Family Food 2013

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Contents

Introduction

Food is necessary for life and essential for good health. The agricultural industry, which produces much of our food, influences our landscape and rural areas. The food manufacturing industry is the largest manufacturing sector in the UK. Taken as a whole, the agri-food sector contributes £97bn to the economy and employs 3.8 million people. Food retail and food services of all types are part of everyday life: from farmers' markets to 24 hour superstores, from fish and chip shops to pubs and restaurants. Food impacts our personal lives on a daily basis. Our spending habits and eating patterns reflect our individual lifestyles and social and economic situations, and have implications for public health and social policy.

Family Food looks specifically at the domestic, or household aspect. It provides detailed statistics on food and drink purchases, expenditure and the derived nutrient content of those purchases from a large household survey covering the United Kingdom. Family Food and its predecessors have been running since the 1940s and the data produced have been used to support and inform Government policy, as well as academic research, for diverse purposes. From monitoring the effects of wartime and post-war rationing to assessing consumer response to recent food price inflation, Family Food data provides insights into the way we live through the food we buy.

Government policy on food differs slightly in the different countries of the United Kingdom, but has the same broad ambitions: supporting the food industry and promoting home grown and produced products, ensuring that the standards, safety and authenticity of the food we eat meet our expectations, and promoting public health.

These policies manifest themselves to the general public most visibly in campaigns such as 5 A DAY and the Eatwell plate, which aim to promote a healthy diet, and 'Love Food Hate Waste' which aims to illustrate how people can save money on their food bills and reduce the environmental impact of waste. However, there are many less visible but no less important aspects, for instance country of origin labelling, which may influence peoples purchasing decisions.

In 2012 food price inflation continued to run higher than the general inflation rate, as it has generally done since 2007. The biggest drivers to UK food price inflation are global commodity prices, exchange rates and oil prices. Consumers' response to changing prices is assessed in Chapter 5, alongside longer term dietary trends.

We are all exposed to information, advice and news about food daily, in the media and through our social circles. Family Food is an impartial analysis of the food we buy. It is accredited as a National Statistics product, which guarantees its integrity, quality assurance and accessibility. Its related publication, Family Spending 2013, looks at all household expenditure and is available from the Office for National Statistics.

Information about the survey organisation and operation is in the 'About Family Food' section in this report, as well as contact details for any user feedback. More methodology papers are available online, detailing the background to the survey, its history, sampling, reliability and methods of calculating nutrient intakes. Extensive long term summary datasets are also available to download. The Family Food survey data is accessible to researchers via The Data Archive.

The Family Food team are always keen to get feedback from users of the report and the data. We have produced a short online survey to gather thoughts and suggestions on how we can improve our outputs.

Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

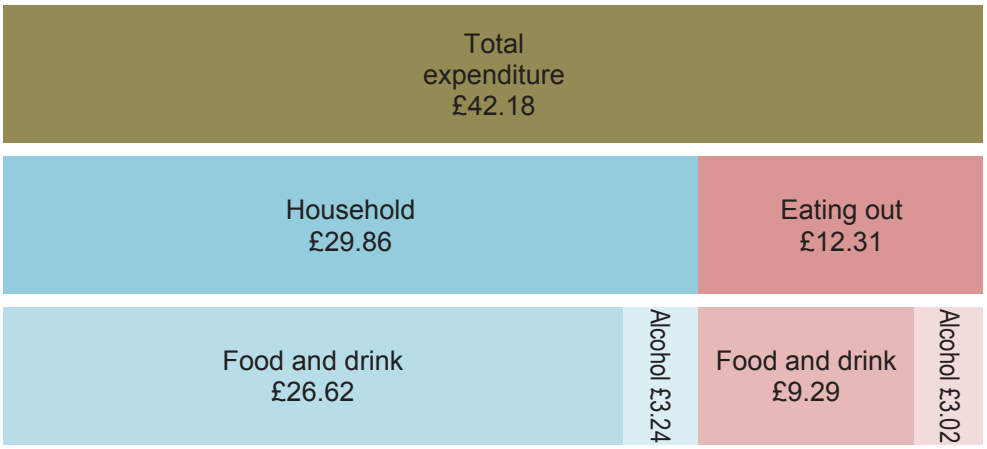
Executive Summary

Family Food 2013 presents the results from the 2013 Family Food module of the Living Costs and Food Survey, covering household shopping and eating habits. Around 6,000 households in the UK are surveyed annually. Households record their expenditure on, and purchased quantities of, food and drink both for the household and that consumed outside the home. Nutrient intakes are derived from the purchase data. More details on the survey are in the 'About Family Food' section.

Overview

- In 2013 average household expenditure on all food and drink was £42.18 per person per week (see chart). Taking inflation into account, this was 1.6 per cent less than 2012 and 3.9 per cent less than 2010.

UK average expenditure on food and drink, per person per week



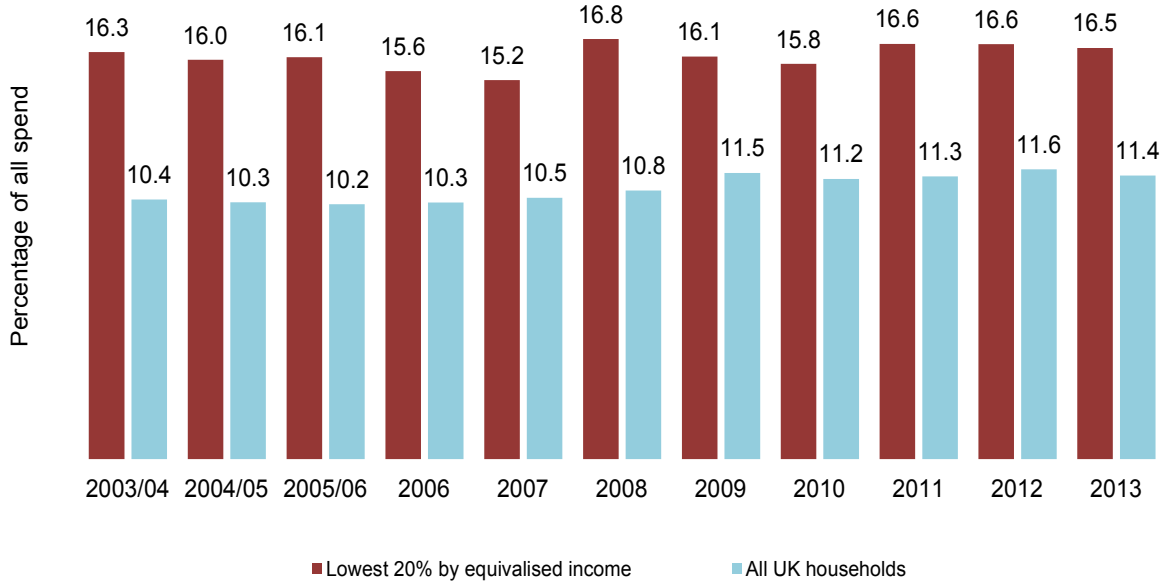
- In the UK an average 11.4 per cent of all household spend went on food in 2013. For the lowest 20 per cent of households by equivalised income it was 16.5 per cent.
- Purchases of various household food types are on a clear short term downward trends since 2010, including, carcase and non-carcase meat, potatoes, vegetables, bread, beverages and alcoholic drinks. Purchases of eggs are on a short term upwards trend in this period.
- The amount of food eaten out has been declining since 2001, with the largest decreases since 2010 in biscuits and chocolate, yoghurt and fromage frais, confectionary and alcoholic drinks.
- Total energy intake from all food and drink is on a long term downward trend. Intake is still around 5 per cent higher than the Estimated Average Requirement for adult intakes.
- All vitamin and mineral intakes except potassium reached at least 100 per cent of the recommended minimum Reference Nutrient Intake, where one is set.
- The average intake of sodium is on a downward trend but was still 79 per cent above the recommended maximum Reference Nutrient Intake of 2.4 grams per day in 2013.

1.2 Expenditure

The report focuses mostly on trends since 2007, when food prices peaked.

- In real terms, between 2010 and 2013 household spending on food and drink fell by 3.2 per cent and eating out expenditure by 5.6 per cent. Household spending on alcoholic drinks fell by 5.7 per cent over the same period, whilst that bought for consumption outside the home fell by 13.4 per cent.
- The percentage of spend on food continues to be highest for low income households, at 16.5 per cent in 2013. Food is the largest item of household expenditure for low income households, after housing, fuel and power costs.

Percentage of spend going on food and non-alcoholic drinks



- On average, UK households purchased 6.1 per cent less food in 2013 than in 2007 while spending 20 per cent more. They saved 5.6 per cent on their unit prices by 'trading down' to cheaper products of the same type.
- Households in income decile 1 (lowest income group) spent 22 per cent more on food in 2013 than in 2007 and purchased 6.7 per cent less. Trading down saved these households 1.0 per cent.

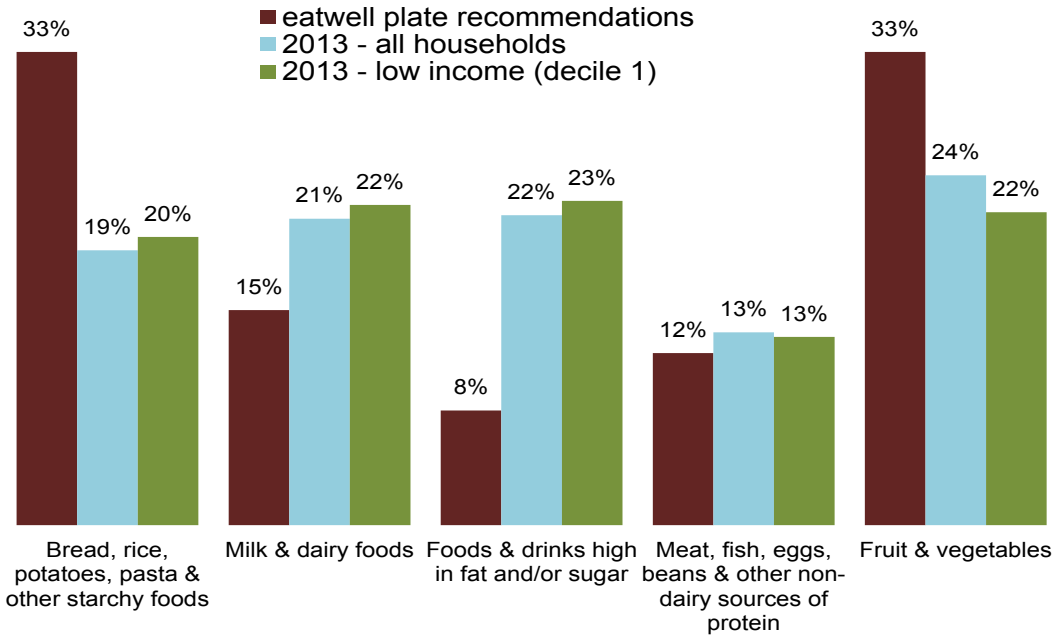
More detailed analyses on expenditure are presented in Chapter 1.

1.3 Purchases

The report focuses mainly on trends over the period 2010-2013.

- Household food purchases do not generally match the Government recommended Eatwell plate proportions of the types of food which make up a well balanced diet. Both low income households and all households have a relatively similar diet in terms of the eatwell plate categories.
- Purchases of soft drinks (not low calorie) are on a downward trend since 2010 and fell by 23 per cent between 2010 and 2013. This was mirrored by an upward trend in low calorie soft drinks' with household purchases 36 per cent higher in the same period.
- Butter purchases have been increasing steadily over the last ten years, and were 6.1 per cent higher than in 2010.

Eatwell plate comparison for low income and all households



- Purchases of raw carcase meat have been on a downward trend since 2010, falling by 14 per cent. Beef, which accounts for around half of raw carcase meat purchases, showed a downward trend, declining by 7.2 per cent on 2012, 15.3% on 2010. All types of beef generally show a fall in purchases since 2010. Purchases of pork show no statistical trend but were 4.2 per cent down on 2010, and 8.1 per cent down on 2012.

- Potato purchases continued their long term downward trend, with a 8.2 per cent reduction since 2010. Purchases are 21 per cent lower than ten years ago. The reduction in recent years is driven by a decline in purchases of fresh potatoes. Around four fifths of the purchases of processed potatoes were chips and crisps and these have been relatively stable over the last ten years.

- While overall purchases of fruit and vegetables reduced between 2010 and 2013, consumers spent 6.7 per cent more on fresh and processed vegetables and 9.2 per cent more on fresh and processed fruit.

More detailed analyses of purchases are presented in Chapter 2, by geographic region in Chapter 4 and by demographic characteristics in Chapter 5.

1.4 Dietary Trends

The report focuses mainly on trends over the period 2010-2013.

- Total energy intake per person was an average of 2192 kcal per person per day in 2012, 4.4 per cent lower than in 2010. This is a statistically significant downward trend that confirms the longer term downward trend already apparent since the mid 1960s. Intake is still around 5 per cent higher than the Estimated Average Requirement.

- Energy intake from eating out was 220 kcal per person per day in 2013, 14.7 per cent lower than in 2010. Average energy intake from eating out accounted for 10 per cent of total energy intake.

- Over the three years from 2010 to 2013, intake of unsaturated fatty acids showed a downward trend. Mono-unsaturated fatty acids declined by 3.4 per cent, while intakes of polyunsaturates fell by 6.4 per cent.

- Fibre intake in 2013 was unchanged on 2012, at an average of 14.4 grams per person per day. This was a 5.4 per cent fall from 2010. The COMA recommendation is for an average of 18 grams of fibre intake per person per day for adults.

- Since 2010 alcohol intake has been on a downward trend. Eating out purchases accounted for 22 per cent of total alcohol intake in 2013. In 2013, eating out intakes of alcohol were 25 per cent lower than in 2010 and showing a significant downward trend.

Nutritional analysis is presented in Chapter 3, by geographic region in Chapter 4, by demographic characteristics in Chapter 5 and for low income households in Chapter 1.

Chapter 1 Expenditure

1.1 Overview

This chapter provides estimates of household and eating out expenditure on food in 2013, alongside analyses of changes in household shopping behaviour in response to food price inflation in recent years.

Using comparisons between low income households and all households it is possible to examine the greater effects food price rises may have on vulnerable groups in society. Low income is one of many reasons to be vulnerable in society but this group is used here as a proxy. In the context of this chapter, low income households are identified as those within the lowest ten or twenty per cent of households by equivalised income, a measure of household income that accounts for differences in household size and composition.

- In 2013 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out was £42.18 per person per week. When inflation is taken into account, the amount spent was 1.6 per cent less than 2012 and 3.9 per cent less than 2010.Household food and non-alcoholic drink purchases formed the largest share at £26.62 per person per week. When inflation is taken into account, the amount spent was 1.6 per cent less than 2012 and 3.9 per cent less than 2010.
- In 2013, the percentage of spend on food and non-alcoholic drinks for the average UK household was 11.4 per cent, a slight fall on the year before.
- The percentage of spend on food continues to be highest for households with the lowest 20 per cent of income, at 16.5 per cent in 2013. Food is the largest item of household expenditure for low income households, after housing, fuel and power costs.
- On average households 'traded down' to cheaper products to save 6 per cent on the unit prices paid for food between 2007 and 2013. The lowest income households traded down to a much lesser extent.
- The average household spent 20 per cent more on food in 2013 than in 2007, when prices were at their lowest. Households in income decile 1 spent 22 per cent more.

1.2 Food classification and results tables

Family Food classifies food items into a hierarchical coding scheme of approximately 500 different food codes. Full details of how food is coded and where it fits into the scheme are available in the methodology paper 'Food and drink codes'. Because of space limitations, the data tables in this report generally only show selected food and drink items within the main categories. The accompanying datasets show results for the full list of codes, going back in most cases to 2001 and in some cases back to 1974. Historical estimates going back to 1940 in some cases are available from The National Archives.

1.3 Household spending on food

The average weekly expenditure in actual prices (not adjusted for inflation) on all household food and drinks in 2013 was £29.86 per person, an increase of 2.0 per cent on 2012. Total expenditure on household food and non-alcoholic drink rose by 2.5 per cent in 2013 to £26.62 and was 8.7 per cent higher than in 2010. Table 1.1 shows significant upward trends in household expenditure between 2010 and 2013 in most categories, notably :

- Total fats and oils - spending increased by 11 per cent and purchased quantities fell by 7.0 per cent. Within this category spending on butter increased by 27 per cent, and purchases by 6.1 per cent.
- Fresh and processed potatoes – spending increased by 15 per cent. Purchased quantities fell by 8.2 per cent.

- Eggs - spending increased 11 per cent, purchases by 8.9 per cent.
- Fresh apples and fruit juice - spending increased by 13 and 11 per cent respectively, whilst purchases fell slightly
- Soft drinks - spending increased by 12 per cent, whilst purchased quantities fell slightly.

The only statistically significant 4 year downward trend was on the amount spent on liquid whole milk, down by 25 per cent since 2010 and 1.1 per cent on 2012. The effects of food price rises on purchasing levels are considered later on in this chapter.

In terms of money spent on eating out, it was 5.6 per cent higher in 2013 than in 2010 at £12.31 per person per week for all food and alcoholic drinks. Spending on food and non-alcoholic drinks eaten out was £9.29 in 2013. Spending on alcoholic drinks was £3.02 per person per week in 2013, 3.1 per cent higher than in 2010. See Table 1.1.

Chart 1.1: UK average expenditure on food and drink, per person per week, 2013

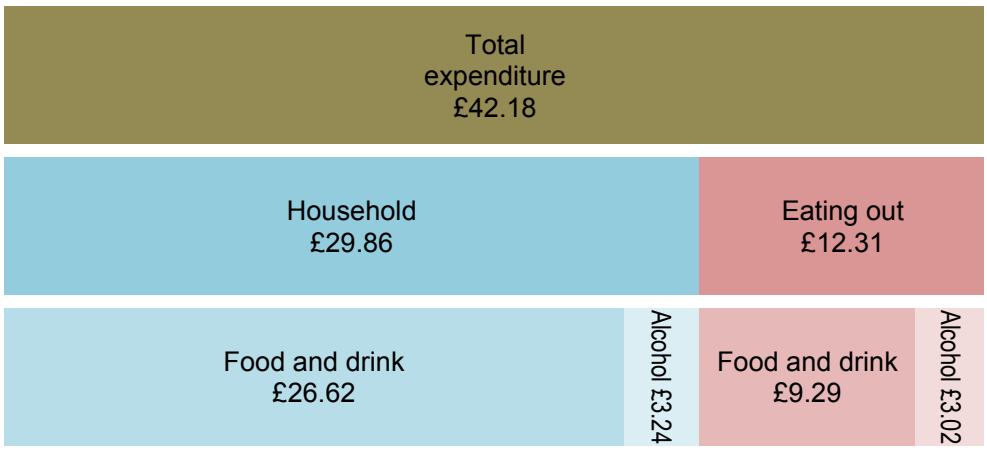


Table 1.1: UK expenditure on food and drink, 2010-2013

	2010	2011	2012	2013	RSE[a]	% change since 2012	% change since 2010	sig[b]
Number of households in sample	5263	5692	5596	5144				
Number of persons in sample	12196	13448	13196	12144				
Food price inflation	3.1	5.9	3.3	3.7				
Household expenditure	*Pence per person per week*							
Milk and cream	189	187	188	187	✓✓✓	-0.8	-1.1	
Liquid whole milk	24	22	18	18	✓✓	-1.1	-24.9	yes
Cheese	79	80	81	85	✓✓✓	+5.5	+7.8	yes
Carcase meat	130	129	136	136	✓✓	+0.5	+4.6	
Non-carcase meat and meat products	441	449	471	484	✓✓✓	+2.9	+9.7	yes
Fish	117	120	124	129	✓✓✓	+4.4	+10.6	yes
Eggs	28	28	30	31	✓✓✓	+3.6	+11.3	yes
Fats and oils	50	53	55	55	✓✓✓	-0.6	+10.5	yes
Butter	16	19	20	20	✓✓	+1.9	+27.1	yes
Sugar and preserves	21	21	23	23	✓✓	-0.5	+6.4	
Potatoes (fresh and processed)	113	116	121	129	✓✓✓	+6.6	+14.6	yes
Fruit and vegetables excluding potatoes	441	442	460	476	✓✓✓	+3.4	+7.9	yes
Vegetables excluding potatoes	230	227	236	245	✓✓✓	+3.9	+6.7	yes
Fruit	211	215	224	230	✓✓✓	+2.8	+9.2	yes
Fresh apples	23	22	24	25	✓✓✓	+6.3	+12.8	yes
Pure fruit juices	33	37	37	37	✓✓	+0.9	+11.2	yes
Cereals	461	474	497	506	✓✓✓	+1.8	+9.7	yes
Bread	116	119	123	127	✓✓✓	+3.1	+9.1	yes
Beverages	51	51	56	54	✓✓✓	-2.3	+7.4	yes
Soft drinks	89	93	96	100	✓✓✓	+4.0	+11.7	yes
Confectionery	96	101	102	104	✓✓✓	+2.2	+8.7	yes
Alcoholic drinks	307	308	330	324	✓✓	-1.9	+5.5	
Beers	21	19	21	20	✓	-5.8	-6.7	
Lagers and continental beers	48	48	49	51	✓✓	+4.0	+7.6	
All household food and non-alcoholic drink	2450	2492	2598	2662	✓✓✓	+2.5	+8.7	yes
All household food and drink	2757	2799	2929	2986	✓✓✓	+2.0	+8.3	yes
Eating out expenditure								
Total expenditure on alcoholic drink eaten out	312	314	314	302	✓✓	-3.6	-3.1	
Total expenditure on food and drink eaten out (exc alc drks)	854	879	895	929	✓✓✓	+3.8	+8.9	yes
Total expenditure on food and drink eaten out	1166	1193	1209	1231	✓✓✓	+1.9	+5.6	
Expenditure on all food and drink	3923	3993	4137	4218	✓✓✓	+2.0	+7.5	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 2009 is statistically significant (if the change is more than twice its standard error).

1.4 Trends in spending in real terms

Table 1.2 shows expenditure in real terms, with the values adjusted to remove the effects of inflation. The figures are derived by deflating expenditure at current prices by the all items Retail Price Index. This index is used because the Consumer Price Index (which is now used for national inflation statistics) does not go back as far as 1975. In 1975, households spent the equivalent of £29.52 per person per week on household food and drink. However this is not directly comparable with the 2013 figure of £26.62 as it does not include spending on confectionery and soft drinks and excludes Northern Ireland.

