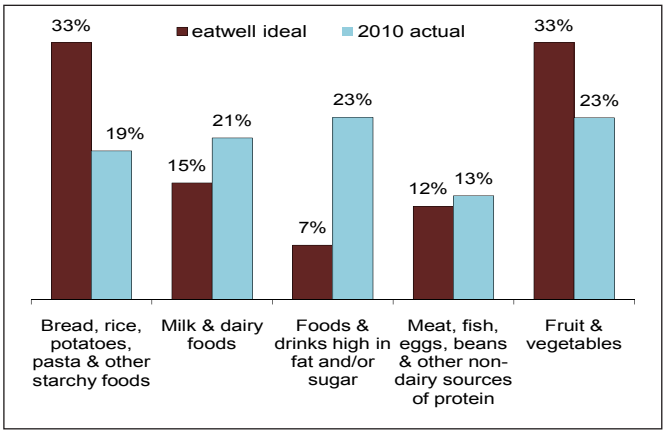


Table 5.4 shows that estimated purchases of fruit and vegetables were an average of 2240 grams per person per week in 2010, which is equivalent to 4.0 portions purchased (dividing first by 7 to convert to daily and then by 80 to get the number of portions).

Defra estimates that 22 per cent of edible fruit and vegetable purchases are wasted, http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-food-foodwastepurchases-100727.pdf

The Health Survey for England is a separate data source that measures individual consumption of fruit and vegetables in England; See http://www.ic.nhs.uk/pubs/hse08physicalactivity. According to the Department of Health's 2009 Health Survey for England, women aged 16 and over consumed an average of 3.7 portions per day, whilst men aged 16 and over consumed an average of 3.4 portions per day.

The National Diet and Nutrition Survey is a separate data source that measures individual consumption of fruit and vegetables. These statistics include estimates for fruit and vegetables in composite foods such as manufactured products and homemade dishes.

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. Statistics on obesity levels in England are available on the NHS Information Centre website: http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/obesity

Family Food provides the best available official statistics on long term trends in energy intake per person in the United Kingdom (Great Britain before 1996). Since the basis of estimation of energy intake has evolved over the years, an index is calculated such that year on year changes only compare like with like, i.e. eating out energy is only added to the calculation once there are two years of data.

Table 5.5 and Chart 5.4 show how the estimates of energy intake per person have evolved from 1940 to 2010. The most important changes in the surveys are highlighted. The average energy intake per person from food and drink declined by 28 per cent between 1974 and 2010 (shown as 72 for 2010 in the index where 1974=100).

Table 5.5: Estimates of energy intake as the survey has evolved

	National Food Survey				Expenditure and Food Survey (EFS) and Living Costs & Food Survey (LCFS)			Combined Series (c)			Index of change
	Excluding asc (a)	Including asc (a)	Aligned with EFS (b)	NFS eating out	household (HH)	eating out (EO)	HH + EO	household (HH)	eating out (EO)	HH + EO(d)	
1940	2355							2355		2355	
1974	2320		2534					2534		2534	100
1980	2230		2439					2439		2439	96
1990	1870		2058					2058		2058	81
1995	1780	1881	2143	240				2143	240	2383	77
2000 (e)	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	75
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	2304	2054	250	2304	72
2010					2035	258	2292	2035	258	2292	72

