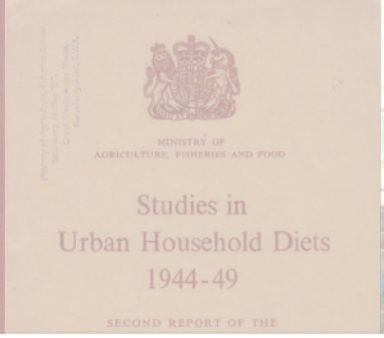
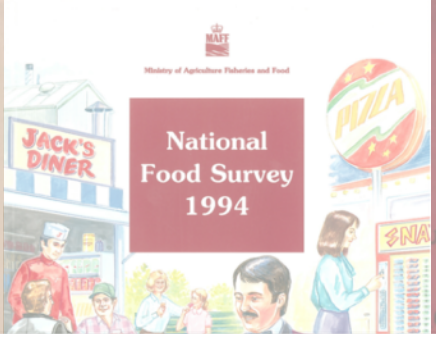
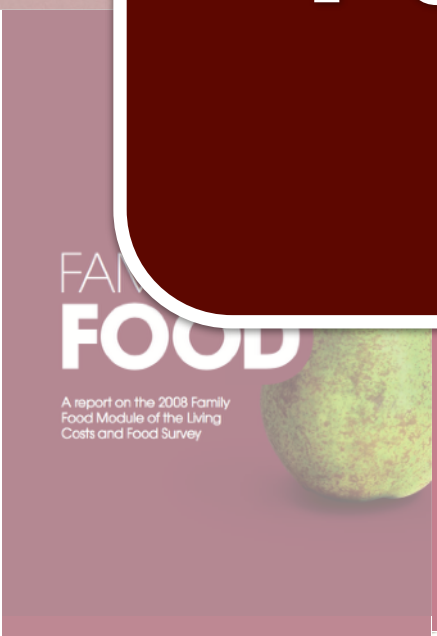
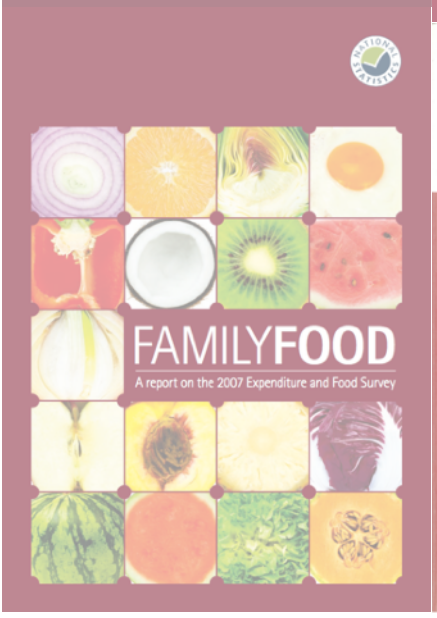
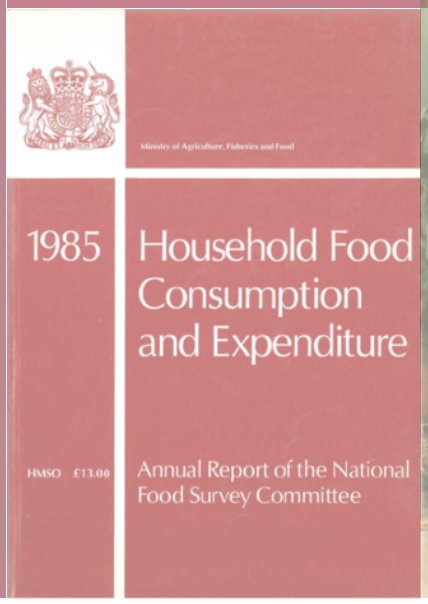
Family Food 2015