The Retail Price Index (RPI), a measure of inflation, rose by 3.6 per cent between 2012 and 2013 and by 11.9 per cent between 2010 and 2013. Removing this overall rise in prices from the changes in expenditure on food and drink shows how expenditure in real terms changed since 2010.

Since 2010, household spending on food and drink in real terms fell by 3.2 per cent and eating out expenditure by 5.6 per cent. Spending on alcoholic drinks for household consumption fell by 5.7 per cent over the same period, whilst that bought for consumption outside the home fell by 13 per cent. Later in the chapter the effects of food price rises on household spending is examined in more detail.

Table 1.2: UK expenditure on food and drink at constant 2013 prices

	1975 (a) (c)	1985 (a) (c)	1995 (a) (b)	2008	2009	2010	2011	2012	2013	% change since 2012	% change since 2010
Retail price index (1975 = 100)	100	277	436	629	625	654	688	707	732	3.6	11.9
							£ per person per week				
Household food and drink			30.93	29.83	31.31	30.85	29.77	30.33	29.86	-1.6	-3.2
Food and drink eaten out			9.78 (d)	13.04	13.27	13.04	12.69	12.52	12.31	-1.6	-5.6
All food and drink			40.72	42.88	44.58	43.89	42.46	42.85	42.18	-1.6	-3.9
Household food and drink exc. alcohol	29.52	26.19	27.92	26.78	27.93	27.41	26.50	26.91	26.62	-1.1	-2.9
Food and drink eaten out exc. alcohol			7.23 (d)	9.51	9.67	9.55	9.35	9.27	9.29	0.3	-2.7
All food and drink exc. alcohol			35.15	36.29	37.59	36.96	35.85	36.18	35.92	-0.7	-2.8
% eaten out			21%	26%	26%	26%	26%	26%	26%		
Household alcoholic drink			3.01	3.05	3.38	3.44	3.27	3.42	3.24	-5.3	-5.7
Alcoholic drink eaten out			2.55 (d)	3.54	3.60	3.49	3.34	3.25	3.02	-7.0	-13.4
All alcoholic drinks			5.56	6.59	6.98	6.93	6.61	6.67	6.26	-6.1	-9.6
% of alcoholic drinks eaten out			46%	54%	52%	50%	51%	49%	48%		

(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.

Context: Food Prices

In 2013 food price inflation was generally increasing, and higher than that of all items inflation. Coupled with an economic recovery but lower wage inflation, it was almost inevitable that there was a media focus on 'cost of living' and suggestions that low income households were finding it harder to pay for food.

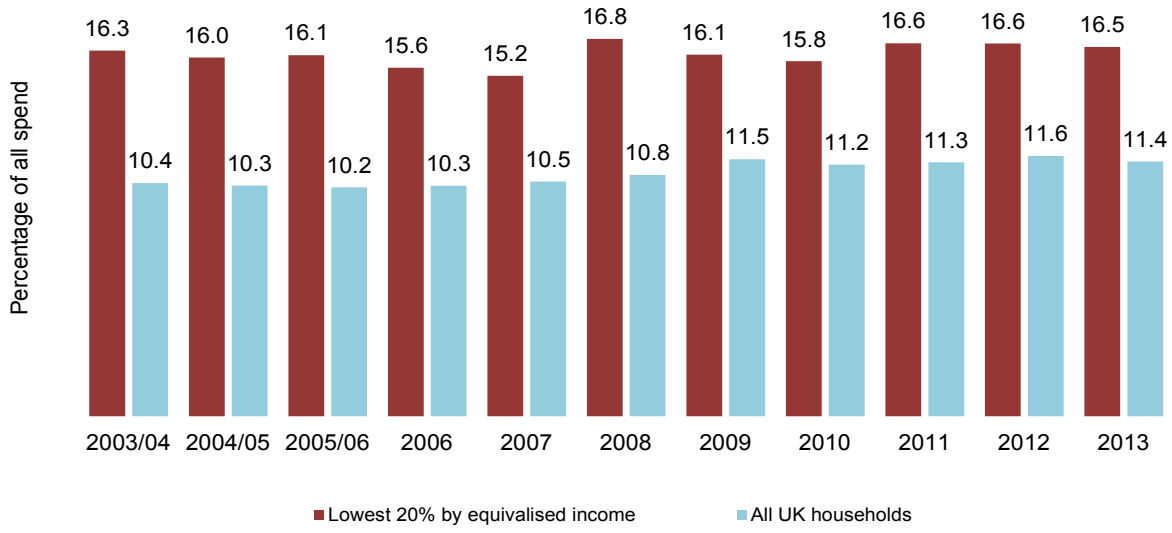
Elsewhere in this report there are analyses of households' responses to higher food prices, including 'trading down' to cheaper products of the same type, and buying less. Food prices are driven by a number of factors, but international commodity and oil prices and exchange rates are significant ones.

In 2014 we have seen evidence that food price inflation is falling, and it has been below general inflation in the latter half of the year. Family Food estimates generally show trends over the long term and short term spikes or depressions are smoothed out in the annual results. If the current short term picture with prices continues, as the sharp increases from 2007 did, then we can expect to see this reflected in shopping behaviour in future years.

1.5 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 over time, 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 1.2: Percentage of spend on food and non-alcoholic drinks



Source: Living Costs and Food Survey, Family Spending table 3.2e, ONS.

In the UK, an average 11.4 per cent of household spend went on food in 2013, while for the lowest 20 per cent of households by equivalised income it was higher at 16.5 per cent. Engel's law is an observation in economics stating that as income rises the proportion of income spent on food falls, even if actual expenditure on food rises. Although these estimates are of proportion of expenditure not income, they are consistent with that observation.

For all households in the UK the percentage of spend on food was 0.9 percentage points higher than the 2007 level, whilst for the lowest 20 per cent by equivalised income it was 1.3 percentage points higher. Food is exerting greater pressure on household budgets since 2007 when food prices started to rise in real terms.

Low income households bought less food in 2013 than in 2007. The analysis below (Table 1.4) shows that the lowest ten per cent of households by income purchased 6.7 per cent less food by weight between 2007 and 2013. The energy content of food purchases by households in the lowest two income deciles is also below its 2007 level (see Chart 3.5).

1.6 Effects of food price rises

Food prices from 2007 to 2013

In real terms (taking out the underlying effects of general inflation) food prices rose from September 2007, peaking in February 2009, before steadying at a new higher level. During 2013 food prices were around 12 per cent higher in real terms than in 2007.

Table 1.3 shows average food prices in 2013 for key food groups. On average, food prices overall rose by 4.1 per cent in 2013 slightly above the all items rate of inflation as measured by the Consumer Price Index (CPI). The highest rises in price were recorded against potatoes, fruit, beef, bacon and pork. Prices for lamb and eggs fell.

Table 1.3: Food price evolution, 2007=100

	2007	2008	2009	2010	2011	2012	2013	% change since 2007	% change since 2010	% change since 2012
All Items Consumer Price Index	100	104	106	109	114	117	120	+20.5	+10.2	+2.6
CPI food items	100	110	116	120	126	130	135	+34.9	+12.7	+4.1
Bread	100	115	119	119	125	125	131	+30.6	+9.8	+4.9
Cereals	100	113	121	123	130	136	141	+40.7	+14.0	+3.8
Biscuits and cakes	100	111	115	120	133	139	143	+43.0	+19.2	+3.0
Beef	100	115	124	124	129	143	151	+51.0	+22.2	+5.8
Lamb	100	109	122	128	155	158	153	+53.1	+19.5	-3.0
Pork	100	115	124	128	135	145	152	+52.1	+18.4	+5.2
Bacon	100	109	115	113	116	116	123	+22.7	+8.4	+5.5
Poultry	100	113	116	116	122	123	128	+28.2	+10.9	+3.8
Fish	100	107	113	119	131	136	141	+41.3	+18.2	+3.8
Butter	100	123	121	138	159	164	167	+67.3	+21.0	+2.3
Cheese	100	115	120	122	129	133	134	+34.0	+9.9	+0.4
Eggs	100	127	131	136	137	135	133	+33.4	-1.9	-1.4
Milk	100	114	122	121	122	120	122	+22.5	+1.6	+2.0
Tea	100	106	118	133	138	139	142	+41.5	+6.5	+1.9
Coffee and hot drinks	100	104	112	113	128	136	137	+36.7	+20.8	+0.5
Soft drinks	100	102	105	112	121	126	128	+28.2	+14.8	+1.8
Sugar and preserves	100	106	120	121	125	129	129	+29.2	+6.7	+0.4
Sweets and chocolates	100	107	115	122	132	138	143	+43.2	+17.6	+3.5
Potatoes	100	111	116	118	125	130	150	+50.3	+27.2	+16.0
Vegetables	100	108	115	118	121	124	127	+26.9	+7.3	+2.4
Fruit	100	107	112	121	126	129	139	+39.0	+14.8	+8.0
of which fresh fruit	100	106	113	114	119	123	126	+25.6	+9.9	+1.9
Alcoholic drinks	100	103	108	111	118	121	125	+25.2	+12.6	+3.5

Trading Down, Buying Less and Spending More

Households can react in many ways to food price increases – they may simply spend more, or buy less of a type of product. They may also 'trade down' by switching to purchases of cheaper products within a food grouping (see glossary for more detail). Family Food provides evidence based estimates of changes in shopping behavior in response to higher prices.

For foods within a given food code, price rises are measured by the Retail Prices Index and the Consumer Prices Index. In contrast, The Family Food Survey measures the average price or unit price that households have paid for foods within a food code. The difference between the rise in price and the rise in unit price paid provides a way of estimating trading down. This is calculated by dividing (deflating) the rise in price paid by the actual rise in price for each food code.

Table 1.4 shows how consumers have reacted to price rises between 2007 and 2013 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.

For example, for butter there was a change in expenditure of +51 per cent for all households. Quantity of butter purchases increased by 1.4 per cent and all households managed to reduce their unit price paid (trading down) by 11 per cent. Thus the dominant response to the 67 per cent price rise in butter between 2007 and 2013 was to spend more money on butter purchases.

Table 1.4: Consumers' response to food price rises between 2007 and 2013

Percentage changes between 2007 and 2013	Price rise	Quantity purchased		Expenditure		Trading Down [a] (deflated unit value)	
		All households	Income decile 1	All households	Income decile 1	All households	Income decile 1
Food	+35	-6.1	-6.7	20	22	-5.6	-1.0
Bread	+31	-10	-12.6	18	17	0.3	8.8
Cereals	+41	2.4	-3.6	26	30	-12	-9.3
Biscuits & cakes	+43	-2.3	-12	25	7.0	-11	-2.9
Beef	+51	-23	-27	20	17	3.8	30
Lamb	+53	-37	na	-4.3	na	-5.7	na
Pork	+52	-5.5	-22.2	11	46	-23	-15
Bacon	+23	0.7	-17	20	6.0	-3.2	1.8
Poultry	+28	-4.1	-5.9	33	61	7.6	25
Fish	+41	-12	4	12	15	-10	-5.7
Butter	+67	1.4	-17	51	17	-11	-6.6
Cheese	+34	-0.4	1.6	26	22	-5.9	-2.7
Eggs	+33	16	9.7	39	41	-5.7	-8.0
Milk	+22	-6.9	-13.4	9.1	6.3	-5.0	-4.6
Tea	+42	-17	-9	6.9	28	-8.6	-1.8
Coffee & hot drinks	+37	-6.8	-2.5	26	50	-1.4	1.0
Soft Drinks	+28	-1.3	-14.2	26	34	-0.2	4.3
Sugar & preserves	+29	-2.1	11.1	32	36	4.0	1.9
Sweets & chocolates	+43	-0.3	1.0	25	12	-13	-13
Potatoes	+50	-18	-22.5	13	-1.6	-7.8	1
Vegetables	+27	-3.4	-2.5	17	17	-4.7	2.3
Fruit	+39	-13	-2	14	9.2	-5.4	-6.4
of which fresh fruit	+26	-13	-4	12	6.6	3.1	2.3
Alcoholic drinks	+25	-10	-21.8	15	46	2.5	21

Table 1.5: Main consumer reaction to the high food prices between 2007 and 2013

	Main consumer reaction - 2013				
	Trading down	Buying more	Buying less	Spending less	Spending more
All households	Cereals (-12%)	Eggs	Beef		Cereals
Trading down (-5.6%)	Biscuits & cakes (-11%)	Butter	Lamb		Poultry
Buying less (-6.1%)	Pork (-23%)		Fish		Butter
Spending more (+20%)	Fish (-10%)		Tea		Cheese
	Butter (-11%)		Potatoes		Eggs
	Sweets & chocolates (-13%)		Fruit		Coffee & hot drinks
			Alcoholic drinks		Soft drinks
					Sugar & preserves
					Sugar & preserves

	Trading down	Buying more	Buying less	Spending less	Spending more
Income decile 1	Cereals (-9%)	Sugar & preserves	Beef		Cereals
Trading down (-1.0%)	Pork (-15%)	Eggs	Pork		Pork
Buying less (-6.7%)	Fish (-6%)	Fish	Bacon		Poultry
Spending more (+22%)	Butter (-8%)	Cheese	Butter		Eggs
	Eggs (-8%)	Sweets	Milk		Coffee & hot drinks
	Milk (-5%)		Soft Drinks		Soft drinks
	Sweets & chocolates (-13%)		Potatoes		Sugar & preserves
	Fruit (-6%)		Fruit		Alcoholic drinks

(a) a positive value indicates trading up

Tables 1.4 and 1.5 show that on average UK households purchased 6.1 per cent less food in 2013 than in 2007 while spending 20 per cent more. Households in income decile 1 (lowest income group) spent 22 per cent more on food in 2013 than in 2007 and purchased 6.7 per cent less.

Households saved an average of 5.6 per cent on their unit price paid by trading down to cheaper products. Trading down saved the lowest income households 1.0 per cent on their unit price paid. It is likely that this figure is lower than for all households because it was not possible to purchase items within the same category at a lower unit price. The trading down analysis does not capture instances where expenditure is switched to a completely different food type.

- On average UK households traded down on pork to save 23 per cent between 2007 and 2013. In the same period households in income decile 1 (lowest income group) spent 46 per cent more buying more pork.
- Since 2007 UK households have bought noticebly less beef, lamb, fish, fruit, potatoes and alcoholic drinks but more eggs.
- Since 2007 households in decile 1 (lowest income group) have bought less butter, beef, pork, bacon, potatoes and alcoholic drinks but more sugar and preserves, eggs and fish.
- There is an element of trading up with purchases of alcoholic drinks, with expenditure increased but quantities reduced, a feature more marked in the lowest income group households.

The Family Food team are always keen to get feedback from users of the report and the data. We have produced a short online survey to gather thoughts and suggestions on how we can improve our outputs.

Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

Chapter 2 Purchases

2.1 Overview

Comparisons between 2010 and 2013, which provide a more reliable indication of change than a year on year comparison, are made for the main food groups that make up people's diets in the UK. In some cases, longer term comparisons are made. Detailed long term time series are available for download.

Purchases of various household foods are on clear short term downward trends since 2010, including carcase meat and meat products, potatoes, bread and beverages. Eggs are on a short term upwards trend since 2010. The amount of food eaten out has been declining since 2001 with decreases in many categories.

2.2 Household purchases

Table 2.1 shows the main food groups examined in this chapter and contains an indication of those items where a statistically significant 4 year linear trend is evident. A detailed explanation of how these trends are calculated is available in the Method Papers.

Fruit and vegetables

Household purchases of fresh and processed vegetables (excluding potatoes) have shown no clear trend since 2010, but increased by 1.4 per cent on 2012 to 1,102g per person per week in 2013, mainly reflecting an increase in 'other' fresh vegetables, i.e. not green vegetables. Purchases have generally been declining since 2005, mainly due to a decrease in purchases of fresh vegetables, which account for roughly 70 per cent of all vegetable purchases.

Potato purchases continued their long term downward trend, with a 8.2 per cent reduction since 2010. Purchases are 21 per cent lower than ten years ago. The reduction in recent years is driven by a decline in purchases of fresh potatoes. Around four fifths of the purchases of processed potatoes were chips and crisps and these have been relatively stable over the last ten years.

Household purchases of fruit (including fruit juice) show a similar profile to vegetables. Purchases are 15 per cent down from their peak in 2006 at 1,114g per person per week on average in 2013. There is some evidence that this decline is slowing, with purchases only 1.7 per cent down on 2010. Fresh fruit accounts for two thirds of total fruit and fruit juice purchases. Fruit juices have followed the same pattern as fruit, with purchases 2.6 per cent down on 2010, continuing a general decline that started in 2006.

While overall purchases of fruit and vegetables reduced between 2010 and 2013, consumers spent 6.7 per cent more on fresh and processed vegetables and 9.2 per cent more on fresh and processed fruit.

Chapter 3 analyses fruit and vegetable purchasing over time in terms of recommended daily consumption levels and Chapter 5 examines how fruit and vegetable purchases vary by demographic groups.

In 2013, 3.5 per cent of all the fresh fruit and vegetables entering the household came from free sources, mainly gardens and allotments. This was higher than 2012 (2.7 per cent) but similar to 2010 (3.6 per cent). This percentage is subject to year on year fluctuations depending on growing conditions in the UK. Section 1.3 provides a more detailed breakdown.

Fats (including oils)

In the last 10 years household purchases of fats have been generally stable following a long decline since the mid eighties. Purchasing levels of oils and fats were 7.0 per cent lower in 2013 than in 2010, a change equivalent to 12 grams per person per week. Reduced and low fat spreads show a downward trend between 2010 and 2013, and were 23 per cent down over that period. Purchases of margarine[1] increased by 1.1 per

Table 2.1: Quantities of household purchases of food and drink in the UK

		2010	2011	2012	2013	RSE[a]	% change since 2012	% change since 2010	trend since 2010 [b]
							grams per person per week unless otherwise stated		
Milk and cream	(ml)	1897	1904	1901	1847	✓✓✓	-2.8	-2.7	
Liquid whole milk (including welfare and school milk)	(ml)	352	355	297	285	✓✓	-3.9	-19.0	↘
Skimmed milks	(ml)	1156	1151	1209	1152	✓✓✓	-4.8	-0.4	
Yoghurt and fromage frais	(ml)	203	200	195	191	✓✓✓	-1.6	-5.6	↘
Cheese		118	118	114	118	✓✓✓	+3.6	-0.0	
Cheese, natural		107	108	104	107	✓✓✓	+3.4	+0.3	
Processed cheese		11	11	10	11	✓✓	+4.9	-2.9	
Carcase meat		211	204	196	182	✓✓✓	-7.0	-13.5	↘
Beef and veal		114	112	104	97	✓✓	-7.2	-15.3	↘
Mutton and lamb		44	37	36	35	✓	-4.7	-20	
Pork		53	56	55	51	✓✓	-8.1	-4.2	
Non-carcase meat and meat products		805	794	793	766	✓✓✓	-3.4	-4.8	↘
Bacon and ham (cooked or uncooked)		113	112	108	103	✓✓	-4.8	-8.6	↘
Poultry (cooked or uncooked)		242	247	251	241		-4.1	-0.6	
Meat based ready meals and convenience meat products		161	157	164	164	✓✓✓	+0.1	+1.6	
Fish		151	147	144	146	✓✓✓	+0.7	-3.4	
White fish, fresh, chilled or frozen		20	17	21	19	✓	-7.9	-6.3	
Fish based ready meals and other fish products		51	54	52	54		+3.6	+4.5	↗
Salmon, fresh, chilled or frozen		12	12	12	13	✓	+11.3	+5.9	
Eggs	(no.)	1.7	1.7	1.8	1.8	✓✓	+4.0	+8.9	↗
Fats		183	170	178	171	✓✓✓	-4.2	-7.0	
Butter		40	40	41	42	✓✓	+1.9	+6.1	
Vegeatble and salad oil		60	54	61	58	✓✓	-4.7	-3.7	
Reduced and low fat spread		49	46	43	38	✓	-10.0	-22.5	↘
Sugar and preserves		126	126	124	123	✓✓	-0.8	-2.6	
Potatoes (fresh and processed)		742	746	724	682	✓✓✓	-5.9	-8.2	↘
Vegetables		1107	1090	1086	1102	✓✓✓	+1.4	-0.5	
Fresh green vegetables		192	189	183	179	✓✓✓	-2.5	-6.8	↘
Other fresh vegetables		565	550	551	569	✓✓✓	+3.2	+0.6	
Processed vegetables [d]		350	351	352	354	✓✓✓	+0.7	+1.2	
Fruit		1133	1150	1107	1114	✓✓✓	+0.7	-1.7	
Fresh fruit		755	764	744	744	✓✓✓	-0.1	-1.5	
Processed fruit and fruit products		378	385	362	370	✓✓✓	+2.2	-2.0	
Pure fruit juices	(ml)	296	307	282	288	✓✓	+2.1	-2.6	
Bread		634	621	615	607	✓✓✓	-1.4	-4.2	↘
White bread		281	259	266	247	✓✓✓	-6.9	-12.0	↘
Brown and wholemeal bread		164	175	158	156	✓✓✓	-1.4	-4.9	↘
Vienna and french bread		28	27	28	27	✓✓	-1.6	-1.2	
Cakes, buns and pastries		153	151	149	150	✓✓✓	+0.5	-2.1	
Biscuits and crispbreads		162	164	160	165	✓✓✓	+2.7	+1.7	
Other cereals and cereal products		556	547	542	549	✓✓✓	+1.4	-1.2	
Beverages		56	53	53	52	✓✓✓	-1.3	-6.5	↘
Soft drinks [c]	(ml)	1718	1630	1633	1664	✓✓✓	+1.9	-3.1	
Not low calorie	(ml)	1139	954	884	878	✓	-0.7	-22.9	↘
Low calorie	(ml)	579	676	749	786	✓✓	+5	+35.7	↗
Confectionery		131	134	126	128	✓✓✓	+1.4	-2.1	
Alcoholic drinks	(ml)	762	728	700	694	✓✓	-1.0	-8.9	↘

(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 2009, see website for more details.