(a) "asc" is alcoholic drinks, soft drinks and confectionery

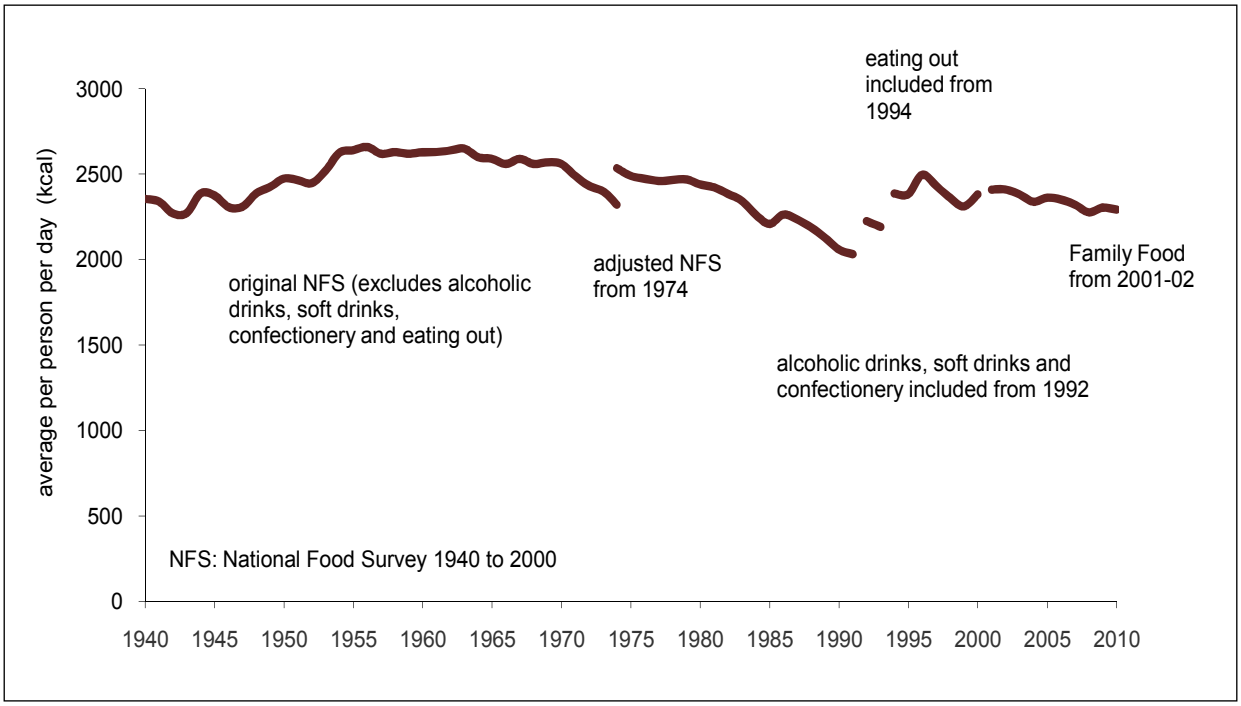
(b) includes alcoholic drinks, soft drinks and confectionery from 1992 onwards

(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 Chart 5.4

(e) Change in methodology makes the estimate of the year on year change unreliable between 2000 and 2001-02.

Chart 5.4: Average energy intake from food and drink since 1940



Chapter 2, Table 2.4 shows that the food categories making the greatest contribution to household energy intake are: bread, cereal products, and 'non-carcase meat and meat products' each of which contributes around 10-11 per cent of energy.

5.4 Nutrient intakes

Family Food data on food and drink purchases is converted into its energy and nutrient content, and thereby enables trends in energy and nutrient intakes to be monitored, based on purchases rather than consumption.

The Government has set a range of 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) has recently published revised recommendations for the energy requirements of the population.
http://www.sacn.gov.uk/pdfs/sacn_energy_report_author_date_10th_oct_fin.pdf

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 NMES. Such a diet could contribute to ill health and premature death.

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 intake. Unless otherwise stated, all statistics in this chapter are based on food energy intake. The estimates do not take food waste into account.

Fat and saturated fatty acids

Average (population) intake of total fat should account for no more than 35 per cent and saturated fatty acids no more than 11 per cent of food energy intake. 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.

According to Family Food, people are deriving too much of their food energy from fat and saturated fatty acids. In 2010 the population derived 38.6 per cent of food energy from fat, 3.6 percentage points over the recommended level. The National Diet and Nutrition Survey reports a lower estimate which is in line with the recommended level for most age groups.

Chart 5.5a shows that, according to Family Food, the level of food energy derived from fat declined in the nineties. It has been relatively stable in recent years, remaining above recommended level of 35 per cent. It shows a drop in the level of food energy derived from saturated fatty acids in 2010.