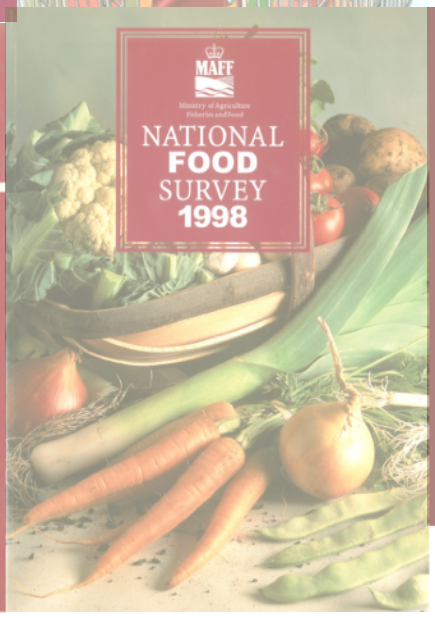


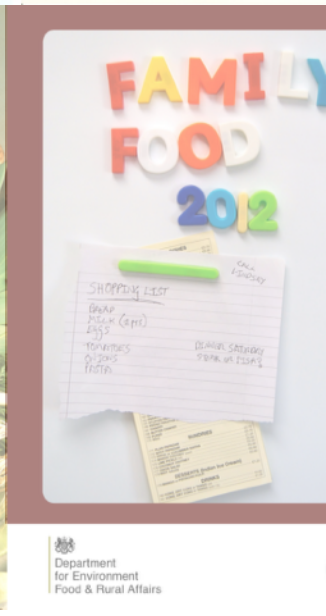












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Contents

Introduction

75 years of Family Food

In July 1940, the Ministry of Food began to collect records of food purchases and expenditure from around 1,500 “working class” households in seven towns and one rural area. The choice of towns was limited by the scarcity of trained investigators and, on a number of occasions, severe air-raids forced the postponement or the abandonment of the work. This was the first instance of the Wartime Food Survey, subsequently extended in scope and frequency to become the National Food Survey, and eventually what we now call Family Food.

Family Food is the longest running continuous household survey of its type in the world. Although there have been many changes over the years, the basic methodology of households recording a diary of what they purchase and how much they spend, is the same. This report represents the 75th consecutive year of survey results.

In this report we have brought together some of the data from 1940 onwards to show 75 year trends where possible. The value of the Family Food survey has always been in its long run data - it is a unique resource for estimates of household purchases, expenditure and derived nutritional intake in the UK. 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.

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, 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.

Accessing Family Food data

In addition to this report, there are many other resources available:

- Long term survey results datasets are available to download
- In addition to this and recent survey reports, the survey reports covering 1940 - 1984 can be viewed online
- National Food Survey raw data from the surveys from 1974 - 2000 is available as open data to download for analysis.This includes individual household diary data and reference data for the surveys in those years. Some data has been banded or excluded to ensure it is safe to publish as open data.
- Family Food survey raw data is available to researchers under licence via The Data Archive.