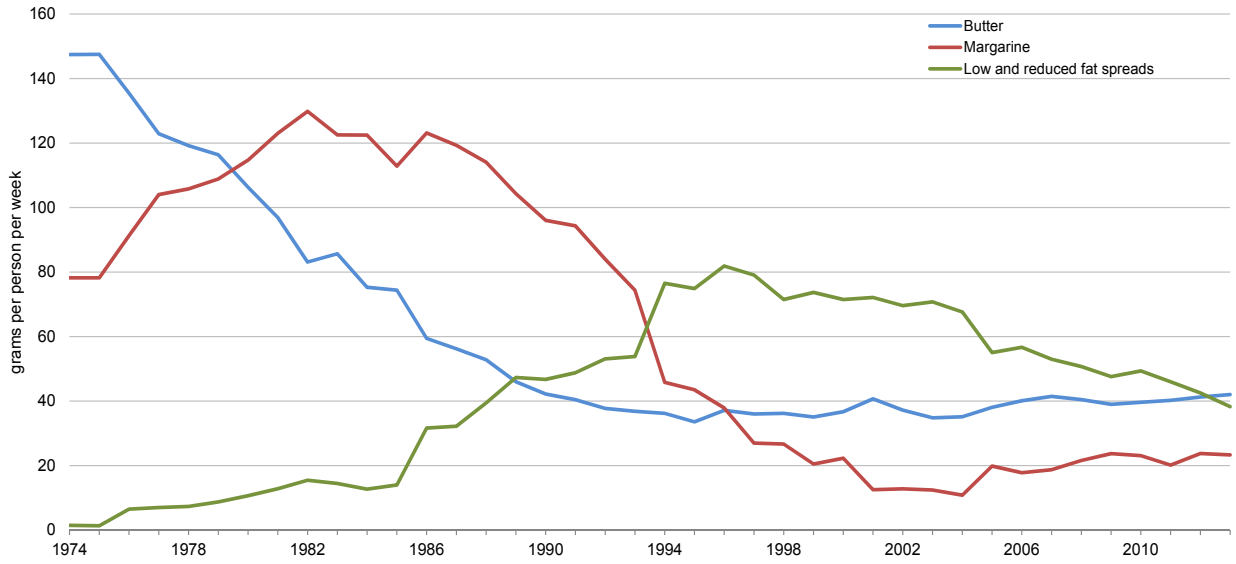
(c) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

(d) Includes frozen, canned and dried vegetables.

cent. Long term trends in estimates for margarine and spreads were affected by the reclassification of a popular product in 1994.

Butter purchases have been increasing steadily over the last ten years, and were 6.1 per cent higher than in 2010, at 42 grams per person per week. Oils accounted for one third of all fat purchases, with average weekly purchases of 58 mls.

Chart 2.1: UK purchases of butter and spreads, 1974 – 2013



Milk and cheese

Whole milk purchases were 19 per cent lower in 2013 than in 2010, equivalent to a reduction of 67 mls per person per week. Over the same period, purchases of skimmed milks were unchanged. Household purchases of milk have been falling for many years, driven by reductions in whole milk. Purchases of semi skimmed milk, which overtook whole milk in the early 1990s and fully skimmed milk, have been generally stable in the last 10 years.

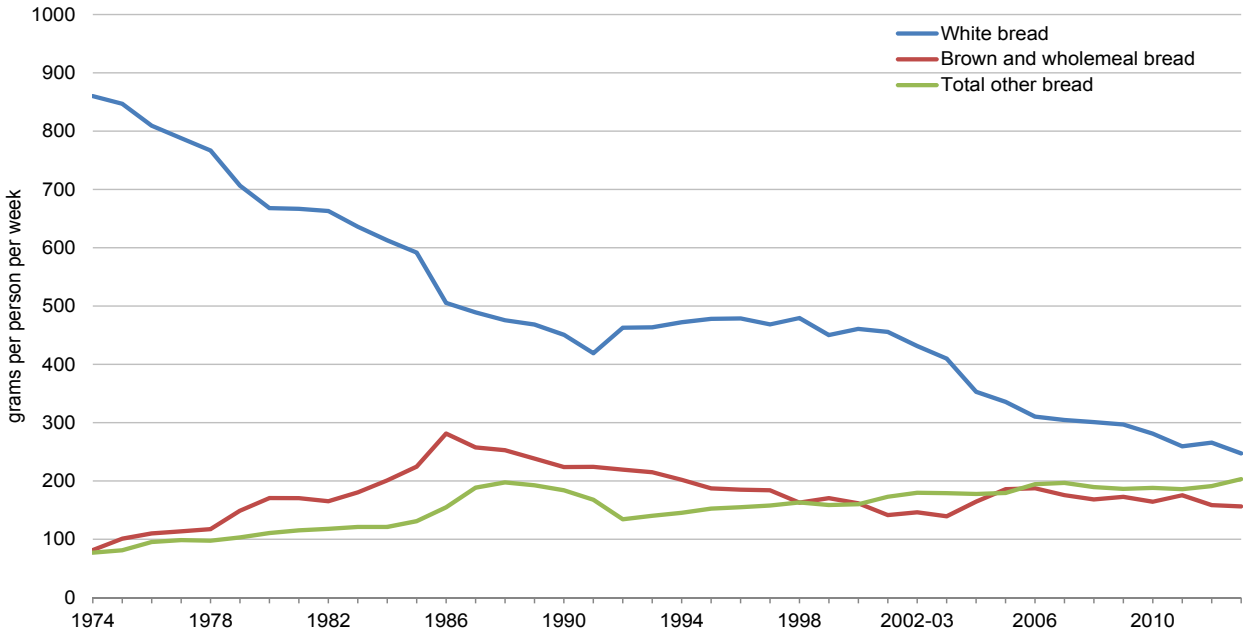
Household purchases of cheese have fluctuated over the last ten years, and show no clear trend since 2010. Cheddar type cheeses account for around half of all cheese purchases by weight, at 67 grams per person per week.

Bread

Purchases of bread are on a long term downward trend, with white and 'brown and wholemeal' (which account for two thirds of purchases) falling by 12 and 4.9 per cent respectively between 2010 and 2013. Purchases of bread are 17 per cent lower than in 2003. Purchases of 'other breads', which includes continental and specialty breads, were 8.0 per cent higher in 2013 than in 2010. Purchases of sandwiches also rose, by 12 per cent, equivalent to 1 gram per day although they remain a small proportion of total bread purchases for the household.

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

Chart 2.2: UK purchases of bread, 1974 – 2013



Context: Food Authenticity

In early 2013, the issue of authenticity of food products was highlighted in the public consciousness by the discovery of a number of ready-made meat products adulterated with horse meat. The horsemeat fraud incident raised the profile of this issue, and prompted a number of similar stories, about the authenticity of the food we eat and how it is advertised. Rice, olive oil, fish and other products are susceptible to being substituted with inferior ingredients, and mis-sold as one thing purporting to be another. This is criminal activity.

There was an immediate response to the incident, with a large number of tests of meat products to establish the scale of the problem and investigation of individual supply chains. The Government's response to the underlying issue was to commission the Elliott review into the Integrity and Assurance of Food Supply Networks – a wide ranging report on food crime and authenticity which was published in September 2014 and contains a number of recommendations. These include setting up a new national Food Crime Unit, improved coordination across government to protect food integrity and tackle food crime, better intelligence sharing between the food industry and government about potential threats to food integrity, and a national network of food analytical laboratories capable of testing food authenticity in the future.

At the height of media interest in this issue, there was anecdotal evidence that consumers' shopping behaviour was affected by the negative media coverage it generated. Some commercial and in-house sources of retail shopping data also reported that sales of processed meat products were affected. If any change in behaviour existed, it would be reflected in Family Food data also. However, the sample size is such that it is not possible to make any definitive assessment of the impact of the incident from the survey results. Short term impacts on shopping habits (over the course of a few months) would be generally subsumed within the annual estimates – any long term shift in habits would take a few more years yet to become clear in the time series. There is no evidence that these shopping habits changed permanently.

Meat

Purchases of raw carcase meat have been on a downward trend since 2010, falling by 14 per cent. Beef, which accounts for around half of raw carcase meat purchases, showed a downward trend, declining by 7.2 per cent on 2012, 15.3% on 2010. All types of beef generally show a fall in purchases since 2010. Purchases of pork show no statistical trend but were 4.2 per cent down on 2010, and 8.1 per cent down on 2012.

Purchases of 'non-carcase meat and meat products' have also declined since 2010, by 4.8 per cent, equivalent to 39 grams per person per week. Most cooked and canned meat categories show downward trends. Purchases of uncooked chicken have generally been rising since 2005 and are up by 5.1 per cent from 2010, although this is not a statistically significant trend.

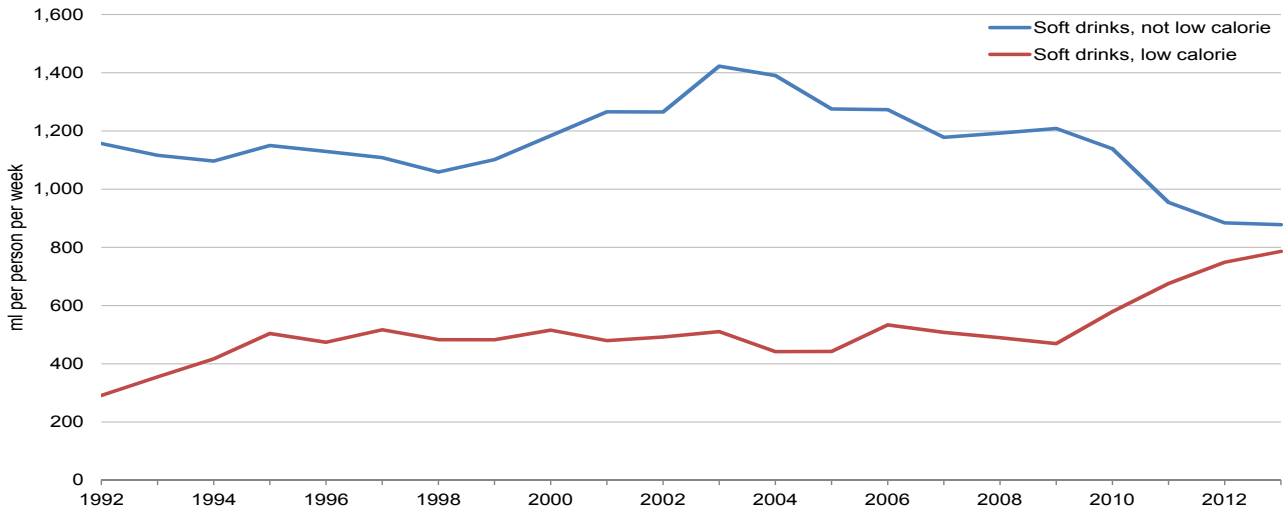
Fish

Household purchases of fish and fish products have been falling since 2006, and fell 3.4 per cent between 2010 and 2013 to 146 grams per person per week, although this was a 0.7 per cent increase on 2012. Ready meals, which account for about one third of purchases, have been showing signs of increasing in recent years, and were up by 4.5 per cent on 2010. Purchases of salmon have been stable between 2010 and 2013.

Soft drinks and beverages

Household purchases of soft drinks were 3.1 per cent lower in 2013 compared to 2010, a fall of 54 grams per person per week. Within this category, household purchases of 'not low calorie soft drinks' are on a downward trend since 2010 and fell by 23 per cent between 2010 and 2013 from 1139 to 878 grams per person per week. This was mirrored by an upward trend in 'low calorie soft drinks' with household purchases 36 per cent higher in the same period up from 579 to 786 grams per person per week.

Chart 2.3: UK purchases of soft drink (concentrated and unconcentrated), 1992 – 2013



The beverages category mainly comprises tea and coffee – fruit juice and mineral water are covered elsewhere. Purchases of beverages were 6.5 per cent down on 2010, a clear significant trend over this period. Over the long term within this category, purchases of tea have declined and are now about 19 per cent less than they were ten years previously. Coffee (instant and ground/beans) purchases have increased during the same period by 15 per cent.

Alcoholic drinks

There is a range of evidence to suggest that self reported alcohol consumption in surveys is less than actual consumption. Comparisons of implied consumption with alcohol sales data have suggested that social survey estimates could be 40 per cent or more lower than actual consumption. Thus the Family Food estimate of the absolute level of intake is almost certain to be an underestimate due to under-reporting of alcoholic drinks. However, the trends are likely to be valid.

Household purchases of alcoholic drinks have shown a steady decline since 2010, 8.9 per cent lower in 2013 than in 2010. Spend on alcoholic drinks for the household in 2013 was 1.0 per cent higher than in 2010. Intake of alcohol (in grams) is examined in Chapters 3 and 5.

2.3 Home-grown food

In 2013, 3.5 per cent of fresh fruit and vegetables entering the household came from free sources, mainly gardens and allotments. This is up from 2.7 per cent in 2012.

The percentage of eggs entering the household from free sources in 2013 increased to its highest recorded level. In 2013, the percentage of eggs entering the household which were free or home produced was 7.0 per cent.

Table 2.2: Percentage of household food home-grown in gardens or allotments

	2009	2010	2011	2012	2013
Beans	29	29	33	28	29
Potatoes	3	2	7	3	3
Onions, leeks and shallots	3	3	4	3	4
Tomatoes	6	7	6	5	6
All other vegetables	4	3	4	3	3
Apples	3	10	9	3	8
Soft fruit	5	8	10	9	12
All other fruit	8	1	2	1	1
Overall percentage	3.3	3.6	5.0	2.7	3.5
Eggs	5.1	5.6	5.7	5.0	7.0

The total amount of home-grown fruit and vegetables in grams per person per week is 68 grams, nearly one third up on the 2012 level, which may reflect the generally poor growing conditions during 2012. In 2013 household purchases of fresh fruit and vegetables (including potatoes) was 1,863 grams. 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 29 per cent of all fresh beans entering the household in 2013, although they only account for around 7 per cent of all home grown fruit and vegetables by weight.

2.4 Takeaway food and drink

Takeaway purchases for consumption within the home are classed as household purchases (see Methodology papers). Table 2.3 summarises the takeaway part of the major food groups. Between 2010 and 2013, purchases of takeaway food brought home have remained similar. Expenditure on takeaway foods was £1.77 per person per week in 2013, 2.6 per cent higher than in 2010

Table 2.3: UK household purchased quantities and expenditure on takeaway food brought home

Purchases	2009	2010	2011	2012	2013	RSE [a]	% change since 2012	% change since 2010	trend since 2010 [b]
				grams per person per week					
Total Meat	57	59	55	56	54	✓✓	-3.7	-8.5	
Total Fish	11	10	11	11	10	✓✓	-4.7	-1.7	
Total Vegetables	47	45	46	43	41	✓✓	-3.4	-7.8	↘
Total Bread	4	5	4	5	5	✓	-5.9	0.1	
Total Other cereals [c]	38	42	40	44	41	✓✓	-7.0	-2.3	
Total Miscellaneous	2	2	2	2	2		9.4	10.3	
Expenditure	2009	2010	2011	2012	2013	RSE [a]	% change since 2012	% change since 2010	
				pence per person per week					
Total Meat	67	73	70	72	73	✓✓	1.8	1.1	
Total Fish	19	17	19	18	18	✓✓	-1.6	0.9	
Total Vegetables	27	26	27	27	27	✓✓	1.2	4.0	
Total Bread	6	7	6	8	8	✓	1.1	11.4	
Total Other cereals [c]	39	46	45	51	47	✓✓	-8.4	2.1	
Total Miscellaneous	3	3	3	3	4	✓	16.3	21.3	
Total	161	172	171	179	177				

(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 2009, 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.

2.5 Eating out purchases

There are downward trends in purchases of some categories of eating out food and drink since 2010, notably:

- Confectionery down 20 per cent,
- Alcoholic and soft drinks down 22 and 5 per cent respectively,
- Yoghurt and fromage frais down 41 per cent and
- Biscuits and chocolate down 16 per cent.

Table 2.4: UK eating out purchased quantities of food and drink, 2009-2013

		2009	2010	2011	2012	2013	RSE[a]	% change since 2012	% change since 2010	trend since 2010[b]
Number of households in sample		5825	5263	5692	5596	5144				
Number of persons in sample		13760	12196	13448	13196	12144				
Eating out purchases										*grams per person per week unless otherwise stated*
Alcoholic drinks										
average across whole population	ml	449	413	394	355	321	✓✓	-9.5	-22.2	↘
average excluding under 14's	ml	538	494	472	426	386	✓✓	-9.3	-21.7	↘
Soft drinks inc. milk drinks	ml	286	279	269	254	264	✓✓✓	+4.0	-5.3	↘
Other food products [c]		127	144	118	103	107	✓✓	+3.9	-25.7	↘
Beverages	ml	120	117	117	118	115	✓✓	-2.3	-1.8	
Meat and meat products		76	75	75	76	70	✓✓✓	-7.6	-6.9	
Sandwiches		67	67	64	63	64	✓✓	+1.6	-3.6	
Potatoes (fresh and processed)		65	62	62	62	61	✓✓✓	-0.8	-1.6	
Indian, Chinese or Thai food		28	31	30	28	31	✓	+12.2	+1.9	
Vegetables		28	26	27	27	25	✓✓	-5.8	-1.3	
Ice cream, desserts and cakes		26	25	25	24	25	✓✓	+5.0	+0.3	
Cheese and egg dishes or pizza		21	22	22	21	20	✓✓	-5.5	-9.8	↘
Salads		17	17	16	17	18	✓✓	+6.0	+8.0	
Rice, pasta or noodles		14	15	15	14	15	✓✓	+3.6	+2.9	
Fish and fish products		14	14	13	14	13	✓✓	-4.4	-2.9	
Fresh and processed fruit		12	12	12	11	12	✓✓	+9.3	+5.3	
Confectionery		11	10	9	8	8	✓✓	-4.0	-19.8	↘
Soups		9	8	10	9	9	✓	-5.9	+2.4	
Bread		7	7	7	7	7	✓✓	+2.3	-2.9	
Crisps, nuts and snacks		7	7	7	6	7	✓✓	+2.3	-4.7	
Biscuits and chocolate		3	3	3	2	2	✓	-7.2	-15.5	↘
Yoghurt and fromage frais		2	2	2	2	1		-32.9	-40.8	↘
Breakfast cereals		1	0	1	1	1	×	-26.7	+40.0	

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

(b) An arrow indicates a statistically significant linear trend since 2009, see website for more details.

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

The Family Food team are always keen to get feedback from users of the report and the data. We have produced a short online survey to gather thoughts and suggestions on how we can improve our outputs.

Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

Chapter 3 Dietary Trends

3.1 Overview

In this chapter food and drink purchases are converted to estimates of energy and nutrient intake. In this report, the term “intake” is used as a proxy for the energy/nutrient content of food purchases. Trends over four years are examined and comparisons made with the UK Dietary Reference Values where appropriate.
More detailed series for all years from 1974 onwards are available to download in spreadsheet format. Estimates for some types of food and therefore some nutrient intakes are available from 1940 at the National Archives.

In parts of this chapter there is a focus on low income households to examine the greater effects food price rises may have on vulnerable groups in society. In this context low income households are identified as those within the lowest twenty per cent of households by equivalised income, a measure of household income that accounts for differences in household size and composition. This lowest twenty percent is termed a quintile, a fifth of the whole sample; but some data is further broken down into the lowest tenth of the sample by equivalised income, and the next lowest tenth, and these two deciles are used to provide more detailed analysis.

Key points

- Mean intakes of all vitamin and mineral intakes were close to or exceeded the population-weighted Reference Nutrient Intake, where one is set.
- Total energy intake from all food and drink for all households is on a downward trend, 4.4 per cent lower in 2013 than in 2010. Intake is still around 5 per cent higher than the Estimated Average Requirement.
- Between 2012 and 2013, the lowest income households (bottom 10 per cent) decreased energy intake from household food, as did those in the second decile.
- Intakes of NMES measured as a percentage of food and drink energy (excluding alcohol), was lower in 2013 than in 2010. Intake continues to exceed recommended maximum levels.
- The average intake of sodium, excluding table salt, has been on a declining trend since 2007, but was 79 per cent above the recommended maximum grams per day in 2013.

3.2 Nutrient conversion

Estimated nutrient intakes are calculated from food purchases using nutrient composition data supplied by Public Health England (PHE). The majority of the data are from PHE’s nutrient analysis programme, supplemented by values from manufacturers and retailers. The methodology paper, ‘Reference nutrient intakes’ documents which food codes have been updated with new nutrient composition data in the last 4 years. The nutrient conversion excludes inedible parts of purchased foods, such as fish heads, banana peels; it assumes all food is eaten. Intakes from dietary supplements are not included in any of the tables.

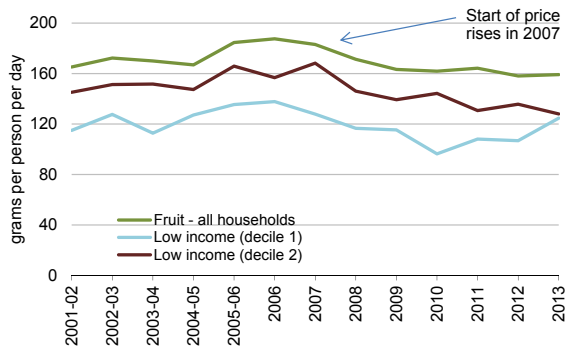
Definitions of certain nutritional terms can be found in the glossary.

3.3 Fruit and vegetables

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.

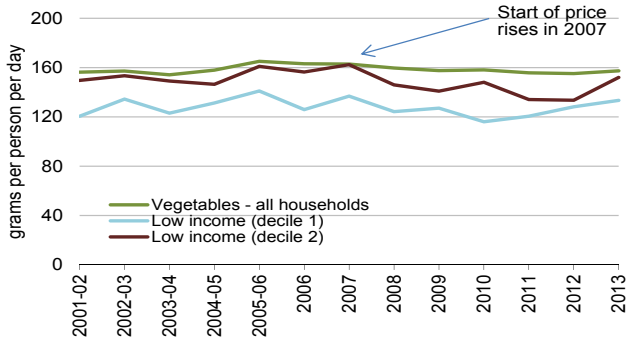
Increasing the consumption of fruit and vegetables is a Government policy. Family Food provides evidence of recent reductions in consumption using household purchases as a proxy for consumption. This relies on the assumption that household wastage rates of fruit and vegetables remain relatively stable compared to changes in purchases.

Chart 3.1a: Trends in fruit purchases



- Overall purchases of fruit increased to 2006 but have fallen 13 per cent since 2007.
- Lowest income households (decile 1), purchased 2.5 per cent less fruit in 2013 than in 2007.
- Income decile 2 households purchased 24 per cent less fruit in 2013 than in 2007.

Chart 3.1b: Trends in vegetable purchases



- Purchases of vegetables peaked in 2005 and have fallen 3.4 per cent since 2007.
- Lowest income households (decile 1) purchased 2.5 per cent less vegetables in 2013 than in 2007, following a few years of increases.
- Income decile 2 household purchases increased sharply in 2013 but were still 6.4 per cent less than in 2007.