Chart 5.5b shows that the percentage of energy intake from saturated fatty acids has declined in recent years with a fall of 0.3 percentage points in 2010 but remains higher than the recommended level. The NDNS also reports that saturated fatty acid intakes exceed the recommendation in all age groups.

Chart 5.5a: Long term trends in intakes of fat and saturated fatty acids

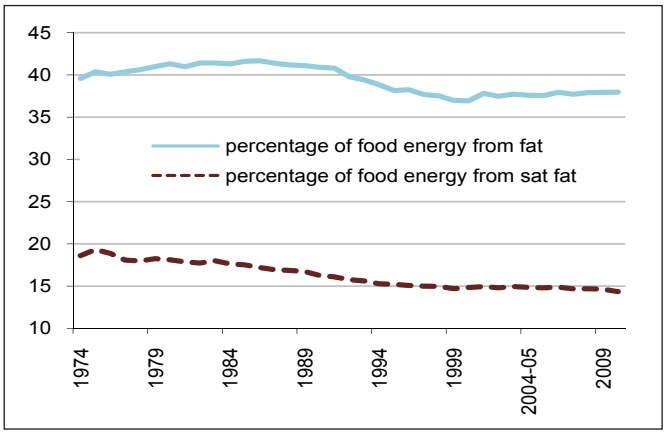
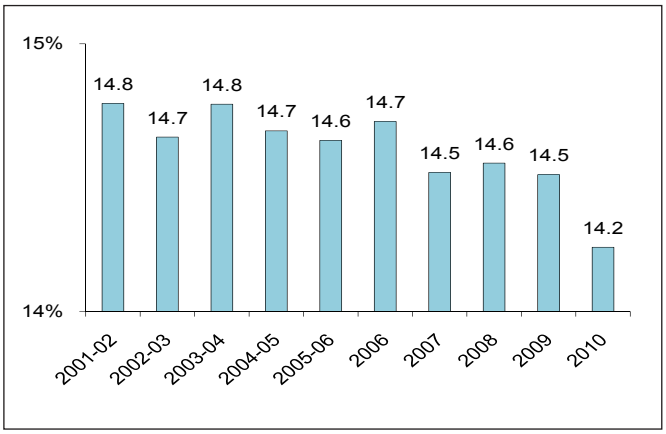


Chart 5.5b Recent trends in intakes of saturated fatty acids



In Chapter 2, Table 2.4 shows that most saturated fatty acids come from purchases of 'oils and fats', 'non-carcase meats and meat products', 'milk and cream', cheese, 'biscuits and crispbreads', and confectionery. Drops in purchases of 'milk and cream' and cheese helped reduce intakes of saturated fatty acids in 2010.

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. The recommendation is that intake of NMES should account for no more than 11 per cent of food energy intake.

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 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.

According to Family Food, people are deriving too much of their food energy from NMES. In 2010 the population derived 13.9 per cent of food energy from NMES which is 2.9 percentage points over the recommended level. The National Diet and Nutrition Survey also reports that mean intakes of NMES as a percentage of food energy exceeded the recommended levels in all age groups. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_128166

Chart 5.6a shows the downward trend in percentage of food energy derived from NMES, down to 13.9 per cent in 2010. The contribution of NMES to energy intake hardly changed between 1994 and 2000. Between 2003 and 2007 the percentage of energy from NMES dropped from 15.0 to 14.0 per cent. Possibly with food prices rising in 2007 and 2008 the downward trend did not continue, but the fall in 2010 reaffirms the downward trend in NMES.

Chapter 2, Table 2.4 shows that most NMES come from the food categories; 'sugar and preserves', soft drinks and confectionery. There was a decrease in 2010 in NMES driven by reductions in soft drinks, confectionery, and alcoholic drinks eaten out.