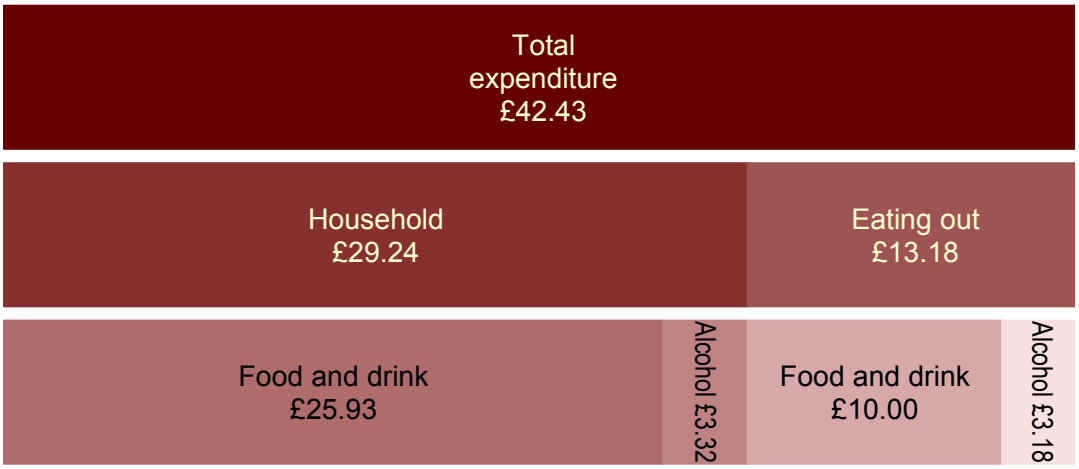
Executive Summary

Family Food 2015 presents the results from the 2015 Family Food module of the Living Costs and Food Survey, covering household shopping and eating habits. Around 5,000 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 2015 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out was £42.43 per person per week. When inflation is taken into account, the amount spent was 0.1 per cent more than 2014 and 3.7 per cent less than 2012. Household food and non-alcoholic drink purchases formed the largest share at £25.93 per person per week.

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



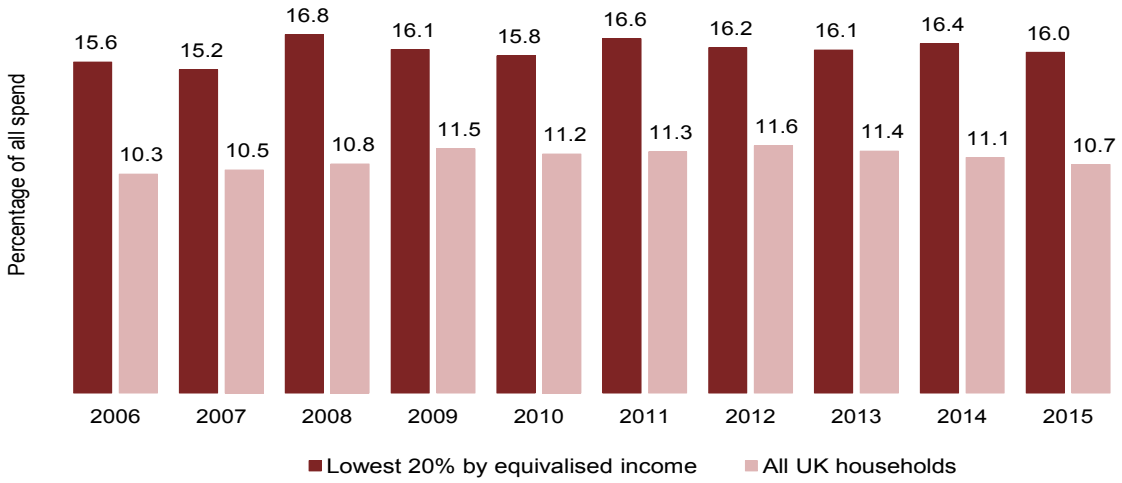
- In 2015, the percentage of spend on food and non-alcoholic drinks for the average UK household was 10.7 per cent, continuing the downward trend since 2012.
- Purchases of various household foods are on clear short term downward trends since 2012, including milk and cream, meat and meat products, potatoes, and bread. Fresh fruit are on a short term upwards trend since 2011.
- Total energy intake from all food and drink is on a long term downward trend.
- 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 long term downward trend but was above the recommended maximum Reference Nutrient Intake of 2.4 grams per day in 2015, at 2.65 grams.

Expenditure

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

- In real terms, between 2015 and 2015 household spending on food and drink fell by 6.3 per cent and eating out expenditure rose by 2.4 per cent. Spending on alcoholic drinks for household consumption fell by 5.8 per cent over the same period, whilst alcoholic drinks bought for consumption outside the home fell by 4.7 per cent.
- The percentage of spend on food continues to be highest for households with the lowest 20 per cent of income, at 16 per cent in 2015. 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 households 'traded down' to cheaper products to save 4.8 per cent on the unit prices paid for food between 2007 and 2015. The lowest income households traded down to a much lesser extent.
- The average household spent 16 per cent more on food in 2015 than in 2007, when prices were at their lowest. Households in income decile 1 spent 26 per cent more.