Table 3.1: Household purchases of fruit and vegetables

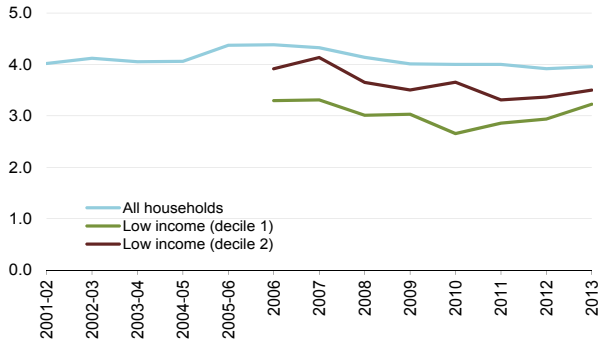
Grams per person per week	2007	2008	2009	2010	2011	2012	2013	% change since 2007
All households								
Fruit and vegetables excluding potatoes	2421	2317	2246	2240	2240	2193	2216	-8.5
Fruit	1281	1199	1143	1133	1150	1107	1114	-13.0
Vegetables	1140	1118	1103	1107	1090	1086	1102	-3.4
Income decile 1 households								
Fruit and vegetables excluding potatoes	1853	1686	1697	1487	1600	1645	1807	-2.5
Fruit	895	816	807	675	756	747	873	-2.5
Vegetables	958	870	890	812	844	898	934	-2.5
Income decile 2 households								
Fruit and vegetables excluding potatoes	2314	2044	1961	2047	1853	1885	1960	-15.3
Fruit	1178	1022	975	1010	915	950	896	-23.9
Vegetables	1137	1022	986	1037	939	935	1064	-6.4

Table 3.1 shows that:

- Fruit and vegetable purchases were 8.5 per cent lower in 2013 than 2007.
- For income decile 1 the drop is 2.5 per cent, and for decile 2 it is 15 per cent.
- Households in income decile 1 purchase the least fruit and vegetables.
- In 2013 income decile 1 households purchased 18 per cent less fruit and vegetables than all households, and 8 per cent less than those in income decile 2.
- Fruit purchases have declined faster than vegetable purchases since 2007.
- Measuring fruit and vegetable purchases against 5 A DAY Guidance

Family Food estimates of fruit and vegetables can be compared against 5 A DAY consumption guidelines by assuming 80 grams per portion. The approach is approximate because it is based on purchases rather than consumption and so does not take account of edible or inedible waste; it excludes purchases not taken into the household, it excludes fruit and vegetables in composite meals, it includes all processed fruit, one portion of pulses and one portion of fruit juice, and it assumes 80 grams per portion for all ages and all produce.

Chart 3.2 Trends in fruit and vegetable purchases measured as portions



- On average, all households purchased 4.0 portions of fruit and vegetables per person per day in 2013.
- Lower income households (deciles 1 and 2) have consistently purchased smaller quantities of fruit and vegetables, although both have increased in the last two years.
- Income decile 1 households purchased 3.2 portions of fruit and vegetables per person per day in 2012.

The Health Survey for England shows a similar trend to Family Food in that reported consumption of fruit and vegetables by adults peaked in 2006 and then fell from 2006 to 2011.

The National Diet and Nutrition Survey provides estimates of fruit and vegetable consumption that includes estimates for fruit and vegetables in composite foods such as manufactured products and homemade dishes. Latest estimates based on data collected from 2008/09-2011/12 show that mean consumption fell below 5 portions per day – 4.1 portions/day for adults and 2.9 portions/day for children 11-18 years. There was no difference in consumption when comparing 2008/10 with 2010/12.

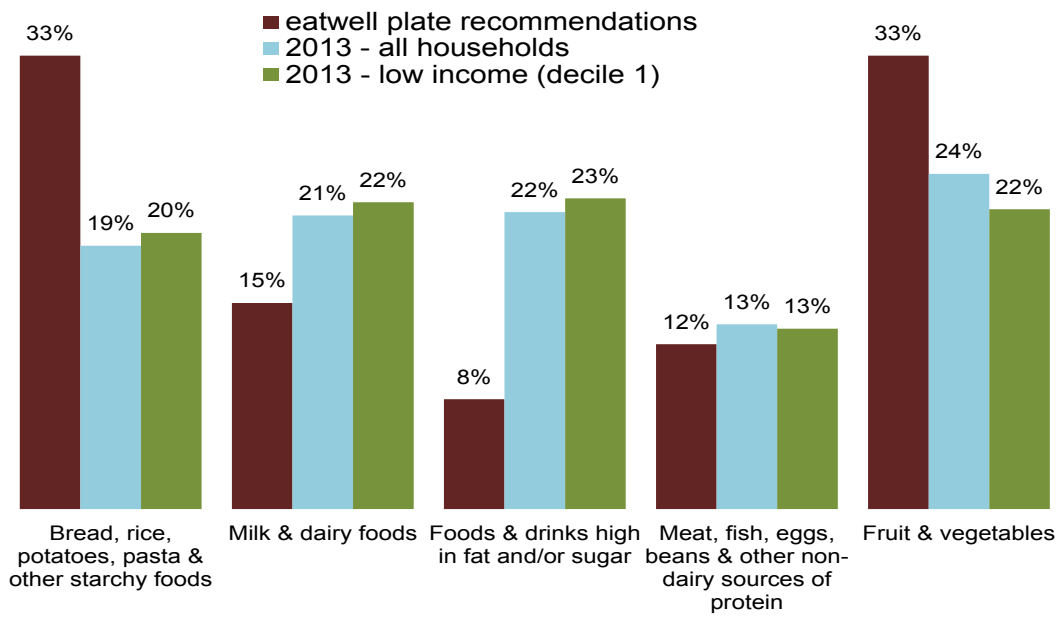
Using Family Food data from 2011, WRAP estimates show that in 2012 an average of £66 per household per week was spent on food on drink. £9 of this food and drink was avoidable waste, £1.84 (20%) of which was fresh fruit, vegetables and salad. This wasted food is estimated to have provided more than 13 billion "5 a day" portions of fruit and vegetables.

3.4 Eatwell plate

The eatwell plate forms the basis of the Government's healthy eating advice to the general population. It makes healthy eating easier to understand by giving a visual representation of the types and proportions of food groups that should be eaten to make a well-balanced, healthy diet. This includes snacks as well as meals. The eatwell plate is intended as a guide to the overall balance of the diet over a day or a week rather than for any specific meal.

Food and drink purchases for household supplies were grouped approximately into the five eatwell plate groups. Based on these groupings, Chart 3.3 shows the average UK diet for all households and low income households (equivalised income decile 1) compared to the eatwell plate categories.

Chart 3.3: Eatwell plate comparison for low income and all households



Looking at balance of diet:

- Neither low income households nor all households are close to the eatwell plate as a whole.
- For non-dairy sources of protein, both low income and all households are close to the eatwell plate recommendation.
- Both low income households and all households have a relatively similar diet when compared to the eatwell plate.

3.5 Energy intake

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 Health and Social Care Information Centre website.

Reducing levels of obesity is a Government policy. While Family Food provides evidence of long term reductions in energy intake it does not capture information on energy expenditure. Therefore, the Family Food data on its own cannot be used to predict changes in the prevalence of obesity.

Based on food and drink purchases, total energy intake per person was 4.4 per cent lower in 2013 than in 2010. This is a statistically significant downward trend over this four year period that confirms the longer term downward trend already apparent since the mid 1960s. Total energy intake was an average of 2192 kcal per person per day in 2013.

Energy intake from eating out was 14.7 per cent lower in 2013 than in 2010. Average energy intake from eating out was 220 kcal per person per day in 2013 accounting for 10 per cent of total energy intake.

Trends in energy intake

To obtain the best estimates of trends in energy content of food purchases by households, an index is calculated such that year on year changes compare like with like, i.e. eating out energy is only added to the calculation once there are two years of data. This approach is required because the basis of estimation of energy intake has evolved over the years as shown in Table 5.5 and Chart 5.5.

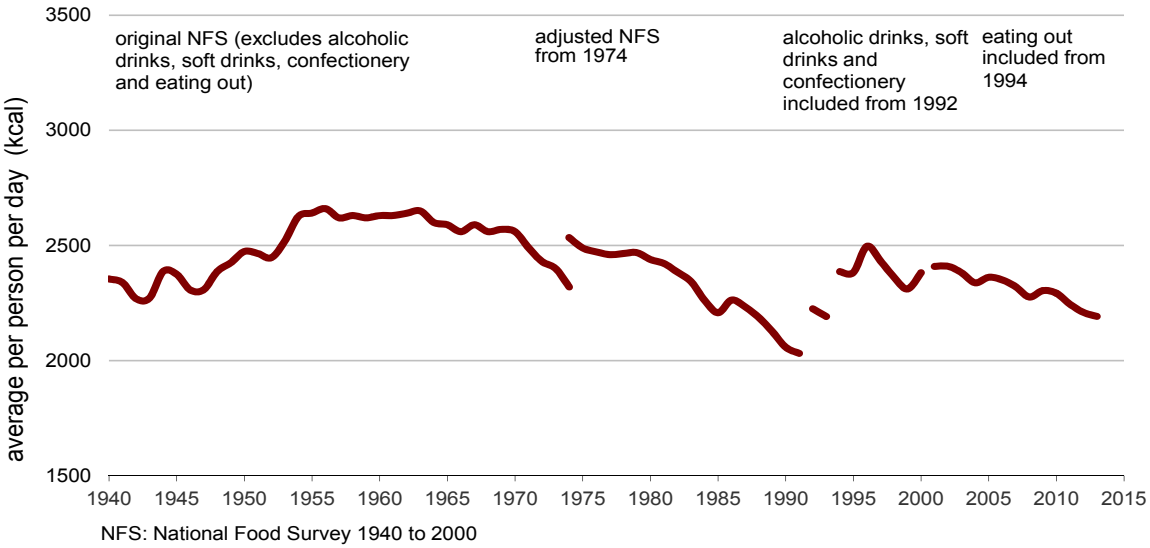
Table 3.2: Estimates of energy intake as the survey has evolved

	National Food Survey				Expenditure & 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]	
											kcals per person per day
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	2293	2035	258	2293	72
2011					2009	236	2245	2009	236	2245	70
2012					1990	219	2209	1990	219	2209	69
2013					1972	220	2192	1972	220	2192	69

(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 5.5.

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

Chart 3.4: Average energy intake from food and drink since 1940



- Energy content of food purchases has been on a downward trend since 1965 as shown in each section of Chart 5.5.
- Energy intake per person declined 31 per cent between 1974 and 2013 (shown in Table 5.5 as 69 for 2013 in the index of change).

Chart 3.5: Energy derived from household food and drink 2001-2013

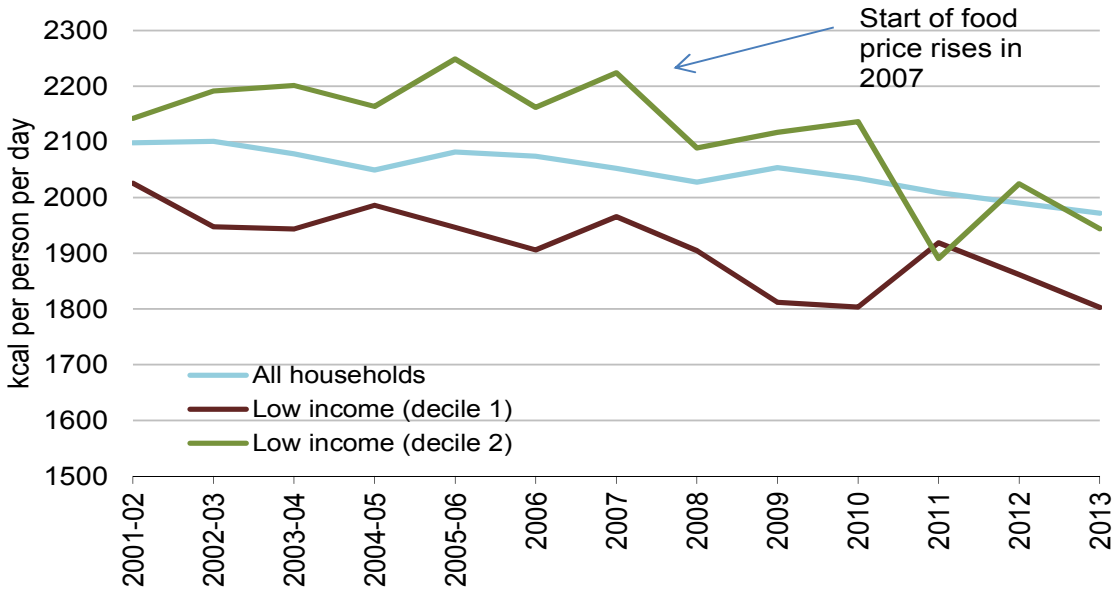


Chart 3.5 shows that:

- Energy intake from household food across all households was 3.9 per cent lower in 2013 than in 2007.
- Income decile 2 households (second lowest group) energy intake from household food fell in 2013 to 1944 kcals per person per day – below the national average and 13 per cent less than in 2007.
- Income decile 1 households (lowest income group) energy intake from household food fell by 3.3 per cent in 2013 to 1803 kcals per person per day.
- Income decile 1 households (lowest income group) had 8.3 per cent less energy intake from household food in 2013 than in 2007.

Other demographic variables as well as income are important and not considered here. Chapter 5 looks at dietary intakes, but not energy, using more demographic characteristics.

Bread accounts for 10.2 per cent of the energy derived from household purchases (Table 3.3). Meat and meat products accounted for 13.9 per cent. Nearly 15 per cent came from potatoes, fruit and vegetables (fresh and processed).

Table 3.3: Contribution to total household energy intake from foods

	Energy - kcal	% of household food and drink energy[a]
	average per person per day	
Liquid whole milk (including welfare and school milk)	28	1.4%
Other milk and cream	135	6.9%
Cheese	60	3.0%
Carcase meat	49	2.5%
Non-carcase meat and meat products	205	10.4%
Fish	30	1.5%
Eggs	17	0.9%
Fats	169	8.6%
Sugar and preserves	63	3.2%
Fresh and processed potatoes	43	2.2%
Fresh green vegetables	5	0.2%
Other fresh vegetables	18	0.9%
Processed vegetables	129	6.6%
Fresh fruit	43	2.2%
Processed fruit and fruit products	52	2.7%
Bread	202	10.2%
Flour	29	1.5%
Cakes, buns and pastries	73	3.7%
Biscuits and crispbreads	110	5.6%
Other cereals and cereal products	242	12.3%
Beverages	6	0.3%
Other foods	83	4.2%
Soft drinks	45	2.3%
Confectionery	80	4.1%
Alcoholic drinks	56	2.8%
Total	**1972**	**100%**

(a) includes energy from alcoholic drinks

Table 3.4 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]	163	7.0	4.3	320	0.2	2.9	125	17.7	3.9	39	0.1
Cheese	60	4.9	3.1	101	..	-	113	4.9	-	23	-
Carcase meat	49	3.3	1.4	2	0.3	-	16	2.5	-	..	-
Non-carcase meat and meat products	205	12.9	4.6	29	1.1	0.1	507	11.2	2.2	69	0.5
Fish	30	1.4	0.3	12	0.2	..	67	2.7	0.1	5	0.1
Eggs	17	1.2	0.3	6	0.2	-	20	6.1	-	-	-
Fats and oils	169	18.6	5.9	3	..	0.2	83	10.0	-	86	-
Sugar and preserves	63	..	-	3	0.1	16.7	4	..	0.3	1	..
Fresh potatoes	43	0.1	..	4	0.2	-	2	8.0	7.0	-	0.4
Fresh green vegetables	5	0.1	..	9	0.1	-	2	13.3	5.9	81	0.4
Other fresh vegetables	18	0.2	0.1	16	0.3	-	8	18.8	6.9	1436	1.0
Processed vegetables	129	5.2	0.9	26	0.9	0.7	177	23.6	6.4	272	2.3
Fresh fruit	43	0.4	0.1	9	0.2	-	61	10.9	14.9	30	1.0
Processed fruit	52	2.4	0.5	10	0.2	5.3	14	12.3	14.3	17	0.5
Bread	202	2.5	0.6	129	1.6	0.1	368	26.4	0.0	2	2.5
Flour	29	0.1	..	8	0.2	-	..	1.3	-	-	0.3
Cakes, buns and pastries	73	3.0	1.3	16	0.3	4.8	65	2.4	0.2	4	0.3
Biscuits	110	5.0	2.5	27	0.5	5.4	79	2.7	-	3	0.6
Other cereal products [b]	242	4.9	1.5	74	2.5	4.2	242	39.4	0.9	43	2.4
Beverages	6	0.1	..	6	0.2	0.7	7	7.9	-	..	-
Other food [c]	83	4.5	1.3	24	0.4	6.5	382	13.6	0.6	103	0.3
Soft drinks	45	-	-	9	..	11.9	16	3.0	10.7	43	-
Confectionery	80	3.4	1.8	20	0.2	10.9	17	1.6	..	5	0.3
Alcoholic drinks	56	..	..	7	0.3	1.1	6	2.5	..	..	-
Total household intake	1972	81	31	869	10	71	2379	243	74	2262	13
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	0
Cheese	3	6	10	12	..	-	5	2	-	1	-
Carcase meat	3	4	4	..	3	-	1	1	-	-	-
Non-carcase meat and meat products	10	16	15	3	11	..	21	5	3	3	4
Fish	2	2	1	1	2	-	3	1	..	..	1
Eggs	1	1	1	1	2	-	1	3	-	-	-
Fats and oils	9	23	19	..	..	..	4	4	-	4	-
Sugar and preserves	3	-	-	..	1	23	..	-	..	-	..
Fresh potatoes	2	..	..	..	2	-	..	3	9	-	3
Fresh green vegetables	..	..	-	1	1	-	..	5	8	4	3
Other fresh vegetables	1	..	..	2	3	-	..	8	9	63	8
Processed vegetables	7	6	3	3	9	1	7	10	9	12	17
Fresh fruit	2	..	..	1	2	-	3	4	20	1	8
Processed fruit	3	3	2	1	2	7	1	5	19	1	3

Table 3.4 continues over the page

Table 3.4 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	..	15	11	-	..	19
Flour	1	..	..	1	2	-	-	1	-	-	2
Cakes, buns and pastries	4	4	4	2	3	7	3	1	-	..	3
Biscuits	6	6	8	3	5	8	3	1	-	..	5
Other cereal products [b]	12	6	5	8	24	6	10	16	1	2	18
Beverages	..	..	..	1	2	1	..	3	-	-	-
Other food [c]	4	6	4	3	4	9	16	6	1	5	3
Soft drinks	2	-	-	1	..	17	1	1	14	2	-
Confectionery	4	4	6	2	2	15	1	1	-	..	2
Alcoholic drinks	3	-	-	1	3	1	..	1	-	-	-

(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.

"Note: - equals nil
.. equals negligible

3.6 Nutrient intakes from eating out

Eating out accounted for 10 per cent of total energy intake in 2013. Excluding energy intake from free meals and unspecified meals, over half of energy from eating out is derived from a combination of meat and meat products, alcoholic drinks, sandwiches, potatoes (including chips) and Indian, Chinese and Thai dishes; See Table 2.6.

The estimation methods for unspecified meals are described in the methodology paper 'Free food and unspecified meals estimation'.

Table 3.5 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	16	0.7	0.1	5	0.2	0.2	30	1.4	0.1	7	1.6
Meat and meat products	23	1.3	0.5	6	0.1	..	49	1.7	0.2	18	9.7
Fish and fish products	4	0.2	..	1	..	-	4	0.4	..	..	0.4
Cheese and egg dishes and pizza	6	0.4	0.1	4	..	-	10	2.1	0.1	5	4.3
Potatoes	15	0.7	0.1	1	0.1	-	3	4.2	1.3	..	0.4
Vegetables	3	0.1	..	2	..	..	8	1.4	0.3	37	6.5
Salads	2	0.1	..	1	..	-	2	0.7	0.4	19	3.5
Rice, pasta and noodles	3	..	..	..	..	-	1	0.1	..	..	0.1
Soups	1	..	..	..	-	..	6	0.2	-	..	..
Breakfast cereals	..	-	-	..	-	-	1	..	-	..	..
Fruit	1	-	-	..	-	..	..	0.1	0.2	1	0.1
Yoghurt	..	-	-	..	-	..	..	-	-	-	..
Bread	3	0.1	..	1	..	-	5	0.3	-	..	0.6
Sandwiches	19	0.9	0.3	10	0.1	0.0	40	2.1	0.2	12	5.9
Beverages	1	0.1	..	2	..	0.1	1	0.3	..	..	0.5
Soft drinks including milk	11	0.1	..	5	..	2.6	2	0.6	0.9	1	0.8
Alcoholic drinks	19	-	-	3	..	1.3	3	3.8	0.2	..	..
Confectionery	5	0.2	0.1	1	..	0.7	1	0.1	-	..	0.1
Ice cream, desserts and cakes	11	0.6	0.3	3	..	0.6	9	0.4	0.1	4	4.6
Biscuits	2	0.1	..	..	..	0.1	1	..	-	..	..
Crisps, nuts and snacks	5	0.3	0.1	..	..	0.1	7	0.3	..	..	0.1
All food & drink eaten out [(a)]	148	5.9	1.9	46	0.7	5.8	183	20	4.0	106	39
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	11	13	7	10	22	3	16	7	3	6	4
Meat and meat products	15	22	27	13	17	..	27	9	4	17	25
Fish and fish products	3	3	2	2	2	..	2	2	..	..	1
Cheese and egg dishes and pizza	4	7	7	8	6	..	6	10	3	4	11
Potatoes	10	11	5	2	7	-	1	21	33	..	1
Vegetables	2	2	1	3	6	1	4	7	7	35	16
Salads	1	1	1	2	3	..	1	4	11	18	9
Rice, pasta and noodles	2	1	..	1	2	-	1	1	..	..	..
Soups	..	..	..	..	1	..	3	1	-	..	..
Breakfast cereals	..	..	..	..	..	..	..	..	..	..	..
Fruit	..	..	..	..	..	..	..	1	5	1	..
Yoghurt	..	..	..	1	..	..	..	..	-	-	..
Bread	2	2	2	3	2	-	3	1	-	..	2
Sandwiches	13	15	14	22	15	..	22	10	5	11	15
Beverages	1	1	2	4	2	2	1	2	1	..	1
Soft drinks including milk	7	1	2	10	1	44	1	3	22	1	2
Alcoholic drinks	13	..	..	7	6	22	2	19	4	..	..
Confectionery	3	3	6	3	1	12	1	..	-	..	..
Ice cream, desserts and cakes	8	10	14	6	5	11	5	2	1	3	12
Biscuits	1	1	2	1	1	2	..	..	-	..	..
Crisps, nuts and snacks	3	5	6	1	2	1	4	2	1	..	..