Sodium

Salt is also called sodium chloride. It is the sodium in salt that can be bad for health. Eating too much sodium can raise blood pressure, which increases 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' (1996), 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: http://www.sacn.gov.uk/reports_position_statements/reports/salt_and_health_report.html

Family Food provides evidence of trends in sodium intake but underestimates the actual intake levels by excluding table salt and is based on food purchases. According to Family Food, people are purchasing foods which provide a sodium intake that exceeds the recommended level of 2.4 grams per person per day. In 2010 the sodium content of purchased foods provided an average of 2.83 grams, a slight increase on 2009. This is nearly a fifth over the recommended level despite excluding sodium from table salt.

Chart 5.6b shows that sodium intakes for household and eating out had been on a downward trend since 2005-06 until 2008 but the latest evidence for 2009 and 2010 shows a slight rise. However, sodium intake was slightly lower in 2010 than it was prior to 2007. Chapter 2, Table 2.4 shows that for household food the biggest contributors to sodium intake were 'non-carcase meat and meat products' and bread.

Chart 5.6a: Recent trend in percentage of energy from NMES

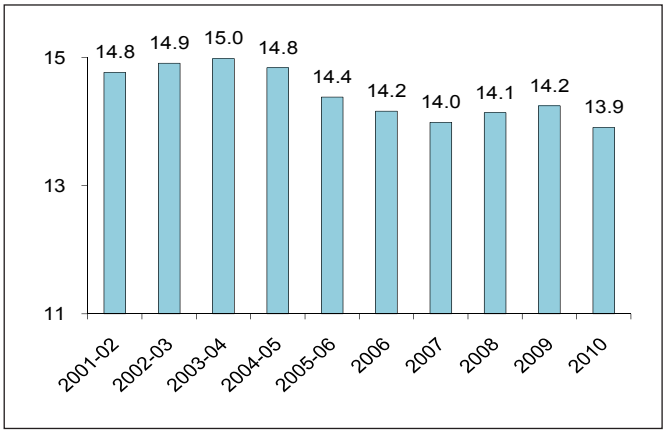
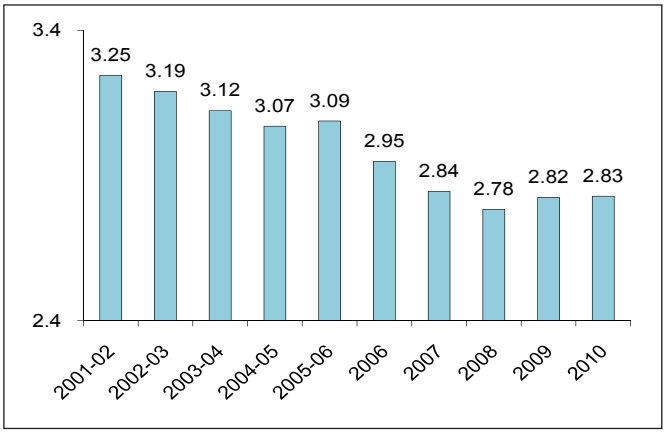


Chart 5.6b: Recent trend in intakes of sodium



Fibre

Dietary fibre has a number of positive health effects; to help prevent constipation, to help lower blood cholesterol levels and to help control blood glucose levels. The Government recommendation 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.

The Family Food estimate of fibre intake based on food purchases in 2010 is 15.3 grams per person per day which is 2.7 grams below the recommended level.

Chart 5.7a shows increases in fibre intake in both 2009 and 2010, but to a level below that achieved in 2005 and 2006. Most fibre intake comes from the food categories of vegetables, bread and 'other cereal and cereal products' (which includes breakfast cereals, rice and pasta). Reductions in bread purchases are a downward push on fibre intakes.

Alcohol

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.

Chapter 1 shows that household purchases of alcoholic drinks rose by 2.3 per cent in 2009 but are 1.4 per cent lower than in 2007. Eating out purchases fell by 8.0 per cent in 2010 and are 17.9 per cent lower than 2007. Chapter 2 shows that alcohol intake from household and eating out combined in 2010 was 0.4 per cent higher than 2009, but 2.1 per cent lower than in 2007.