Purchases

The report focuses mainly on trends over the period 2012-2015.

- Overall purchases of fruit and vegetables rose slightly between 2012 and 2015 driven by consumers spending more on fresh vegetables and fresh fruit. Spending on processed vegetables and fruit fell during the same period.
- Potato purchases continued their long term downward trend, with a 6.8 percent reduction since 2012. Purchases are 20 percent 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.

- Purchases of raw carcase meat have been on a downward trend since 2010, and after a spike last year, fell again by 4.2 per cent in 2015. Beef, which accounts for around half of raw carcase meat purchases increased by 1.0 per cent on 2014, but fell by 1.5 per cent on 2012. Purchases of pork were 9.5 per cent down on 2012 and 12 per cent down on 2014.

- Household purchases of fish and fish products have fallen steadily since 2006 but picked up in 2015 to show a rise of 1.2 per cent on 2012 and 1.7 per cent on 2014 which equates to a rise of 2 grams per person per week. Ready meals, which account for over one third of purchases, rose to 2012 levels after a fall in 2014.

- Butter purchases have been increasing steadily over the last ten years, and were 3.0 per cent higher than in 2012, at 42 grams per person per week. Oils accounted for just over a third of all fat purchases, with average weekly purchases of 59 mls.

Dietary Trends

The report focuses mainly on trends over the period 2012-2015.

- Total energy intake from all food and drink for all households is on a downward trend, 2.9 per cent lower in 2015 than in 2012.

- Intakes of NMES measured as a per centage of food and drink energy (excluding alcohol), was lower in 2015 than in 2012. 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 11 per cent above the recommended maximum grams per day in 2015.

- Mean intakes of all vitamin and mineral intakes were close to or exceeded the population-weighted Reference Nutrient Intake, where one is set.

Chapter 1 Expenditure

1.1 Overview

This chapter provides estimates of household and eating out expenditure on food in 2015, 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 twenty per cent of households by equivalised income, a measure of household income that accounts for differences in household size and composition.

- In 2015 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out was £42.43 per person per week. When inflation is taken into account, the amount spent was 0.1 per cent more than 2014 and 3.7 per cent less than 2012. Household food and non-alcoholic drink purchases formed the largest share at £25.93 per person per week.
- In 2015 the percentage of spend on food and non-alcoholic drinks for the average UK household was 11 per cent, continuing the downward trend since 2012.
- The percentage of spend on food continues to be highest for households with the lowest 20 per cent of income, at 16 per cent in 2015. 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 4.8 per cent on the unit prices paid for food between 2007 and 2015. The lowest income households traded down to a much lesser extent.
- The average household spent 16 per cent more on food in 2015 than in 2007, when prices were at their lowest during the period of the Survey. Households in the lowest income decile spent 26 per cent more than in 2007.

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 spreadsheet 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 2015 was £29.24 per person, a decrease of 1.1 per cent on 2014. Total expenditure on household food and non-alcoholic drink fell by 1.3 per cent in 2015 to £25.93 and was 0.2 per cent lower than in 2012. Table 1.1 shows significant upward trends in expenditure on all food and drink between 2012 and 2015, however household food and drink expenditure has decreased in that period by 0.1 per cent, while expenditure on food and drink eaten out has increased significantly by 9.1 per cent. Expenditure on some items has changed significantly between 2012 and 2015:

- Confectionery – spending increased by 10 per cent
- Fish – spending increased by 8.7 per cent

- Pure fruit juices - spending decreased by 20 per cent.
- Sugar and preserves - spending decreased by 15 per cent.
- Bread – spending decreased by 8.3 per cent

In terms of money spent on eating out, it was 6.3 per cent higher than in 2014 at £13.18 per person per week for all food and alcoholic drinks. Spending on food and non-alcoholic drinks eaten out was £10.00 in 2015. Spending on alcoholic drinks was £3.18 per person per week in 2015, 6.5 per cent higher than in 2014. See Table 1.1.