(a) The category ‘Other food products’ has been removed from this table as it includes a significant proportion of unspecified meals which is an imputed category

“Note: - equals nil
.. equals negligible”

3.7 Reference 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. Recommendations for energy and nutrient intakes for the general UK population and age/sex sub-groups have been set by expert scientific advisory committees. The Committee on Medical Aspects of Food and Nutrition Policy (COMA) set dietary reference values for population intakes of energy and a range of nutrients. Its successor the Scientific Advisory Committee on Nutrition (SACN) has published revised Dietary Reference Values for the energy requirements of the population. For consistency with previous years' estimates, the COMA reference values for energy have been used in this report.

Many tables in this chapter compare nutrient intakes derived from the survey with Reference Nutrient Intakes[1] (RNIs). 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 the calculation of weighted average values for the population are described in the methodology paper 'Reference nutrient intakes'.

Dietary Reference Values (DRVs) for macronutrients are expressed as a percentage of food energy intake (excluding energy from alcohol) to take account of differing energy requirements. Intakes in this chapter are expressed on the same basis to allow comparison with the DRVs. Unless otherwise stated, all statistics in this chapter are based on food energy intake (excluding energy from alcohol). The estimates are based on food purchases and do not take edible food waste into account.

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

Based on the food and drink purchases, average micronutrient intakes except potassium were all at or above the weighted reference nutrient intakes (RNI) in 2013. Potassium intakes were 98% of RNI. In the case of sodium, the reference nutrient intake is set as a maximum level, which was exceeded in 2013 by 79 per cent excluding sodium from table salt.

Average energy intake (including energy from alcohol) was 105 per cent of the weighted Estimated Average Requirement (EAR), as set by COMA. Average energy intake excluding energy from alcohol was also above the weighted EAR at 102 per cent.

Income decile 1 households (lowest income group) had 5.3 per cent less energy intake from household food in 2012 than in 2007.

Table 3.3 shows that the food categories making the greatest contribution to household energy intake are bread, cereal products (which includes breakfast cereals, rice, pasta and pizza), and 'non-carcase meat and meat products' each of which contributes around 10-12 per cent of energy.

Other demographic variables as well as income are important and not considered here. Chapter 5 looks at dietary intakes, but not energy, using more demographic characteristics.

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

Table 3.6 UK energy and nutrient intakes in the UK in 2013 as a percentage of weighted Reference Nutrient Intakes

		Nutrient intakes in 2013			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	1972	220	2192	94	10	105
Energy excluding alcohol [b]	kcal	1923	206	2129	92	10	102
Protein	g	66.6	8.2	74.8	145	18	163
Calcium	mg	869	65	934	126	9	136
Iron	mg	10.3	1.1	11.4	101	11	112
Zinc	mg	7.9	0.9	8.8	99	12	111
Magnesium	mg	256	25	282	97	10	106
Sodium [c]	g	2.38	0.29	2.67	160	19	179
Potassium	g	2.80	0.33	3.13	88	10	98
Thiamin	mg	1.56	0.18	1.74	185	21	206
Riboflavin	mg	1.74	0.13	1.87	152	11	164
Niacin equivalent	mg	30.8	4.0	34.8	222	28	250
Vitamin B_6	mg	1.8	0.3	2.1	146	24	171
Vitamin B_{12}	µg	5.5	0.5	6.0	402	37	440
Folate	µg	243	35	278	131	19	150
Vitamin C	mg	74	8	82	194	20	214
Vitamin A (retinol equivalent)	µg	850	91	941	138	15	153

(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.

Sodium (excluding table salt)

Salt (sodium chloride) is the major source of sodium in the UK diet. It is the sodium in salt that can be bad for health. High salt intake contributes to the development of high blood pressure. High blood pressure is a risk factor for cardiovascular disease and stroke. Salt is approximately equal to sodium multiplied by 2.5.

In the report 'Nutritional Aspects of Cardiovascular Disease' (1996), COMA recommended a maximum 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'.

Family Food provides evidence of trends in sodium intake but underestimates the actual intake levels as it excludes the contribution from table salt purchases (because table salt also has non-food uses in the household).

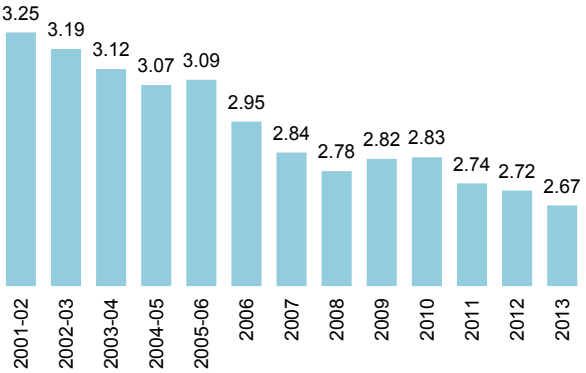
Figures do not include purchases of table salt since table salt can be used for a variety of household tasks other than for consumption. Salt that might have been added to food during cooking or at the table is therefore excluded from estimates.

The total intake of sodium continues to fall, with levels in 2013 5.7 per cent lower than in 2010, a statistically significant downwards trend. Eating out accounted for 12 per cent of sodium intake. Sodium intake from eating out fell 14 per cent in 2013 compared to 2010. Major contributors to the sodium content of household food purchases in 2012 include: 'non-carcase meat and meat products', bread and 'other food'. The contribution that these food groups make to energy intake is shown in Table 2.4.

The biggest contributors to sodium intake, from Table 2.4, were 'non-carcase meat and meat products' and bread. Reductions in purchases of both 'non-carcase meat and meat products' and bread have contributed to the reduction in sodium intakes in 2013, but reformulation of manufactured food products is likely to have had some influence.

The National Diet and Nutrition Survey provides supporting evidence for the downward trend in sodium intake, reporting a reduction in mean salt intake between 2000-01 and 2011 from 9.5g to 8.1g per day based on urinary sodium excretion, which is accepted as the best method for assessing sodium intake.

Chart 3.6 Recent trend in sodium intake from food for household and eating out (in grams per person per day)



- Sodium intakes fell by 0.46 grams between 2001-02 and 2008.
- Sodium intake from foods fell to a new low level of 2.67 grams in 2013, equivalent to 6.67 grams of salt.
- Sodium intake from foods exceeds the maximum recommended level of 2.4 grams per person per day, equivalent to 6 grams of salt.

Non milk extrinsic sugars (NMES)

Non-milk extrinsic sugars are a category of sugars that are considered to contribute to dental decay. 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 have adverse effects on teeth.

Total intake of non-milk extrinsic sugars is on a long term downwards trend and fell 6.1 per cent between 2010 and 2013, although it was unchanged from 2012. Intake of NMES, as measured as a percentage of food and drink energy (excluding alcohol) was 13.6 per cent, 2.0 per cent below the 2010 level. The household food groups that contribute most to total NMES intakes are 'sugar and preserves', soft drinks and confectionery (Table 2.4). NMES provided 10.9 per cent of eating out food and drink energy in 2013. Eating out purchases account for around 7.8 per cent of total NMES intake.

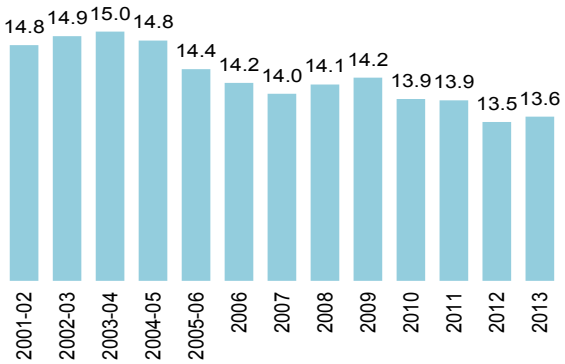
The sugar naturally present in milk and milk products (lactose) is excluded from the definition as it is not considered to have adverse effects on teeth. The recommendation is that intake of NMES should account for no more than 11 per cent of food energy intake.

According to Family Food, the percentage of energy derived from NMES exceeds the recommended maximum levels for the population average diet. In 2013, the population derived 13.6 per cent of food energy from NMES, which is 2.6 percentage points over the maximum recommended level.

Table 2.4 shows that most NMES come from the food categories; 'sugar and preserves', soft drinks and confectionery.

The National Diet and Nutrition Survey provides supporting evidence that mean intakes of NMES as a percentage of food energy exceed the recommended levels in all age groups.

Chart 3.7 Recent trend in the percentage of food energy derived from NMES from household and eating out food and drink



- 13.6 per cent of energy came from NMES in 2013.
- Between 2003 and 2007, the percentage of energy from NMES dropped from 15.0 to 14.0 per cent.
- There was little change between 2007 and 2011 but in 2012, there was a reduction of 0.4 percentage points, rising by 0.1 percentage point in 2013.

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 risk of developing heart disease which is the leading cause of premature death in the UK.

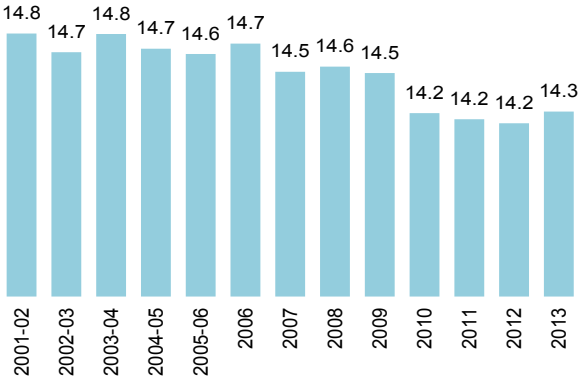
The National Diet and Nutrition Survey provides supporting evidence that saturated fatty acid intakes exceed the recommended maximum in all age groups. It reports a lower estimate for total fat intake that is in line with the recommended level for most age groups.

Total intake of saturated fatty acids (measured in grams per person per day) continued on a downward trend, falling by 4.0 per cent between 2010 and 2013. In 2013, 14.4 per cent of food and drink energy (excluding alcohol) was derived from saturated fatty acids (Tables 2.1 and 2.2).

Saturated fatty acids provided 12.9 per cent of eating out food and drink energy in 2013. Eating out purchases provided 8.8 per cent of saturated fatty acid intakes. Over the three years 2010 to 2013, intake of unsaturated fatty acids showed a downward trend. Monounsaturated fatty acids declined by 3.4 per cent, while intakes of polyunsaturates fell by 6.4 per cent.

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’ and cheese.

Chart 3.8 Recent trend in the percentage of food energy derived from saturated fatty acids from household and eating out food and drink



- Between 2001-02 and 2013, the percentage of energy from saturated fatty acids declined.
- During the same period, the percentage of energy from fat was generally stable, with an average of 38.3 per cent.
- Both are above the recommended levels.

Fibre

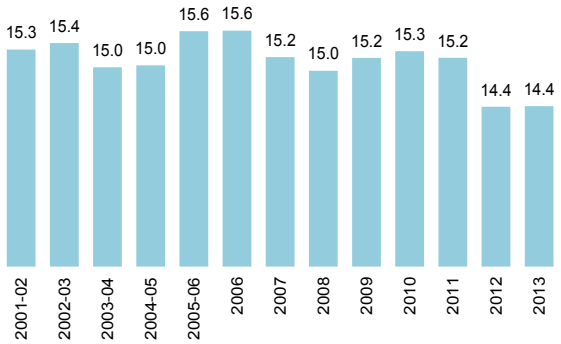
In Family Food, we refer to non-starch polysaccharides as fibre. Consumption of a high fibre diet is recommended for gastro-intestinal health and may also help to lower blood cholesterol levels.

The COMA recommendation is for an average of 18 grams of fibre intake per person per day for adults, based on the Englyst method for determining fibre in foods. The report says that intakes for children should be proportionately less, but does not provide a specific figure.

Fibre intake in 2013 was unchanged on 2012, at an average of 14.4 grams per person per day. This was a 5.4 per cent fall from 2010.

Fibre intake in 2013 was unchanged on 2012, at an average of 14.4 grams per person per day. This was a 5.4 per cent fall from 2010, due in part to new nutrient composition data for fruit and vegetables in 2012 which had generally lower values for fibre content than previous, older data.

Chart 3.9 Recent trend in fibre intake in grams per person per day



- Fibre intake in 2013 was unchanged at 14.4 grams per person per day, the lowest level since 2001.
- Fibre intake had been relatively stable from 2007 to 2011 after peaking in 2005 and 2006.
- Fibre intake remains below the recommended level by 3.6 grams per person per day.

Vitamins and minerals

Prior to 2012, “availability factors” were applied to a range of foods that are purchased raw but generally eaten cooked, to take account of vitamin losses during cooking. Following a review in 2012, which highlighted some apparent inconsistencies in the choice of foods and values, it was decided to discontinue the use of these factors. This should be borne in mind when interpreting changes in some vitamin ‘intakes’ between 2010 and 2013.

A more detailed explanation, including a list of the composition values and food products affected can be found in the methodology paper “Reference nutrient intakes”.

Over the four years 2010 to 2013, intakes of most vitamins and minerals showed downward trends, notably Vitamin B6 and folate, with decreases of 16 and 7.9 per cent respectively. Over the same period, thiamin and vitamin C showed upward trends. These trends are partly explained by changes in food composition data over time, due to new analytical data becoming available or changes in the formulation of food products.

Prior to 2012, total carotene intake was based on composition data for beta carotene only, as beta carotene is the main component. Retinol equivalent intake is a calculated value derived using both retinol and total carotene data. In 2012, the composition data for fruit and vegetables was updated using total carotene data. Other food groups will be updated with total carotene data as it becomes available. These changes in the basis of composition data for carotene partly explain the apparent increases in intake of carotene and retinol equivalent between 2010 and 2013.

Alcohol

There is a range of evidence to suggest that self reported alcohol consumption in surveys is less than actual consumption. Comparisons of implied consumption with alcohol sales data have suggested that social survey estimates could be 40 per cent or more lower than actual consumption. Thus the Family Food estimate of the

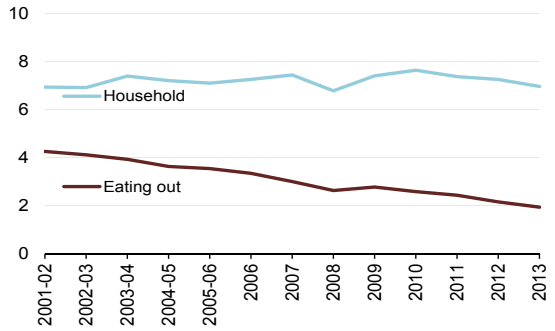
absolute level of intake is almost certain to be an underestimate due to under-reporting of alcoholic drinks. However, the trends are likely to be valid.

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.

Alcohol intake fell 5.4 per cent in 2013 to 8.9 grams per person per day. Since 2010 intake has been on a downward trend. Eating out purchases accounted for 22per cent of total alcohol intake in 2013. In 2013, eating out intakes of alcohol were 25 per cent lower than in 2010 and showing a significant downward trend.

Chapter 1 shows that household purchases of alcoholic drinks fell by 1.0 per cent in 2013 and are 9.0 per cent lower than in 2010. Eating out purchases fell by 9.5 per cent in 2013 and is 22.2 per cent lower than 2010. Chapter 2 shows that alcohol intake from household and eating out combined in 2013 was 5.4 per cent lower than 2012 and 12.9 per cent lower than in 2010.

Chart 3.10 Trend in intake of alcohol in grams per person per day



- Alcohol intake from eating out purchases declined 54 per cent between 2001-02 and 2013.
- Alcohol intake overall fell 5.4 per cent in 2013 to 8.9 grams per person per day (averaged over the entire UK population).

Table 3.7 UK average energy and nutrient intakes from all food and drink 2009-2013

		2009	2010	2011	2012	2013	% change since 2012	% change since 2010	Trend since 2010	% from food eaten out in 2013
Total energy and nutrient intakes [a]										*average intake per person per day*
Energy	kcal	2304	2293	2245	2209	2192	-0.8	-4.4	↘	10.0
	MJ	9.6	9.6	9.4	9.2	9.2	-0.8	-4.4	↘	10.0
Energy excluding alcohol	kcal	2233	2221	2176	2143	2129	-0.6	-4.1		9.7
Total Protein	g	78.6	78.6	77.2	75.9	74.8	-1.5	-4.9		11.0
Fat	g	95	95	92	91	91	-0.1	-4.3	↘	10.8
Fatty acids:										
Saturates	g	36.0	35.1	34.3	33.7	33.7	-0.1	-4.0	↘	8.8
Monounsaturates	g	36.0	37.0	35.8	35.5	35.8	+0.8	-3.4	↘	11.4
Polyunsaturates	g	17.2	17.1	16.2	16.3	16.0	-2.1	-6.4	↘	13.0
Cholesterol	mg	262	257	252	249	244	-2.2	-5.3	↘	13.2
Carbohydrate [b]	g	282	279	276	271	269	-0.8	-3.7	↘	8.4
Total sugars	g	129	125	124	120	119	-0.1	-4.9	↘	6.8
Non-milk extrinsic sugars	g	85	82	81	77	77	-0.0	-6.1	↘	7.8
Starch	g	153	153	152	151	149	-1.3	-2.7	↘	9.8
Fibre [c]	g	15.2	15.3	15.2	14.4	14.4	+0.1	-5.4	↘	10.4
Alcohol	g	10.2	10.2	9.8	9.4	8.9	-5.4	-12.9	↘	21.8
Calcium	mg	983	965	955	937	934	-0.4	-3.3	↘	6.9
Iron	mg	11.9	11.9	11.8	11.4	11.4	+0.8	-4.2	↘	9.6
Zinc	mg	9.3	9.4	9.2	9.0	8.8	-1.6	-5.9	↘	10.5
Magnesium	mg	289	289	287	284	282	-0.8	-2.4	↘	9.0
Sodium [d]	g	2.82	2.83	2.74	2.72	2.67	-1.8	-5.7	↘	10.9
Potassium	g	3.23	3.21	3.21	3.16	3.13	-1.1	-2.7	↘	10.4
Thiamin	mg	1.67	1.67	1.62	1.78	1.74	-2.3	+3.8	↗	10.3
Riboflavin	mg	1.92	1.89	1.92	1.89	1.87	-1.1	-1.3	↘	6.8
Niacin equivalent	mg	34.3	34.4	33.6	33.0	34.8	+5.6	+1.3		11.4
Vitamin B_6	mg	2.5	2.5	2.4	2.1	2.1	-2.3	-15.7	↘	14.3
Vitamin B_{12}	µg	6.4	6.4	6.2	6.1	6.0	-0.7	-5.2	↘	8.3
Folate	µg	299	302	298	282	278	-1.6	-7.9	↘	12.7
Vitamin C	mg	79	80	77	82	82	-0.4	+2.5	↗	9.5
Vitamin A:										
Retinol	µg	530	542	533	521	511	-2.0	-5.8	↘	7.6
β-carotene	µg	2191	2300	2187	2557	2572	+0.6	+11.8	↗	12.0
Retinol equivalent	µg	897	927	900	950	941	-0.9	+1.5		9.6
Vitamin D	µg	3.07	3.12	3.10	3.06	3.17	+3.6	+1.6		9.7
Vitamin E	mg	12.22	12.36	12.33	12.17	12.44	+2.3	+0.7		11.9
As a percentage of food and drink energy excluding alcohol										
Fat	%	38.5	38.6	38.1	38.3	38.5	+0.6	-0.2		
Fatty acids:										
saturates	%	14.5	14.2	14.2	14.2	14.3	+0.6	+0.1		
monounsaturates	%	14.5	15.0	14.8	14.9	15.1	+1.4	+0.8		
polyunsaturates	%	6.9	6.9	6.7	6.9	6.8	-1.5	-2.4		
Carbohydrate	%	47.4	47.2	47.6	47.5	47.4	-0.2	+0.5		
Non-milk extrinsic sugars	%	14.2	13.9	13.9	13.5	13.6	+0.6	-2.0		
Protein	%	14.1	14.2	14.2	14.2	14.0	-0.9	-0.8		

Table 3.7 continues over the page

Table 3.7 continued

		2009	2010	2011	2012	2013	% change since 2012	% change since 2010
As a percentage of weighted reference nutrient intake [f]								
Energy [e]	%	110	109	107	105	105	-0.8	-4.3
Energy exc alcohol [e]	%	106	106	104	102	102	-0.6	-4.0
Protein	%	171	171	168	166	163	-1.4	-4.6
Calcium	%	143	140	139	136	136	-0.4	-3.1
Iron	%	115	116	115	111	112	+0.8	-3.8
Zinc	%	117	117	115	112	111	-1.6	-5.8
Magnesium	%	109	109	108	107	106	-0.8	-2.2
Sodium [d]	%	189	189	184	182	179	-1.8	-5.5
Potassium	%	101	101	100	99	98	-1.1	-2.4
Thiamin	%	199	199	193	211	206	-2.3	+3.9
Riboflavin	%	168	166	168	165	164	-1.0	-1.2
Niacin equivalent	%	246	247	242	237	237	+0.0	-3.9
Vitamin B_6	%	200	202	194	175	175	-0.0	-13.7
Vitamin B_{12}	%	460	460	449	440	439	-0.2	-4.6
Folate	%	159	160	158	150	150	+0.0	-6.2
Vitamin C	%	205	208	200	214	214	+0.1	+3.1
Vitamin A (retinol equivalent)	%	144	149	145	153	153	+0.0	+2.5