Chart 5.7b shows that the alcohol intake from eating out purchases has declined steadily since 2001-02. It has fallen 39 per cent from 4.3 to 2.6 milligrams per person per day in 2010. However, alcohol intake from household supplies has risen slightly to 7.6 milligrams per person per day in 2010. The Family Food estimate of the absolute level of intake is likely to be an underestimate due to under-reporting of alcoholic drinks, but the trends are likely to be valid.

Chart 5.7a: Trend in fibre intake in grams per person per day

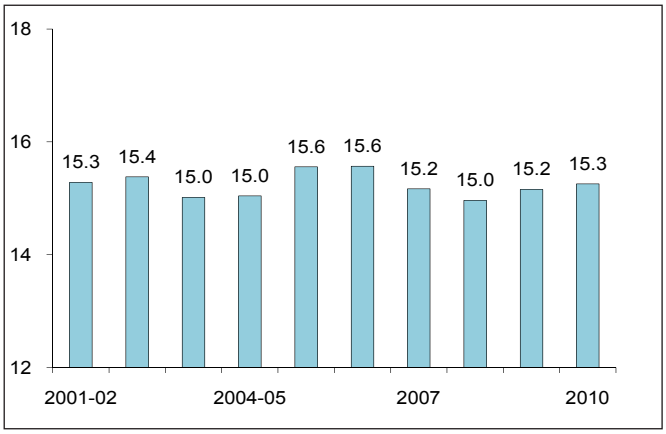
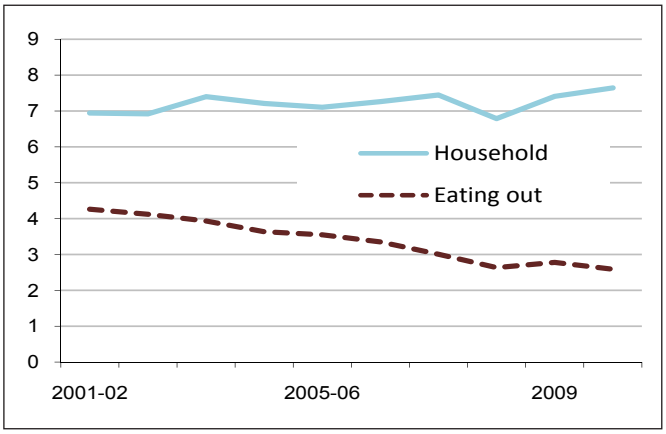


Chart 5.7b: Trend in intake of alcohol in milligrams per person per day



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Development Priorities

The Defra team in conjunction with the Family Food Committee agreed the following development priorities for the Family Food Survey:

1. updating and accuracy of nutrient composition of food codes,
2. reduce the dependence of eating out estimates on unspecified meals,
3. monitor accuracy of reporting and coding,
4. analyse EFS data to get estimates of price elasticities,
5. update portion sizes to improve the quality of eating out estimates,
6. assess non-response bias,
7. make use of the new estimates of food waste

(1) updating and accuracy of nutrient composition profiles

The conversion from food purchases to nutrient content requires nutrient composition factors for each of the 'Family Food' food codes. There are about 250 codes for household supplies of food and drink and another 250 for eating out categories. The Department of Health maintains a databank of nutrient compositions for a wide range of specific foods that are made available to Defra. These are updated as and when new data becomes available from DH's analytical programme or from manufacturers and retailers. Each Family Food code covers a number of foods so a weighted average nutrient composition is calculated for each code using data on the relative market share of foods within a code. Work is ongoing to update these market shares to ensure that the nutrient composition calculated for each Family Food code is as accurate as possible. One approach for household supplies is to obtain data from the KANTAR household panel which records household food purchases.

(2) reduce the dependence of eating out estimates on unspecified meals

For most meals recorded in the diary respondents provide an itemised list of its components and we apply standard portion sizes. Unspecified meals arise in the survey when expenditure is recorded but no itemised list is provided. Unspecified meals are problematic in the Family Food Survey because they provide no details of the types of food being purchased or of its nutritional content. To obtain quantity, energy content and nutrient content of unspecified meals we use averages of portion sizes and energy and nutrient contents across the range of possible meal components. It is estimated that unspecified meals may account for over a third of the energy content of food purchases.