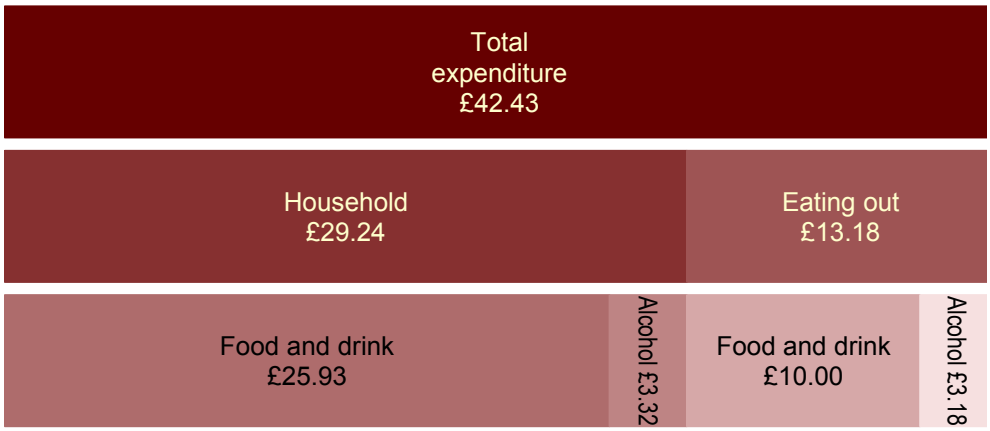
Table 1.1: UK expenditure on food and drink, 2012-2015

	2012	2013	2014	2015	RSE[a]	% change since 2014	% change since 2012	sig[b]
Number of households in sample	5596	5144	5134	5080				
Number of persons in sample	13196	12144	12150	12062				
Food price inflation	3.2	3.8	-0.2	-2.6				
Household expenditure	*Pence per person per week*							
Milk and cream	188	187	182	176	✓✓✓	-3.5	-6.7	yes
Liquid whole milk	18	18	16	17	✓✓	7.0	-5.0	
Cheese	81	85	81	79	✓✓✓	-2.6	-2.4	
Carcase meat	136	136	141	135	✓✓✓	-4.5	-0.5	
Non-carcase meat and meat products	471	484	482	456	✓✓✓	-5.3	-3.0	
Fish	124	129	129	135	✓✓✓	4.0	8.7	yes
Eggs	30	31	30	28	✓✓✓	-5.8	-6.8	yes
Fats and oils	55	55	52	52	✓✓	0.8	-5.3	
Butter	20	20	20	20	✓✓	-2.1	-1.3	
Sugar and preserves	23	23	21	19	✓✓	-7.1	-14.6	yes
Potatoes (fresh and processed)	121	129	123	123	✓✓✓	-0.5	1.1	
Fruit and vegetables excluding potatoes	460	476	469	468	✓✓✓	-0.3	1.6	
Vegetables excluding potatoes	236	245	237	233	✓✓✓	-1.9	-1.5	
Fruit	224	230	232	235	✓✓✓	1.3	4.8	yes
Fresh apples	24	25	24	23	✓✓✓	-3.2	-2.6	
Pure fruit juices	37	37	32	29	✓✓	-7.6	-20.1	yes
Cereals	497	506	497	501	✓✓✓	0.8	0.8	
Bread	123	127	117	113	✓✓✓	-3.4	-8.3	yes
Beverages	56	54	56	59	✓✓	5.4	5.7	
Soft drinks	96	100	95	93	✓✓✓	-2.7	-3.6	
Confectionery	102	104	110	113	✓✓✓	2.5	10.4	yes
Alcoholic drinks	330	324	330	332	✓✓	0.6	0.3	
Beers	21	20	19	22	✓	16.6	6.1	
Lagers and continental beers	49	51	50	47	✓✓	-5.2	-4.6	
All household food and non-alcoholic drink	2598	2662	2627	2593	✓✓✓	-1.3	-0.2	
All household food and drink	2929	2986	2957	2924	✓✓✓	-1.1	-0.1	
Eating out expenditure								
Total expenditure on alcoholic drink eaten out	314	302	299	318	✓✓	6.5	1.5	
Total expenditure on food and drink eaten out (exc alc drks)	895	929	941	1000	✓✓✓	6.2	11.8	yes
Total expenditure on food and drink eaten out	1209	1231	1240	1318	✓✓✓	6.3	9.1	yes
Expenditure on all food and drink	4137	4218	4197	4243	✓✓✓	1.1	2.6	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 2012 is statistically significant (if the change is more than twice its standard error).