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

		2013 Household	% change since 2010 Household	Trend since 2010	2013 Eating out	% change since 2010 Eating out	Trend since 2010
Total energy and nutrient intakes [a]							*average intake per person per day*
Energy	kcal	1972	-3.1	↘	220	-14.7	↘
	MJ	8.3	-3.1	↘	0.9	-14.7	↘
Energy excluding alcohol	kcal	1923	-2.9		206	-14.0	
Total Protein	g	66.6	-3.7		8.2	-13.8	↘
Vegetable Protein	g	40.2	-4.4	↘			
Animal Protein	g	26.4	-2.5	↘			
Fat	g	81	-2.7	↘	10	-15.8	↘
Fatty acids:							
Saturates	g	30.8	-2.6	↘	3.0	-16.8	↘
Monounsaturates	g	31.7	-1.5		4.1	-15.8	↘
Polyunsaturates	g	13.9	-5.1	↘	2.1	-14.5	↘
Cholesterol	mg	211	-3.6	↘	32	-15.3	↘
Carbohydrate [b]	g	246	-2.8	↘	23	-12.1	↘
Total sugars	g	111	-4.3	↘	8	-12.4	↘
Non-milk extrinsic sugars	g	71	-5.6	↘	6	-11.7	↘
Starch	g	135	-1.5		15	-11.9	↘
Fibre [c]	g	12.9	-4.1	↘	2	-15.5	↘
Alcohol	g	7.0	-8.8	↘	1.9	-25.0	↘
Calcium	mg	869	-2.5	↘	65	-13.4	↘
Iron	mg	10.3	-3.0	↘	1.1	-14.4	↘
Zinc	mg	7.9	-4.5	↘	0.9	-15.8	↘
Magnesium	mg	256	-0.9		25	-14.8	↘
Sodium [d]	g	2.38	-4.50	↘	0.29	-14.2	↘
Potassium	g	2.80	-0.92		0.33	-15.5	↘
Thiamin	mg	1.56	6.58	↗	0.18	-15.6	↘
Riboflavin	mg	1.74	-0.05		0.13	-15.5	↘
Niacin equivalent	mg	30.8	3.6	↗	4.0	-13.4	↘
Vitamin B_6	mg	1.8	-15.7	↘	0.3	-15.9	↘
Vitamin B_{12}	µg	5.5	-4.0	↘	0.5	-16.0	↘
Folate	µg	243	-6.4	↘	35	-16.9	↘
Vitamin C	mg	74	4.9	↗	8	-16.4	↘
Vitamin A:							
Retinol	µg	472	-4.8		39	-16.5	↘
β-carotene	µg	2262	18.7	↗	309	-21.5	↘
Retinol equivalent	µg	850	4.3	↗	91	-19.4	↘
Vitamin D	µg	2.86	3.1		0.31	-10.5	↘
Vitamin E	mg	10.96	3.0		1.48	-13.7	↘
As a percentage of food and drink energy excluding alcohol							
Fat	%	38.0	0.2		42.8	-2.1	
Fatty acids:							
Saturates	%	14.4	0.3		12.9	-3.3	
Monounsaturates	%	14.8	1.5		17.8	-2.2	
Polyunsaturates	%	6.5	-2.2		9.1	-0.6	
Carbohydrate	%	48.0	0.1		41.3	2.2	
Non-milk extrinsic sugars	%	13.9	-2.7		10.9	2.7	
Protein	%	13.8	-0.7		15.9	0.2	

Table 3.8 continued

		2013 Household	% change since 2010 Household	Trend since 2010	2013 Eating out	% change since 2010 Eating out	Trend since 2010
As a percentage of weighted reference nutrient intake [f]							
Energy [e]	%	94	-2.9		10	-14.6	
Energy exc alcohol [e]	%	92	-2.8		10	-13.9	
Protein	%	145	-3.4		18	-13.6	
Calcium	%	126	-2.2		9	-13.2	
Iron	%	101	-2.6		11	-14.1	
Zinc	%	99	-4.5		12	-15.7	
Magnesium	%	97	-0.7		10	-14.7	
Sodium [d]	%	160	-4.3		19	-14.1	
Potassium	%	88	-0.7		10	-15.3	
Thiamin	%	185	6.7		21	-15.5	
Riboflavin	%	152	0.1		11	-15.4	
Niacin equivalent	%	208	-2.4		28	-13.3	
Vitamin B_6	%	150	-13.3		24	-15.8	
Vitamin B_{12}	%	402	-3.4		36	-15.9	
Folate	%	131	-4.5		19	-16.7	
Vitamin C	%	194	5.6		20	-16.2	
Vitamin A (retinol equivalent)	%	138	5.5		15	-19.4	

(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.

The Family Food team are always keen to get feedback from users of the report and the data. We have produced a short online survey to gather thoughts and suggestions on how we can improve our outputs.

Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

Chapter 4 Geographic Comparisons

4.1 Overview

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 the Office of National Statistics website.

Differences between regions can be due to systematic regional variation in demographic characteristics, but this Chapter does not address this. Chapter 5 analyses differences in purchases of fruit and vegetables and in estimated intakes of sodium, non-milk extrinsic sugars, fibre and saturated fatty acids according to regional and demographic characteristics of households.

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. To ensure a large enough sample for robust estimates in each country, this chapter concentrates on three year averages between 2010 and 2013.

4.2 UK country comparisons

Spending

Spending on all food and drink (including alcoholic drinks) was highest in Northern Ireland at £47.16 per person per week, compared to Wales where spending was the lowest at £37.59. The same pattern was evident with expenditure on eating out; Northern Ireland was the highest at £15.03, one and a half times higher than Wales at £10.19.

Household expenditure on alcoholic drinks was highest in Scotland at £3.64 per week compared to £2.65 in Wales. Expenditure on household food and drink (excluding alcoholic drinks) followed the same pattern as eating out, with Northern Ireland spending the most and Wales spending the least.

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

Table 4.1: Spending by UK countries - 3 year average

	England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample	13791	763	1395	483			
Average age of HRP	53	54	54	53			
Average number of adults per household	1.9	1.9	1.8	2.0			
Average number of children per household	0.5	0.5	0.4	0.5			
Average gross weekly household income (£)	735	607	672	609			
Household expenditure							*pounds per person per week*
Household food & drink excluding alcohol	25.71	24.75	26.69	28.86	Wales	N. Ireland	1.2
Household alcoholic drinks	3.19	2.65	3.64	3.27	Wales	Scotland	1.4
All food & drink	28.91	27.40	30.34	32.14	Wales	N. Ireland	1.2
Eating out expenditure							
Eating out food & drink excluding alcohol	9.04	7.93	8.70	10.88	Wales	N. Ireland	1.4
Eating out alcoholic drinks	3.13	2.26	2.89	4.14	Wales	N. Ireland	1.8
All food & drink	12.17	10.19	11.59	15.03	Wales	N. Ireland	1.5
Total expenditure							
All food & drink excluding alcohol	34.75	32.68	35.40	39.75	Wales	N. Ireland	1.2
Alcoholic drinks	6.33	4.91	6.53	7.41	Wales	N. Ireland	1.5
All food & drink	41.08	37.59	41.93	47.16	Wales	N. Ireland	1.3

Chart 4.1: Spending on food and alcohol by UK countries - 3 year average

Household purchases

Averaged over the three years to 2013 the ratio between the highest and lowest amounts purchased for household supplies between the four UK countries varied from 1:1.1 (several food types) to 1:1.6 (potatoes).

The ratio between highest and lowest levels of purchasing was 1:1.3 or more for three food types:

- Potato purchases were highest in Northern Ireland, 60 per cent higher than the lowest, in Scotland.
- Confectionery purchases varied from the highest in Northern Ireland to England, which were over 30 per cent lower.
- Carcase meat was purchased in largest quantities by Northern Irish households, one third more than Scotland, which had the smallest quantities.

Eating out purchases

The ratio between highest and lowest purchases of food and drink eaten out varied more widely across the four UK countries than household purchases, from 1:1.2 (several food types) to 1:1.9 (vegetables).
Households in England did not have substantially higher purchases than other UK countries in any category, although they had the lowest purchases of soft drinks.

Households in Northern Ireland had the highest purchases of food eaten out in 7 out of the 12 food categories, including ‘Indian, Chinese and Thai meals’, ‘meat and meat products’, alcoholic drinks, and confectionery. They purchased the least fish and fish products.

Scottish households had the lowest purchases of vegetables, potatoes, meat and meat products and ‘Indian, Chinese and Thai meals’. They had the highest purchases of sandwiches.

Welsh households purchased the least sandwiches, ‘ice creams desserts and cakes’, alcoholic drinks and beverages.

Table 4.2: 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		13791	763	1395	483			
Average age of HRP		53	54	54	53			
Average number of adults per household		2	2	2	2			
Average number of children per household		0.5	0.5	0.4	0.5			
Average gross weekly household income (£)		735	607	672	609			
Household purchases	*grams per person per week unless otherwise stated*							
Milk and cream	(ml)	1875	2013	1826	2104	Scotland	N. Ireland	1.2
Cheese		119	108	107	104	N. Ireland	England	1.1
Carcase meat		194	199	177	238	Scotland	N. Ireland	1.3
Non-carcase meat and meat products		767	896	838	932	England	N. Ireland	1.2
Fish		148	137	133	132	N. Ireland	England	1.1
Eggs	(no.)	1.8	1.7	1.6	1.8	Scotland	N. Ireland	1.2
Fats and oils		173	178	173	168	N. Ireland	Wales	1.1
Sugar and preserves		125	138	113	112	N. Ireland	Wales	1.2
Potatoes		703	799	681	1095	Scotland	N. Ireland	1.6
Vegetables excluding potatoes		1117	1095	905	928	Scotland	England	1.2
Fruit		1142	967	1046	1071	Wales	England	1.2
Total cereals		1538	1492	1545	1687	Wales	N. Ireland	1.1
Beverages		53	59	47	52	Scotland	Wales	1.2
Soft drinks [(a)]	(ml)	1601	1703	1974	1786	England	Scotland	1.2
Alcoholic drinks	(ml)	707	733	697	709	Scotland	Wales	1.1
Confectionery		125	141	149	182	England	N. Ireland	1.5
Eating out purchases	*grams per person per week unless otherwise stated*							
Indian, Chinese and Thai meals		30	27	24	33	Scotland	N. Ireland	1.4
Meat and meat products		75	73	61	86	Scotland	N. Ireland	1.4
Fish and fish products		14	12	13	8	N. Ireland	England	1.7
Cheese and egg dishes and pizza		22	17	17	21	Wales	England	1.3
Potatoes		62	67	53	69	Scotland	N. Ireland	1.3
Vegetables excluding potatoes		28	28	15	24	Scotland	Wales	1.9
Sandwiches		63	55	77	59	Wales	Scotland	1.4
Ice creams, desserts and cakes		25	21	26	25	Wales	Scotland	1.2
Beverages	(ml)	119	96	109	120	Wales	N. Ireland	1.3
Soft drinks including milk	(ml)	256	273	307	307	England	N. Ireland	1.2
Alcoholic drinks	(ml)	365	299	302	369	Wales	N. Ireland	1.2
Confectionery		8	8	9	11	England	N. Ireland	1.3

(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 estimated nutrient intakes derived from these purchases (See Table 3.2).

The largest variations in nutrient intakes are in retinol and alcohol. Intake of retinol was above the weighted RNI in all four countries of the UK so this variation is not of nutritional concern.

Average daily energy intake was highest in Northern Ireland, at 2,416 kcal per person per day, and lowest in Wales at 2,205 kcal person per day. Average weekly starch intake varied from 147 grams in Wales to 167 grams in Northern Ireland. Households in Northern Ireland had the highest intake of total fat but when taken as a percentage of total energy intake, there was little variation across all four countries.

Alcohol

There is a range of evidence to suggest that self reported alcohol consumption in surveys is less than actual consumption. Comparisons of implied consumption with alcohol sales data have suggested that social survey estimates could be 40 per cent or more lower than actual consumption. Thus the Family Food estimate of the absolute level of intake is almost certain to be an underestimate due to under-reporting of alcoholic drinks. However, the trends are likely to be valid.

In terms of volume of purchases of alcoholic drinks for the household, Welsh households had the highest at 733 mls per person per week, whilst England and Northern Ireland purchased the most for consumption outside the home (Table 3.1).

In terms of alcohol content (in grams) Scottish households had the highest total intake of alcohol, 10 grams per person per day, 17 per cent higher than Wales at 8.3 grams per person per day (see Table 3.2), whilst being the lowest in purchased volume terms. This indicates they purchased drinks containing higher alcohol content.

Table 4.3: Energy and nutrient intakes by UK country - 3 year average

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Number of households in sample		13791	763	1395	483			
Average age of HRP		53	54	54	53			
Average number of adults per household		1.9	1.9	1.8	2.0			
Average number of children per household		0.5	0.5	0.4	0.5			
Average gross weekly household income (£)		735	607	672	609			
Total energy & nutrient intakes [a]				*intake per person per day*				
Energy	kcal	2209	2205	2213	2416	Wales	NI	1.10
	MJ	9.2	9.2	9.3	10.1	Wales	NI	1.10
Energy intake excluding alcohol	kcal	2144	2147	2143	2349	Scot	NI	1.10
Total Protein	g	75.7	77.0	75.0	84.8	Scot	NI	1.13
Fat	g	91	92	92	99	England	NI	1.09
Fatty acids:								
Saturates	g	33.7	34.3	35.1	37.3	England	NI	1.11
Monounsaturates	g	35.6	35.7	35.8	38.4	England	NI	1.08
Polyunsaturates	g	16.2	16.0	15.7	17.0	Scot	NI	1.08
Cholesterol	mg	248	252	243	273	Scot	NI	1.12
Carbohydrate [b]	g	272	270	269	298	Scot	NI	1.11
Total sugars	g	120	123	120	130	Scot	NI	1.08
Non-milk extrinsic sugars	g	78	81	80	85	England	NI	1.09
Starch	g	151	147	149	167	Wales	NI	1.14
Fibre [c]	g	14.7	14.3	14.0	15.7	Scot	NI	1.12
Alcohol	g	9.4	8.3	10.0	9.6	Wales	Scot	1.21
Calcium	mg	938	961	938	1027	Scot	NI	1.09
Iron	mg	11.5	11.3	11.3	12.4	Scot	NI	1.10
Zinc	mg	9.0	9.0	8.9	9.9	Scot	NI	1.12
Magnesium	mg	284	283	277	307	Scot	NI	1.11
Sodium [d]	g	2.68	2.77	2.87	3.02	England	NI	1.13
Potassium	g	3.16	3.21	3.07	3.52	Scot	NI	1.15
Thiamin	mg	1.71	1.70	1.65	1.88	Scot	NI	1.14
Riboflavin	mg	1.89	1.94	1.84	2.06	Scot	NI	1.12
Niacin equivalent	mg	33.7	34.2	33.3	37.7	Scot	NI	1.13
Vitamin B_6	mg	2.2	2.2	2.2	2.5	Scot	NI	1.14
Vitamin B_{12}	µg	6.1	6.4	5.9	6.6	Scot	NI	1.10
Folate	µg	287	281	273	302	Scot	NI	1.11
Vitamin C	mg	81	76	76	82	Wales	NI	1.08
Vitamin A:								
Retinol	µg	525	547	495	463	NI	Wales	1.18
β-carotene	µg	2459	2395	2250	2462	Scot	NI	1.09
Retinol equivalent	µg	937	948	872	879	Scot	Wales	1.09
Vitamin D	µg	3.12	3.15	2.99	3.28	Scot	NI	1.10
Vitamin E	mg	12.34	12.06	12.08	12.72	Wales	NI	1.05

Table 4.3 continues over the page

Table 4.3 continued

		England	Wales	Scotland	Northern Ireland	Lowest	Highest	Ratio lowest highest
Percentage contributions of macronutrients to energy intake excluding alcohol								
Fat	%	38.3	38.4	38.8	37.9	NI	Scot	1.02
Fatty acids:								
Saturates	%	14.1	14.4	14.7	14.3	England	Scot	1.04
Monounsaturates	%	14.9	15.0	15.0	14.7	NI	Scot	1.02
Polyunsaturates	%	6.8	6.7	6.6	6.5	NI	England	1.05
Carbohydrate	%	47.5	47.1	47.1	47.6	Scot	NI	1.01
Non-milk extrinsic sugars	%	13.6	14.1	14.0	13.5	NI	Wales	1.04
Protein	%	14.1	14.3	14.0	14.4	Scot	NI	1.03
As a percentage of weighted reference nutrient intake [f]								
Energy [e]	%	106	111	103	110	Scot	Wales	1.07
Energy excluding alcohol [e]	%	102	107	100	107	Scot	Wales	1.08
Protein	%	165	174	161	180	Scot	NI	1.12
Calcium	%	137	145	133	147	Scot	NI	1.10
Iron	%	113	117	110	121	Scot	NI	1.10
Zinc	%	112	119	110	122	Scot	NI	1.11
Magnesium	%	107	111	102	113	Scot	NI	1.10
Sodium [d]	%	179	192	187	195	England	NI	1.09
Potassium	%	99	104	94	106	Scot	NI	1.13
Thiamin	%	196	201	186	208	Scot	NI	1.12
Riboflavin	%	166	177	159	178	Scot	NI	1.12
Niacin equivalent	%	243	258	237	264	Scot	NI	1.11
Vitamin B_6	%	185	197	179	200	Scot	NI	1.12
Vitamin B_{12}	%	439	488	426	471	Scot	Wales	1.15
Folate	%	155	158	145	158	Scot	NI	1.09
Vitamin C	%	205	196	186	191	Scot	England	1.11
Vitamin A (retinol equivalent)	%	146	166	133	133	Scot	Wales	1.25

(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.

4.3 England regional comparisons

England is divided into nine regions. Detailed population statistics can be found at the Office for National Statistics website.

Spending

The South East had the highest spending on all food and drinks for the household (excluding alcoholic drinks) at £27.80 per person per week. The lowest spend was Yorkshire and The Humber at £23.48 per person.

The variation across the regions for money spent on eating out was much greater than between purchases made for household consumption. In London, 34 per cent of total spending on food and drink (including alcohol) was on eating out purchases. This compares to 27 per cent in the East Midlands.

In England as a whole 30 per cent of all expenditure on food and drink including alcohol went on eating out purchases.

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

Table 4.4: 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%		50%		30%	
North East	25%	6	52%	2	29%	5
North West	25%	7	49%	6	29%	6
Yorkshire and The Humber	26%	4	49%	5	30%	3
East Midlands	24%	8	45%	8	27%	9
West Midlands	24%	9	50%	4	28%	8
East	25%	5	45%	9	28%	7
London	30%	1	57%	1	34%	1
South East	27%	2	47%	7	30%	2
South West	26%	3	50%	3	29%	4

Household purchases

The ratio between highest and lowest levels of purchasing for household supplies across the English regions varied from 1:1.1 for cereals to 1:1.8 for alcoholic drinks. For the latter, purchases varied from 472 ml in London to 839 ml in the North East. The same two regions varied on confectionery purchases, with the North East purchasing half as much again as London.

Eating out purchases

The biggest differential in eating out purchases in English regions is the ‘Indian, Chinese and Thai meals’ category; North East had the lowest purchases at 24 grams per person per week whilst London had nearly twice as much at 42 grams. The East purchased the least alcoholic drinks at 298 ml – the North East purchased over half as much again. Ice creams, desserts and cakes varied from the West Midlands at 20 grams, to the South East with 30 grams.

Table 4.5: 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	1677	(ml)	East Midlands	2101	(ml)	1.3
Cheese	North East	97		South West	132		1.4
Carcase meat	Yorkshire & the Humber	180		East	212		1.2
Non-carcase meat and meat products	London	683		North East	818		1.2
Fish	North West	135		London	162		1.2
Eggs	North East	2	(no.)	East	2	(no.)	1.3
Fats and oils	North East	156		East Midlands	191		1.2
Sugar and preserves	North East	106		East Midlands	147		1.4
Potatoes	London	552		East Midlands	784		1.4
Vegetables exlcuding potatoes	North East	981		South East	1209		1.2
Fruit	North East	875		South East	1270		1.5
Total cereals	South East	1482		East Midlands	1639		1.1
Beverages	London	44		South West	62		1.4
Soft drinks [(a)]	London	1304	(ml)	East	1779	(ml)	1.4
Alcoholic drinks	London	472	(ml)	North East	839	(ml)	1.8
Confectionery	London	92		North East	144		1.6
Eating out purchases					*grams per person per week unless otherwise stated*		
Indian, Chinese and Thai meals	North East	24		London	42		1.8
Meat and meat products	West Midlands	70		North East	81		1.2
Fish and fish products	North West	11		London	16		1.4
Cheese and egg dishes and pizza	West Midlands	19		South East	24		1.3
Potatoes	London	54		Yorkshire & the Humber	71		1.3
Vegetables exlcuding potatoes	North West	24		South West	34		1.4
Sandwiches	West Midlands	54		London	74		1.4
Ice creams, desserts and cakes	West Midlands	20		South East	30		1.5
Beverages	North West	100	(ml)	South East	139	(ml)	1.4
Soft drinks including milk	South West	230	(ml)	London	278	(ml)	1.2
Alcoholic drinks	East	298	(ml)	North East	480	(ml)	1.6
Confectionery	West Midlands	8		South West	9		1.2
Household expenditure					*pence per person per week*		
Total all food & drink excluding alcohol	Yorkshire & the Humber	2348		South East	2780		1.2
Total alcoholic drinks	London	272		South East	350		1.3
Total all food & drink	North East	2670		South East	3130		1.2
Eating out expenditure					*pence per person per week*		
Total all food & drink excluding alcohol	West Midlands	764		London	1098		1.4
Total alcoholic drinks	East	275		London	361		1.3
Total all food & drink	West Midlands	1067		London	1459		1.4

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

Table 4.6: Purchases of selected foods by region - 3 year average

		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Number of households in sample		13791	796	1855	1504	1304	1566	1604	1508	2225	1429
Average age of HRP		53	53	52	53	53	54	54	51	54	55
Average number of adults per household		1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Average number of children per household		0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.5
Average gross weekly household income (£)		735	582	671	632	660	660	766	889	888	722
Household purchases										*grams per person per week unless otherwise stated*	
Milk and cream	(ml)	1875	1816	1939	1880	2101	1846	1873	1677	1833	2017
Cheese		119	97	111	109	131	111	131	106	131	132
Carcase meat		194	186	188	180	197	195	212	198	192	194
Non-carcase meat and meat products		767	818	813	742	782	777	805	683	762	782
Fish		148	144	135	148	136	142	157	162	152	145
Eggs	(no.)	2	2	2	2	2	2	2	2	2	2
Fats and oils		173	156	170	160	191	178	176	184	161	174
Sugar and preserves		125	106	117	118	147	134	121	113	126	145
Potatoes		703	731	750	714	784	780	714	552	664	752
Vegetables excluding potatoes		1117	981	986	1002	1180	1074	1169	1161	1209	1185
Fruit		1142	875	1022	985	1119	1052	1250	1226	1270	1243
Total cereals		1538	1488	1514	1486	1639	1624	1562	1523	1482	1555
Beverages		53	50	54	51	54	54	53	44	57	62
Soft drinks [a]	(ml)	1601	1703	1623	1549	1723	1728	1779	1304	1584	1625
Alcoholic drinks	(ml)	707	839	741	831	816	740	688	472	728	694
Confectionery		125	144	129	128	136	130	137	92	126	127
Eating out purchases										*grams per person per week unless otherwise stated*	
Indian, Chinese and Thai meals		30	24	24	24	29	34	24	42	34	28
Meat and meat products		75	81	77	76	77	70	71	76	71	78
Fish and fish products		14	14	11	16	12	12	13	16	14	14
Cheese and egg dishes and pizza		22	22	20	22	22	19	20	24	24	21
Potatoes		62	66	62	71	64	63	60	54	58	67
Vegetables excluding potatoes		28	28	24	29	29	26	26	26	28	34
Sandwiches		63	69	61	68	59	54	62	74	67	55
Ice creams, desserts and cakes		25	22	23	24	26	20	25	24	30	29
Beverages	(ml)	119	110	100	115	122	104	123	118	139	126
Soft drinks including milk	(ml)	256	276	271	262	250	242	241	278	253	230
Alcoholic drinks	(ml)	365	480	407	425	368	398	298	309	323	391
Confectionery		8	9	9	8	8	8	8	8	9	9
Household expenditure											*pence per person per week*
Total all food & drink excluding alcohol		2571	2359	2437	2348	2575	2443	2751	2587	2780	2645
Total alcoholic drinks		319	311	322	326	339	306	332	272	350	320
Total all food & drink		2891	2670	2759	2673	2913	2748	3083	2859	3130	2965
Eating out expenditure											*pence per person per week*
Total all food & drink excluding alcohol		904	774	793	810	808	764	923	1098	1032	914
Total alcoholic drinks		313	336	307	311	283	303	275	361	312	326
Total all food & drink		1217	1110	1100	1120	1090	1067	1198	1459	1343	1240

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

Nutrient intakes

The regional variation in energy and nutrient intakes broadly follows the picture for purchases. Average energy intake per person per week was highest in the East Midlands, the South West and the East, and lowest in Yorkshire and the Humber and the North East. Alcohol and non-milk extrinsic sugars varied the most, with London the lowest and the North East and South West highest, respectively.