(3) accuracy of reporting and coding

Survey participants record their food and drink purchases in a two week diary. They are able to attach till receipts or to write in diary entries to cover amount spent and quantity purchased for each individual item. In many cases quantities are not properly recorded and to maintain good will and high response rates these omissions are frequently tolerated. As well as lack of quantity information there are also cases where there is insufficient detail recorded on the diary, possibly the till receipt, to identify the correct food code.
To deal with quantity omissions on the diary proxy quantities are found by searching on-line supermarket websites and matching the item description and expenditure. To deal with insufficient information to code default codes are used for generic type products such as breakfast cereals. These forms of imputation impact on the estimates.

(4) analyse Family Food data to get estimates of price elasticities

Price elasticities are estimates of how consumer demand is affected by price and income changes. Price elasticities can be obtained from econometric modeling of Family Food data on itemised purchases where both cost and quantity are known.

Defra commissioned a research project in 2010 to produce a comprehensive range of price elasticities from Family Food data from 2001 to 2009. Price elasticities will be published when the project is completed.

(5) update portion sizes to improve the quality of eating out estimates

Quantities are not recorded against eating out foods on the Family Food diaries because purchases are often in the form of meals and quantities are unknown. In the eating out section of the Family Food diary the survey participant records an itemised list of meal components. Defra uses a set of standard portion sizes for eating out food codes. These have not been updated since 2001.

(6) assess non-response bias

The response rate to the Family Food Survey has fallen from 60 per cent in 2001 to a little over 50 per cent in 2010. The risk of non-response bias rises as the response rate falls. Significant survey resources are already targeted at achieving a high response rate.

(7) make use of the new estimates of food waste

Estimates of food waste are required to convert estimates of food purchases into estimates of food consumed. Defra published estimates of household food waste rates by type of food in 2009. Currently these estimates are not combined with Family Food data to obtain estimates of food consumption. Instead the statistics focus on food purchases.

Links to Family Food Datasets on the Defra Website

Datasets for the Family Food publication can be accessed though the web at
http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/

Information is available on purchases, expenditure and nutrient intakes for both household and eating out. Datasets available are:

- United Kingdom
- UK regions
- Gross income quintile
- Equivalised income decile
- Urban Rural
- 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
- Economic activity of household reference person

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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

Andrew Barnard
Office For National Statistics

Gaynor Bussell
Dietitian

Professor Judith Buttriss
British Nutrition Foundation

Professor Andrew Chesher
University College, London

Dermot Donnelly
Northern Ireland Statistics and Research Agency

Dr Giles Horsfield
Office For National Statistics

Dr Kathy Johnston
Scottish Government

Dr Laura Keyse
Office For National Statistics

Sheela Reddy
Department of Health

Kate Halliwell
Food And Drink Federation

Gillian Swan
Food Standards Agency

Professor Martin Wiseman
University Of Southampton

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Data Downloads

Datasets in excel format are available at:
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 Office Region
Rural and Urban: England, Wales and Scotland
Gross income quintile
Equivalised income decile
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
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 to 2010) is available to download via the Data Archive on the Economic and Social Data Service website:
http://www.esds.ac.uk/findingData/efsTitles.asp

National Food Survey data from 1974 to 2000 is available from:
http://www.esds.ac.uk/findingData/nfsTitles.asp

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Glossary

General

Term	Meaning
Household Reference Person (HRP)	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.
Consumer Price Index (CPI)	The Consumer 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

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.
Dietary Reference Values (DRV)	Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991.
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

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 "Modified OECD' equivalence scale, each member of the household is first given an equivalence value. The head of the household is given a value of 0.67 – in other words, that person can typically attain the same standard of living as a childless couple on only 67 per cent of its income. 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 1.
Trading Down	Trading down is used in this Family Food report to mean switching to purchases of cheaper products within a food grouping. Cheaper is equivalent to lower quality in some way. The reduction in quality could be in any quality attribute of the product such as packaging, brand name, provenance, nutrient content or taste. Trading down into a completely different type of food is not captured.

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