Chart 1.1: UK average expenditure on food and drink, per person per week, 2015



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 non-alcoholic drink. However this is not directly comparable with the 2015 figure of £25.93 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 1.0 per cent between 2014 and 2015 and by 6.5 per cent between 2012 and 2015. Removing this overall rise in prices from the changes in expenditure on food and drink shows how expenditure in real terms changed since 2012.

Since 2012, spending on household food and drink in real terms fell by 6.3 per cent and eating out expenditure rose by 2.4 per cent. Spending on alcoholic drinks for household consumption fell by 5.8 per cent over the same period, whilst alcoholic drinks bought for consumption outside the home fell by 4.7 per cent. Later in the chapter the effects of food price rises on household spending is examined in more detail.

Context: Food Prices

Food prices rose sharply during the economic crash in 2008, and in subsequent years, food price inflation was generally higher than overall inflation. Food prices are driven by a number of factors, but international commodity and oil prices and exchange rates are significant ones.

In 2014 the food price inflation rate (as measured by the Consumer Price Index) fell below overall inflation, and food prices actually started to fall as inflation fell below 0% for the first time since 2006. This trend continued throughout 2015 and beyond (see chart 1.2).

In this chapter there are analyses of households' responses to changes in food prices, including 'trading down' to cheaper products of the same type, and buying less. 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.

Table 1.2: UK expenditure on food and drink at constant 2015 prices

	1975 [a] [c]	1985 [a] [c]	1995 [a] [b]	2010	2011	2012	2013	2014	2015	% change since 2014	% change since 2012
Retail price index (1975 = 100)	135	373	588	882	928	958	987	1010	1020	0.9	7.0
							£ per person per week				
Household food and drink			31.97	31.89	30.78	31.19	30.87	29.86	29.24	-2.1	-6.3
Food and drink eaten out			10.11 [d]	13.48	13.12	12.87	12.73	12.53	13.18	5.3	2.4
All food and drink			42.08	45.38	43.90	44.07	43.60	42.38	42.43	0.1	-3.7
Household food and drink exc. alcohol	29.52	26.19	28.86	28.34	27.40	27.67	27.52	26.53	25.93	-2.3	-6.3
Food and drink eaten out exc. alcohol			7.47 [d]	9.87	9.66	9.53	9.61	9.51	10.00	5.2	4.9
All food and drink exc. alcohol			36.33	38.21	37.06	37.21	37.13	36.04	35.93	-0.3	-3.4
% eaten out			21%	26%	26%	26%	26%	26%	0.28		
Household alcoholic drink			3.11	3.55	3.38	3.52	3.35	3.33	3.32	-0.4	-5.8
Alcoholic drink eaten out			2.64 [d]	3.61	3.46	3.34	3.12	3.02	3.18	5.4	-4.7
All alcoholic drinks			5.75	7.16	6.84	6.86	6.47	6.35	6.50	2.4	-5.3
% of alcoholic drinks eaten out			46%	50%	51%	49%	48%	48%	0.49		