There was little difference between regions in macronutrient intakes when expressed as a percentage of food energy, although London showed the highest percentage energy from poly-unsaturates, and lowest from saturated fats and non-milk extrinsic sugars. Micronutrient intakes were close to or above the population weighted RNIs in all regions. Any differences generally reflected regional differences in energy intakes.

Table 4.7: Energy and nutrient intakes by region - 3 year average

England and 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		13791	796	1855	1504	1304	1566	1604	1508	2225	1429
Average age of HRP		53	53	52	53	53	54	54	51	54	55
Average number of adults per household		1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Average number of children per household		0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.5
Average gross weekly household income (£)		735	582	671	632	660	660	766	889	888	722
Total energy & nutrient intakes [a]											*intake per person per day*
Energy	kcal	2209	2134	2165	2123	2329	2236	2271	2167	2193	2283
	MJ	9.2	8.9	9.1	8.9	9.8	9.4	9.5	9.1	9.2	9.6
Energy excluding alcohol	kcal	2144	2060	2096	2052	2259	2168	2207	2116	2126	2215
Total Protein	g	75.7	73.9	75.2	72.9	78.6	75.3	78.0	74.6	75.4	77.4
Fat	g	91	88	89	87	96	90	95	90	91	94
Fatty acids:											
Saturates	g	33.7	33.1	33.5	32.4	35.8	33.3	35.3	31.0	34.0	35.8
Monounsaturates	g	35.6	34.3	34.6	33.5	37.1	35.2	37.2	35.9	35.5	36.5
Polyunsaturates	g	16.2	15.2	15.7	15.2	16.9	16.0	16.6	17.7	15.7	16.0
Cholesterol	mg	248	238	247	236	254	242	261	245	249	253
Carbohydrate [b]	g	272	258	264	261	288	281	277	268	268	282
Total sugars	g	120	114	118	116	128	122	126	110	123	131
Non-milk extrinsic sugars	g	78	75	76	75	83	81	82	69	79	85
Starch	g	151	144	146	145	160	159	151	157	145	151
Fibre [c]	g	14.7	13.8	14.1	13.9	15.5	14.8	15.1	14.8	14.9	15.3
Alcohol	g	9.4	10.5	9.8	10.2	10.1	9.6	9.2	7.2	9.6	9.7
Calcium	mg	938	910	943	926	1015	943	961	858	934	991
Iron	mg	11.5	11.0	11.4	11.0	12.1	11.6	11.9	11.1	11.7	12.1
Zinc	mg	9.0	8.7	8.9	8.6	9.3	8.9	9.2	8.8	8.9	9.2
Magnesium	mg	284	275	279	272	297	284	293	276	288	295
Sodium [d]	g	2.68	2.71	2.71	2.60	2.80	2.68	2.80	2.41	2.73	2.81
Potassium	g	3.16	3.04	3.12	3.05	3.31	3.16	3.26	3.02	3.19	3.32
Thiamin	mg	1.71	1.62	1.68	1.63	1.77	1.71	1.77	1.68	1.72	1.81
Riboflavin	mg	1.89	1.82	1.91	1.83	2.00	1.87	1.96	1.75	1.90	2.00
Niacin equivalent	mg	33.7	33.1	33.5	32.4	34.7	33.6	34.9	32.9	33.8	34.5
Vitamin B_6	mg	2.2	2.1	2.2	2.1	2.3	2.2	2.3	2.1	2.2	2.3
Vitamin B_{12}	µg	6.1	5.9	6.2	6.0	6.4	6.0	6.4	5.9	6.0	6.3
Folate	µg	287	267	279	272	297	285	298	279	296	305
Vitamin C	mg	81	71	77	73	82	78	86	83	86	85

Table 4.7 continues over the page

Table 4.7 continued

England & regions		England	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West
Vitamin A:										*intake per person per day*	
Retinol	µg	525	473	525	489	533	540	550	500	539	553
β-carotene	µg	2459	2274	2325	2346	2578	2293	2513	2435	2588	2687
Retinol equivalent	µg	937	853	914	882	964	924	971	907	972	1003
Vitamin D	µg	3.12	2.87	3.09	2.97	3.24	3.07	3.33	2.98	3.16	3.26
Vitamin E	mg	12.34	11.63	11.92	11.59	12.95	12.24	12.72	13.12	12.09	12.32
Percentage contributions of macronutrients to energy intake excluding alcohol											
Fat	%	38.3	38.5	38.4	38.0	38.1	37.5	38.7	38.4	38.4	38.2
Fatty acids:											
Saturates	%	14.1	14.5	14.4	14.2	14.3	13.8	14.4	13.2	14.4	14.5
Monounsaturates	%	14.9	15.0	14.9	14.7	14.8	14.6	15.2	15.3	15.0	14.8
Polyunsaturates	%	6.8	6.6	6.7	6.7	6.8	6.7	6.8	7.5	6.6	6.5
Carbohydrate	%	47.5	47.0	47.2	47.7	47.9	48.6	47.1	47.4	47.3	47.7
Non-milk extrinsic sugars	%	13.6	13.6	13.7	13.8	13.8	13.9	13.9	12.3	13.9	14.4
Protein		14.1	14.4	14.3	14.2	13.9	13.9	14.1	14.1	14.2	14.0
As a percentage of weighted reference nutrient intake [f]											
Energy [e]	%	106	101	103	101	111	107	108	104	105	109
Energy excluding alcohol [e]	%	102	97	100	98	107	104	105	101	102	106
Protein	%	165	159	165	158	170	164	173	164	165	169
Calcium	%	137	131	138	135	147	137	140	125	136	144
Iron	%	113	108	111	107	117	113	115	109	115	119
Zinc	%	112	108	112	108	116	112	116	110	112	116
Magnesium	%	107	102	106	102	111	107	112	105	109	111
Sodium [d]	%	179	180	182	174	186	180	190	162	183	189
Potassium	%	99	94	98	95	103	99	104	95	100	104
Thiamin	%	196	191	200	193	210	203	211	201	206	214
Riboflavin	%	166	158	167	160	175	164	173	154	166	175
Niacin equivalent	%	243	236	241	232	249	241	251	238	244	248
Vitamin B_6	%	185	173	179	173	186	180	187	170	180	188
Vitamin B_{12}	%	439	423	451	428	456	434	466	427	433	453
Folate	%	155	141	149	144	157	151	160	148	157	163
Vitamin C	%	205	183	200	189	211	203	226	217	224	222
Vitamin A (retinol equivalent)	%	146	136	147	141	155	149	157	146	156	161

(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

There is a range of evidence to suggest that self reported alcohol consumption in surveys is less than actual consumption. Comparisons of implied consumption with alcohol sales data have suggested that social survey estimates could be 40 per cent or more lower than actual consumption. Thus the Family Food estimate of the absolute level of intake is almost certain to be an underestimate due to under-reporting of alcoholic drinks. However, the trends are likely to be valid. There was substantial variation in the volume of alcoholic drinks purchased and alcohol content of purchases across the regions.

- North East had the highest combined volume of purchases of alcoholic drinks at 1318 mls per person per week, 246 mls higher than the UK average in 2013.
- London had the lowest combined intake of alcohol at 7.2 grams per person per day. Across all other regions, the variation was less marked with levels of between 9.2 to 10.5 grams.

4.4 Rural Urban comparisons for England, Scotland and Wales

The East had the highest spending on all food and drinks for the household (excluding alcoholic drinks) at £26.91 per person per week. The lowest spend was the North East at £23.13 per person.

The variation across the regions for money spent on eating out was much greater than between purchases made for household consumption. In London, 35 per cent of total spending on food and drink (including alcohol) was on eating out purchases. This compares to 27 per cent in the East Midlands. In England as a whole 30 per cent of all expenditure on food and drink went on eating out purchases.

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

Each household in the survey in Great Britain is categorised as either rural or urban. A rural urban classification exists for Northern Ireland and may be included in the future. The rural urban definition for England and Wales is described in detail on the ONS website. 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 available here.

Around one fifth of the household population of England lives in rural areas, two fifths of the Welsh population and a quarter of the Scottish population. Average weekly incomes, based on the three year average of 2011-2013, are included in the tables to aid comparisons and are higher in rural areas than urban areas.

Spending

Within each country and across GB as a whole, rural households spent more on household food purchases than urban households averaged over the 3 year period 2011-2013. Scottish rural households had the highest level of average spending per person per week on household food and drink (excluding alcoholic drinks) at £28.90. Urban households in Wales spent the least at an average of £23.91 per week over the same period.

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 English rural areas, at £7.55 per person per week; and lowest in Welsh urban areas, at £4.46 per person per week.

Household purchases

Rural households purchased more food for household supplies than urban households in 15 out of the 16 food categories. Only purchases of ‘milk and cream’ and soft drinks were highest in urban areas (Wales and Scotland respectively). See Table 3.8 for a more detailed breakdown.

The greatest variations between highest and lowest volumes purchased were between urban Scotland and rural Wales: beverages (tea, coffee etc.) were 58 per cent higher in rural Wales than urban Scotland. For ‘Sugar and preserves’ average purchases were 107 grams per person per week in urban Scotland, compared to 156 grams (46 per cent higher) in rural Wales.

Within England, whilst all purchase categories were higher in rural households, there was little variation between rural and urban, with no categories showing greater than around 20 per cent difference. For Scotland and Wales rural/urban variation was wider: within Scotland, rural households purchased over 40 per cent more sugar and potatoes, but 6 per cent less soft drinks. Within Wales, rural households purchased 11 per cent less milk and cream than urban households but 42 per cent more 'sugar and preserves'.

Across GB as a whole, the energy content of food and drink purchases was 6.1 per cent higher in rural than urban households and nutrient intakes were generally higher.

Eating out purchases

The pattern of higher spending on food in rural rather than urban households was not as apparent for eating out purchases. There was greater variation in the quantities purchased between countries and between rural and urban areas. Households in rural Wales purchased more than twice the quantity of vegetables compared to urban Scotland. However, within Scotland there was little difference between the quantities purchased in rural and urban households.

Within England, rural households purchased more fish, potatoes, vegetables, 'ice cream, desserts and cakes', beverages and alcoholic drinks for consumption away from home than households in urban areas.

Within Wales, households in rural areas purchased greater quantities in all categories of eating out except 'Indian, Chinese and Thai meals', meat and meat products, and 'cheese and egg dishes and pizza'.

Within Scotland, the pattern was different to the other countries as households in rural areas purchased less of all categories than urban households except beverages and vegetables.

Table 4.8: Purchases of selected foods by rural/urban breakdown - 3 year average

		GB Urban	GB Rural	England Urban	England Rural	Wales Urban	Wales Rural	Scotland Urban	Scotland Rural
Number of households in sample		12174	3775	10736	3055	480	283	958	437
Average age of HRP		53	56	53	57	53	56	53	56
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	0.5	0.4	0.4
Average gross weekly household income (£)		692	823	699	860	587	647	669	679
Household purchases									*grams per person per week unless otherwise stated*
Milk and cream	(ml)	1846	1989	1863	1990	2157	1926	1815	2034
Cheese		112	135	113	134	107	109	99	115
Carcase meat		186	215	191	226	209	208	176	216
Non-carcase meat and meat products		768	822	765	802	899	959	867	878
Fish		143	156	145	158	147	132	121	156
Eggs	(no.)	2	2	2	2	2	2	2	2
Fats and oils		168	189	172	186	186	173	154	218
Sugar and preserves		119	145	120	145	110	156	107	153
Potatoes		692	757	702	760	816	854	700	736
Vegetables excluding potatoes		1069	1199	1083	1208	1094	1170	854	1042
Fruit		1086	1263	1099	1279	943	983	1005	1231
Total cereals		1523	1584	1534	1573	1465	1501	1502	1641
Beverages	(ml)	50	62	52	60	54	65	41	56
Soft drinks [(a)]	(ml)	1628	1673	1581	1668	1528	1846	1907	1802
Alcoholic drinks	(ml)	675	822	674	820	667	775	740	755
Confectionery		125	138	123	134	133	129	146	163
Eating out purchases									*grams per person per week unless otherwise stated*
Indian, Chinese and Thai meals		30	27	31	26	24	17	22	13
Meat and meat products		74	71	77	76	76	69	70	53
Fish and fish products		13	16	14	16	11	13	12	11
Cheese and egg dishes and pizza		22	19	23	20	19	13	19	16
Potatoes		60	65	61	68	69	71	55	41
Vegetables excluding potatoes		26	29	27	32	26	33	15	17
Sandwiches		65	62	63	60	54	55	83	80
Ice creams, desserts and cakes		24	28	24	28	20	24	25	24
Beverages	(ml)	116	120	120	122	85	94	110	113
Soft drinks including milk	(ml)	269	234	261	223	251	270	336	236
Alcoholic drinks	(ml)	356	358	370	394	291	391	339	219
Confectionery		9	8	9	8	8	9	10	7
Household expenditure									*pence per person per week*
Total all food & drink excluding alcohol		2503	2828	2499	2841	2391	2607	2579	2890
Total alcoholic drinks		297	403	294	415	237	299	357	379
Total all food & drink		2801	3231	2794	3257	2628	2906	2936	3270
Eating out expenditure									*pence per person per week*
Total all food & drink excluding alcohol		874	972	876	998	739	921	884	838
Total alcoholic drinks		304	316	305	339	209	267	330	205
Total all food & drink		1179	1288	1180	1337	948	1188	1214	1044

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

Chart 4.2: Average spending on alcoholic drinks in rural/urban 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 Welsh rural households at 37.8 per cent and highest in Welsh urban households at 38.8 per cent. This was in contrast to the higher percentage from fat in rural Scotland and England compared to that from urban households. The percentage of energy derived from NMES was lower in urban Wales and England than in the rural equivalents, but higher in urban Scotland than rural Scotland. The highest percentage of energy from NMES was in rural Wales at 14.6 per cent compared to urban Wales at 13.5 per cent.

The greatest variation in intake levels was Vitamin A, with rural Welsh households achieving 36 per cent more than urban Welsh households but intakes above the RNI in all countries urban and rural. Across all countries, vitamin intakes were higher in rural households than in urban households. See Table 3.9 for more detailed breakdown.

Table 4.9: Energy and nutrient intakes by rural/urban breakdown - 3 year average

		GB Urban	GB Rural	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
Number of households in sample		12174	3775	10736	3055	480	283	958	437
Average age of HRP		53	56	53	57	53	56	53	56
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	0.5	0.4	0.4
Average weekly income of HRP		692	823	699	860	587	647	669	679
Total energy and nutrient intake [a]									*intake per person per day*
Energy	kcal	2173	2337	2178	2333	2143	2280	2139	2383
	MJ	9.1	9.8	9.1	9.8	9.0	9.5	9.0	10.0
Energy intake excluding alcohol	kcal	2118	2267	2116	2252	2090	2215	2068	2314
Total Protein	g	74.6	79.7	74.7	79.6	75.4	78.9	72.8	80.2
Fat	g	90	97	90	97	90	93	88	101
Fatty acids:									
Saturates	g	32.9	37.2	32.8	37.1	33.7	35.0	33.4	38.7
Monounsaturates	g	35.0	37.7	35.1	37.6	35.0	36.2	34.5	38.8
Polyunsaturates	g	16.1	16.4	16.2	16.3	15.9	15.9	15.0	17.5
Cholesterol	mg	242	267	242	268	245	256	235	262
Carbohydrate [b]	g	268	283	269	282	260	283	261	288
Total sugars	g	118	130	118	130	116	130	116	129
Non-milk extrinsic sugars	g	76	85	76	84	75	87	78	85
Starch	g	150	152	151	151	144	152	144	158
Fibre [c]	g	14.4	15.4	14.5	15.5	13.8	15.0	13.5	15.0
Alcohol	g	8.9	11.2	8.8	11.5	7.7	9.2	10.1	9.8
Calcium	mg	922	1000	923	997	941	989	899	1022
Iron	mg	11.3	12.2	11.4	12.3	11.0	11.9	11.0	12.0
Zinc	mg	8.8	9.5	8.8	9.5	8.9	9.3	8.6	9.5
Magnesium	mg	279	302	280	302	276	295	268	299
Sodium [d]	g	2.65	2.89	2.63	2.87	2.70	2.84	2.79	3.05
Potassium	g	3.10	3.37	3.11	3.37	3.13	3.32	2.96	3.30
Thiamin	mg	1.68	1.81	1.68	1.82	1.66	1.77	1.59	1.80
Riboflavin	mg	1.85	2.02	1.85	2.03	1.88	2.02	1.78	1.97
Niacin Equivalent	mg	33.2	35.5	33.2	35.5	33.3	35.4	32.5	35.4
Vitamin B_6	mg	2.2	2.3	2.2	2.3	2.2	2.3	2.1	2.3
Vitamin B_{12}	µg	6.0	6.5	6.0	6.5	6.0	6.7	5.8	6.3
Folate	µg	280	307	281	310	273	295	264	293
Vitamin C	mg	79	87	79	88	74	81	73	84
Vitamin A:									
Retinol	µg	507	579	511	578	463	627	481	520
Carotene	µg	2367	2694	2391	2730	2361	2452	2101	2608
Retinol equivalent	µg	903	1030	912	1034	857	1039	833	956
Vitamin D	µg	3.04	3.33	3.06	3.35	3.09	3.23	2.89	3.22
Vitamin E	mg	12.23	12.55	12.31	12.46	11.97	12.13	11.55	13.31

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Table 4.9 continued

		GB Urban	GB Rural	England urban	England rural	Wales urban	Wales rural	Scotland urban	Scotland rural
Percentage contributions of macronutrients to energy intake excluding alcohol									
Fat	%	38.2	38.8	38.1	38.8	38.8	37.8	38.5	39.3
Fatty acids:									
Saturates	%	14.0	14.8	13.9	14.8	14.5	14.2	14.6	15.1
Monounsaturates	%	14.9	15.0	14.9	15.0	15.1	14.7	15.0	15.1
Polyunsaturates	%	6.9	6.5	6.9	6.5	6.9	6.5	6.5	6.8
Carbohydrate	%	47.6	47.0	47.7	47.0	46.7	47.9	47.4	46.7
Non-milk extrinsic sugars	%	13.6	14.1	13.5	14.1	13.5	14.6	14.1	13.8
Total Protein	%	14.1	14.1	14.1	14.1	14.4	14.2	14.1	13.9
As a percentage of weighted reference nutrient intake [f]									
Energy [e]	%	104	111	104	111	102	109	102	113
Energy exc alcohol [e]	%	101	107	101	107	99	106	99	110
Protein	%	164	172	164	172	165	173	158	172
Calcium	%	134	145	135	144	137	145	131	147
Iron	%	110	121	110	121	108	118	107	120
Zinc	%	111	118	111	118	111	117	108	118
Magnesium	%	105	112	106	113	104	111	101	111
Sodium	%	178	192	177	190	182	191	186	202
Potassium	%	97	104	98	104	98	104	92	102
Thiamin	%	200	215	201	216	196	213	189	213
Riboflavin	%	162	176	163	176	165	178	155	171
Niacin equivalent	%	239	255	239	254	239	256	234	253
Vitamin B_6	%	177	188	177	188	180	187	171	185
Vitamin B_{12}	%	433	466	435	465	437	485	414	452
Folate	%	149	161	150	163	146	158	140	154
Vitamin C	%	205	225	207	228	192	210	189	216
Vitamin A (retinol equivalent)	%	146	165	147	165	138	167	134	153

(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.

The Family Food team are always keen to get feedback from users of the report and the data. We have produced a short online survey to gather thoughts and suggestions on how we can improve our outputs.

Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

Chapter 5 Demographic Comparisons

5.1 Overview

This chapter examines how key dietary intakes vary with demographic characteristics of households. It examines age, region, income and ethnicity with respect to sodium, saturated fatty acids, Non-Milk Extrinsic Sugars (NMES), fruit, vegetables and fibre.

In general, higher income is associated with a better diet whilst greater age has a mixed association. Those with higher incomes purchased more fruit and vegetables and achieved higher fibre intake. Intake of NMES broadly fell as income rose, while sodium intake increased gradually with income. Households with an older Household Reference Person (HRP) had greater intakes of saturated fatty acids. Intake of vegetables and fibre also increased with age of HRP up to age group '60 to 69', and for fruit up to age group '70 to 79'.

5.2 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. Each demographic variable is separated into a number of categories e.g. equivalised income is split into ten bands. A main effects regression provides separate estimates for each category of the variable.

The method finds 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, and incomes.

Multiple regression analysis also informs the standard error, which tells us how confident we are with the estimates. A 95 per cent confidence interval is calculated for all the baseline categories as an example of the upper and lower limit for margin of error. For example with the analysis on sodium, we are confident that the estimate of 2.9 grams is within plus or minus 0.1 grams per person per day.

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. Energy from alcohol is excluded from energy intake estimates.

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 the ONS website and Chapter 4 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 uses 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.

5.3 Baseline group

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 5.1: Baseline household

Demographic variable	Baseline category
Region	South East of England
Household composition	2 adults, no children
Age of HRP	40-49 years
Ethnicity of HRP	White British
Equivalised income	Income decile 4

5.4 Analyses in this section

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

Table 5.2: Summary of analyses

Item	Population Recommendations
Sodium	**Less than 2.4 grams sodium per day (6 grams of salt).** 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	**Population average intake should contribute no more than 11 per cent of food energy.** Chapter 3 shows that the current percentage exceeds this recommendation.
Percentage of energy intake derived from non-milk extrinsic sugars	**Population average intake should contribute no more than 11 per cent of food energy.** Chapter 3 shows that the current percentage exceeds this recommendation.
Fruit	**At least 400g of fruit and vegetables per day equivalent to the 5 A DAY guidance.** Chapter 1 shows a 1.7 per cent drop in purchases of fruit since 2010.
Vegetables excluding potatoes	**At least 400g of fruit and vegetables per day equivalent to the 5 A DAY guidance.** Chapter 1 shows a 0.5 per cent drop in purchases of vegetables since 2010.
Fibre	**Population average intake of at least 18 grams per day.** Chapter 3 shows that intake did not reach this recommendation in 2013.

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 3 for UK averages.

5.5 Sodium

Variation in sodium intake across demographic groups is explored using the baseline group as a benchmark. Sodium intake analysis from this survey excludes the contribution from table salt and salt added during cooking and is therefore an underestimate of total intake.

The 95 per cent confidence interval for the baseline group ranged between 2.8 grams and 3.0 grams per person per day.

- Sodium intake from food did not show a clear pattern of intakes as income increased, although intake was highest in the higher income deciles.
- The range of sodium intake across income deciles was 0.4 grams per person per day between the highest and lowest groups; ranging from 2.7 grams to 3.1 grams per person per day.
- The range of sodium intake from food across age of HRP groupings was 0.6 grams per person per day between the highest and lowest groups; ranging from 2.5 grams to 3.1 grams per person per day.
- The sodium content of purchased foods increased with age of HRP up to '50 to 59' years before declining. The highest age group had the lowest sodium intake.
- In 2013, as in 2012, households in Northern Ireland and Scotland had higher sodium intakes from food purchases than those in England and Wales.

Chart 5.1a: Sodium by **income** (baseline characteristics other than income) 2013

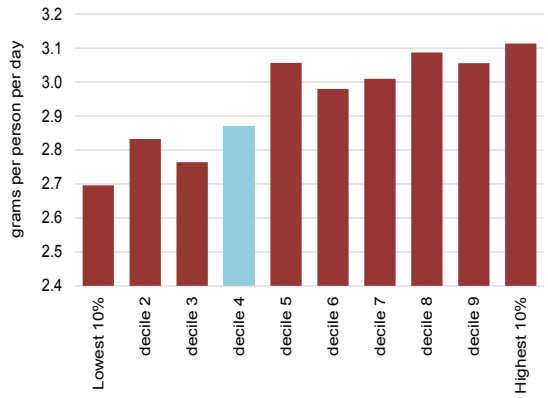
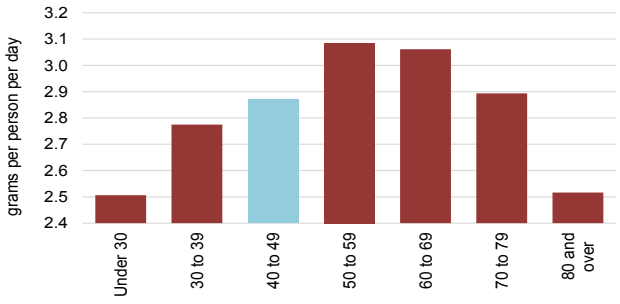


Chart 5.1b: Sodium by **age of HRP** (baseline characteristics other than age of HRP) 2013



5.6 Saturated fatty acids

Variation in intake of saturated fatty acids across demographic groups is explored using the baseline group described in 4.3 as a benchmark. On average, people obtained 14.3 per cent of food energy from saturated fatty acids in 2013 based on combined household and eating out purchases. See Chapter 3 for UK averages.

The approximate 95 per cent confidence interval for the baseline group ranged between 14.4 per cent and 14.9 per cent of food energy derived from saturated fatty acids.

- The percentage of food energy derived from saturated fatty acids ranged by 1.7 percentage points across age groupings of the HRP, and increased steadily with age group.
- The percentage of food energy derived from saturated fatty acids ranged by 3.0 percentage points across ethnic groups; the lowest were 'Black and Black British'; the highest were 'White British'.
- Region is not a significant factor influencing the percentage of energy obtained from saturated fatty acids. Variation across all regions was no more than 0.7 percentage points.

Chart 5.2a: Percentage of energy from saturated fatty acids by **age of HRP** (baseline characteristics other than age of HRP) 2013

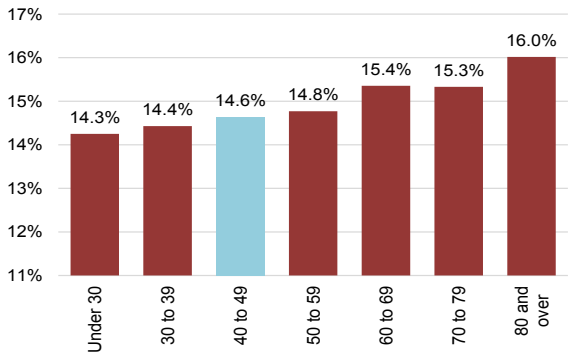
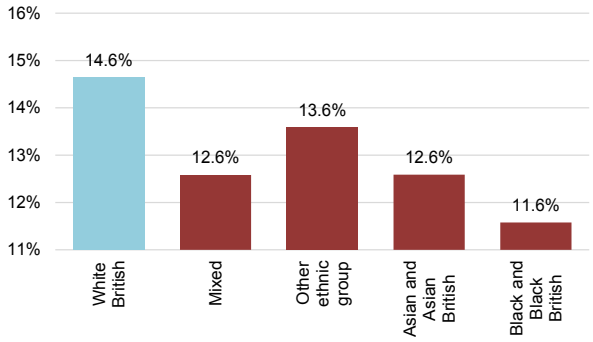


Chart 5.2b: Percentage of energy from saturated fatty acids by **ethnicity** (baseline characteristics other than ethnicity) 2013



5.7 Non-milk extrinsic sugars (NMES)

The approximate 95 per cent confidence interval for the baseline group ranged between 12.5 per cent and 13.4 per cent of food energy derived from NMES. The major food purchases contributing to NMES intake are 'not low calorie' soft drinks and 'sugars and preserves' and confectionery.

- In 2013 households in the lowest income group (decile 1) obtained the largest percentage of energy from NMES at 14.3 per cent; the highest income group had the lowest, at 12.2 per cent. However there is no clear linear relationship between income and NMES.
- All income deciles exceeded the recommended maximum level of 11 per cent of energy from NMES.
- The percentage of food energy derived from NMES varied across the age groupings of the HRP by 1.2 percentage points.
- Both the Under 30 and 80 and over category had the highest percentage of energy from NMES.
- All HRP age groups exceeded the recommended level of 11 per cent of food energy from NMES. The evidence from the Family Food Survey is supported by the National Diet and Nutrition Survey[1] which reported that; "mean intakesof NMES as a percentage of food energy exceeded the DRV in all age groups particularly in children aged four to ten years (14.7%) and children aged 11 to 18 years (15.6%).
- Variation in percentage of energy derived from NMES was 1.4 percentage points across regions. In 2012 and 2013 households in London and Northern Ireland purchased foods with the lowest amount of food energy from NMES.

Chart 5.3a: Percentage of energy from NMES by **income** (baseline characteristics other than income) 2013

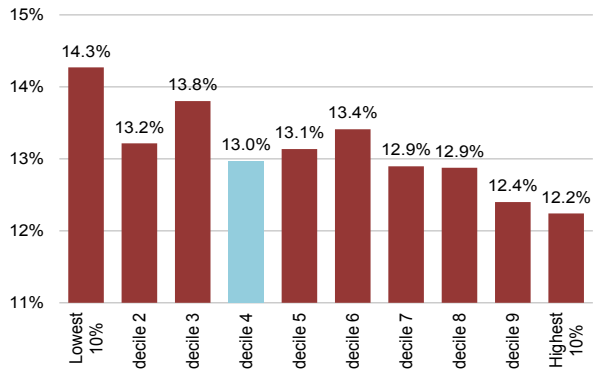
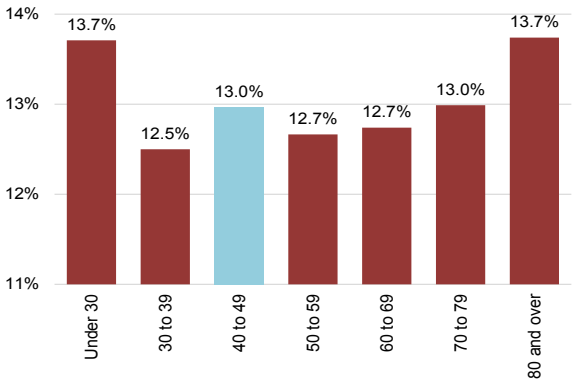


Chart 5.3b: Percentage of energy from NMES by **age of HRP** (baseline characteristics other than age of HRP) 2013



1 Bates B. Lennox A, Prentice A, Bates C, Page P, Nicholson S, Swan G. National Diet and Nutrition Survey: Headline Results from Years 1, 2, 3 and 4 (combined) of the rolling programme 2008/09 – 2011/12, https://www.gov.uk/government/statistics/national-diet-and-nutrition-survey-results-from-years-1-to-4-combined-of-the-rolling-programme-for-2008-and-2009-to-2011-and-2012

5.8 Fruit

This analysis includes all household purchases of fresh and processed (e.g. dried, frozen and canned) fruit, including fruit juice but excludes nuts, fruit contained in composite products (e.g. fruit pudding) and all eating out fruit purchases. In Chapter 2 estimates of purchases, nuts are included in the fresh and processed fruit category, but only account for around 3 per cent of the total, Variation in fruit purchases across demographic groups is explored using the baseline group as a benchmark.

The approximate 95 per cent confidence interval for the baseline group ranged between 156 grams and 177 grams of fruit purchases per person per day.

- Fruit purchases generally rose with income with the exception of the lowest income decile, which was higher than the next two. Purchases varied by 61 grams per person per day between the highest and the second lowest income groups.
- The second lowest income decile households purchased the lowest amount of fruit, 147g.
- Fruit purchases varied by 87 grams across the age groupings of the HRP.
- Fruit purchases in households where the age of the HRP is under 30 were 137 grams on average (or 1.8 portions). Purchases increase with age up to the 70 to 79 group.

Chart 5.4a: Fruit purchases by **income** (baseline characteristics other than income) 2013

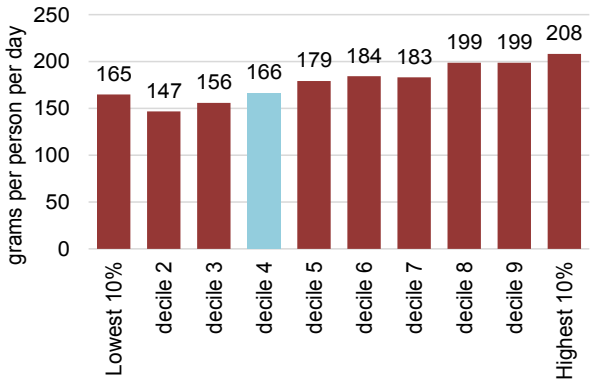
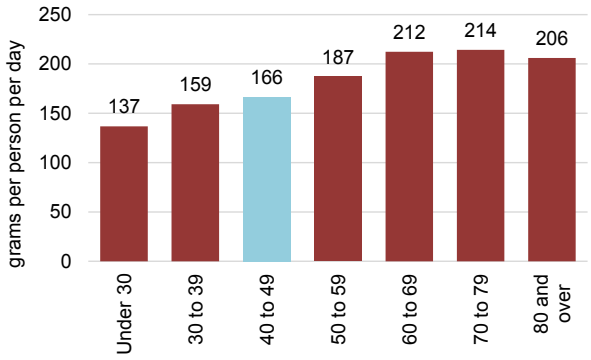


Chart 5.4b: Fruit purchases by **age of HRP** (baseline characteristics other than age of HRP) 2013



5.9 Vegetables

This analysis excludes potatoes, vegetables contained in composite products (e.g. vegetable curry) and eating out purchases of vegetables. Variation in vegetable purchases across demographic groups is explored using the baseline group as a benchmark.

The approximate 95 per cent confidence interval for the baseline group ranged between 199 grams and 219 grams of vegetable purchases per person per day.

- Vegetable purchases generally rose with income, although the bottom two income deciles had higher purchases than the next three. Purchases varied by 27 grams per person per day over all income deciles.
- Vegetable purchases varied by 82 grams per person per day across age groupings of the HRP.
- Vegetable purchases increased with age until the HRP is 60 to 69, after which it decreased.
- Households with the HRP under 30 purchased the least amount of vegetables, 164 grams per person per day, which is 2 portions.
- Households with the HRP aged 60 to 69 purchased 3 portions of vegetables per person per day.
- Variation across all regions was 50 grams of vegetables per person per day.

Chart 5.5a: vegetable purchases by **income** (baseline characteristics other than income) 2013

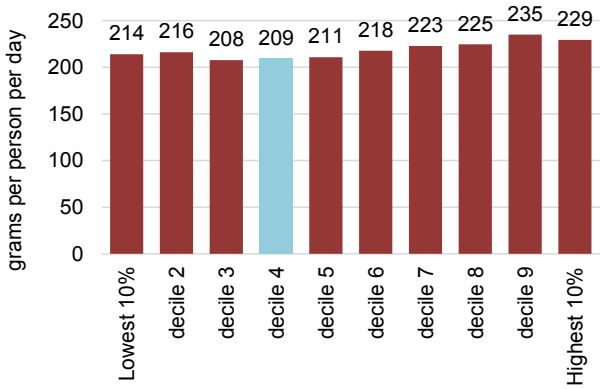
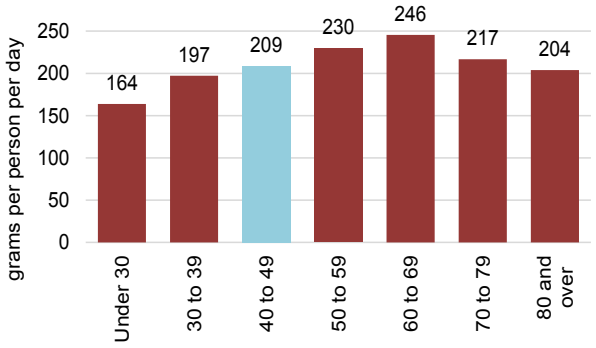


Chart 5.5b: vegetable purchases by **age of HRP** (baseline characterisitics other than age of HRP) 2013



5.10 Fibre

Variation in fibre intake across demographic groups is explored using the baseline group of households. The approximate 95 per cent confidence interval for the baseline group ranged between 14.3 grams and 15.3 grams per person per day.

- All income deciles were below the recommended average of 18 grams of fibre per person per day in 2013.
- Fibre intake generally increased with income and varied by 2.6 grams per person per day between the highest and lowest income groups.
- Fibre intake ranged 4.7 grams per person per day across age groups of the HRP. Fibre intake increased with the age of the HRP up to the 60 to 69 years age group, which achieved on average 16.9 grams per person per day.

Chart 5.6a: Fibre by **income** (baseline characteristics other than income) 2013

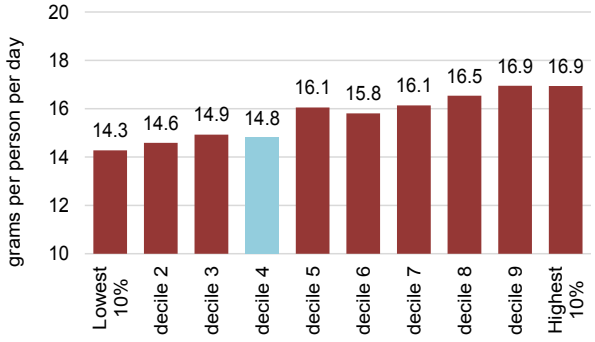
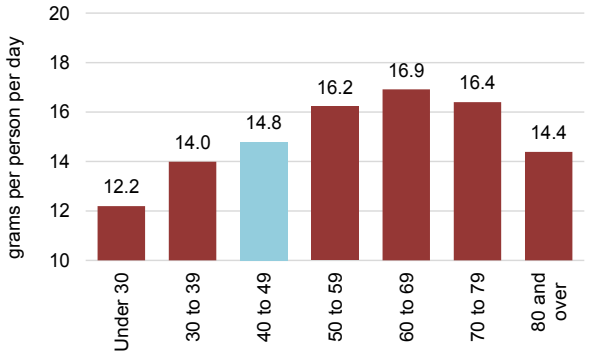


Chart 5.6b: Fibre by **age of HRP** (baseline characteristics other than age of HRP) 2013



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Please take a few minutes to give us your opinions at www.surveymonkey.com/s/FF2013feedback.

About Family Food

Over the last 70 years, we estimate around half a million households have participated in Family Food and its predecessors. Our thanks go to all those respondents, without whose cooperation this invaluable historic data resource would not be possible, and especially to those who freely donated their time in 2013.

Survey organisation

Family Food 2013 is a report on the 2013 Family Food Module of the Living Costs and Food Survey (LCFS). This report provides statistics on food purchases by type of food and includes estimates of nutrient content. Datasets and methodology notes are provided on the website with some statistics back to the 1940s. The survey covers about 6,000 households across the United Kingdom each year. Food purchases are reported at a detailed level and demographic patterns and trends are identified.

A total of 11,484 addresses were selected in 2013 for the LCFS in Great Britain, of which 10,354 were eligible households (i.e. were not empty properties or business addresses). In Great Britain 4,993 households co-operated fully in the survey in 2013. The overall response rate for the 2013 LCFS was 48 per cent in Great Britain. In Northern Ireland 152 households co-operated out of a sample of 251, a response rate of 61 per cent.

Defra is the main user of the statistics in its coordinating 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.

Family Spending is a separate report on the Living Costs and Food Survey published by the Office for National Statistics. It covers all forms of household expenditure but without as much detail on food and without quantities and nutrient content of food purchases.

Comparisons between ONS and Defra reports

Family Food uses LCFS data on food expenditure to estimate consumption and nutrient intake. It should be noted that in Family Food, food consumption and nutrient uptake is at person level.

Family Spending reports expenditure at household level, meaning that the figures cannot be directly compared to those presented in Family Food. The different approaches reflect the different analytical purposes of the two publications, with person level being appropriate to nutritional analysis.

National Statistics

Family Food conforms fully to National Statistics standards. The term ‘National Statistics’ is an accreditation quality mark that stands for a range of qualities such as relevance, integrity, quality, accessibility, value for money and freedom from political influence. More information is available from the UK Statistics Authority.

Survey development

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. Public Health England (PHE) 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 PHE’s analytical programme or from manufacturers and retailers. In 2013, revised factors were applied to some of the codes for canned vegetables, margarine and spreads, bread, breakfast cereal and pizza. More detail is in the methodology paper ‘Reference nutrient Intakes’.

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 some cases, there is insufficient detail recorded on the diary to identify the correct food code, or quantities are not properly recorded. Whilst every effort is made by the survey team to correct these during household visits it is sometimes necessary to tolerate this in order to maintain goodwill and high response rates.

To deal with quantity omissions on the diary the validation team collect proxy quantities by searching on-line supermarket websites and matching the item description and expenditure. If there is insufficient information to allocate a food item to a specific code, default codes may sometimes be used. Default codes are based upon the most commonly occurring product within a category; e.g. a diary entry of 'sausages' gives insufficient information to distinguish between pork/beef/other meat, so in this case it would be allocated to the 'pork' food code by way of default as the most commonly bought variety.

Checks on 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 were reviewed in 2013, and no significant changes were made.

The Family Food Committee

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

David Lee (Chair)
Department for Environment, Food and Rural Affairs

Dr Joanna Bulman
Office for National Statistics

Dr Giles Horsfield
Office for National Statistics

Kirsty Pavey
Food and Drink Federation

Gaynor Bussell
Dietitian

Gillian Swan
Public Health England

Professor Judith Buttriss
British Nutrition Foundation

Kevin Naylor
Department of Health

Professor Andrew Chesher
University College, London

Professor Martin Wiseman
University of Southampton

Mr Richard Murray
Scottish Government

Dermot Donnelly
Northern Ireland Statistics and Research Agency

Family Food production team

Isabella Hayes, Julie Rumsey, David Lee, Andrew Scaife

We would welcome feedback and suggestions from users of Family Food and its datasets. Contact the team at familyfood@defra.gsi.gov.uk.

Data downloads

Datasets in Excel format are available to download from the Defra website.

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. Historical estimates going back to 1940 in some cases are available from The National Archives.

Information is available at United Kingdom level 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 NUTS 1 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 2013) 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

Glossary

Nutrients

Committee on Medical Aspects of Food and Nutrition Policy (COMA)
A UK-wide expert scientific advisory committee set up to advise UK health Departments on dietary reference values for population intakes of energy and a range of nutrients. It was disbanded in 2000 and replaced by SACN.

Dietary Reference Values (DRV)
Department of Health, 'Dietary Reference Values for Food Energy and Nutrients for the United Kingdom', HMSO 1991. SACN published new DRVs for energy intake in April 2012.

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.

Fibre
Non-starch polysaccharides as determined by the Englyst method.

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.

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.

Reference Nutrient Intakes (RNI)
Reference Nutrient Intake 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.
Scientific Advisory Committee on Nutrition (SACN)
A UK-wide advisory committee set up to replace COMA in 2001. It advises UK health Departments.

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.

General and statistical terms

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.

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 household member is given an equivalence value. This scale, first proposed by Haagenars et al. (1994), assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child. Additional household members are assigned smaller values 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.

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.

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).

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.