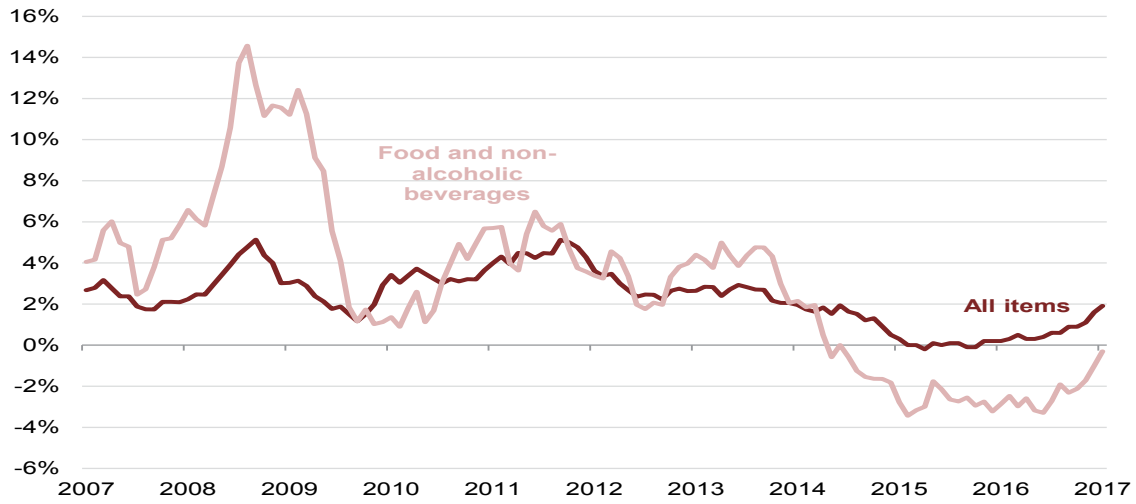
(a) Great Britain only.

(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.

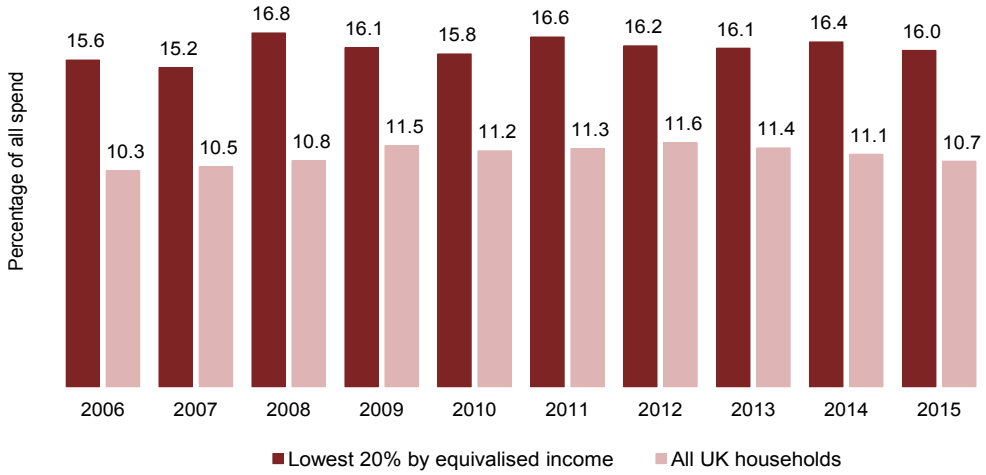
Chart 1.2: CPI 12-month inflation rates for all items and food and drink



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 1.3: 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 per cent of household spend went on food in 2015, while for the lowest 20 per cent of households by equivalised income it was higher at 16 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.

Although the percentage of spend on food remains relatively constant, the actual amount spent, and the products purchased will change in response to relative prices. In 2015, food price inflation was negative, i.e. food prices were falling.

1.6 Effects of food price rises

Food prices from 2007 to 2015

Food prices rose from September 2007, peaking in August 2008, before steadying at a new higher level until early 2014. Since then food prices have fallen steadily in real terms, and every month has seen a decrease (in the previous 12 month period) since July 2014.

Table 1.3 shows average food prices in 2015 for key food groups. On average, overall food prices fell by 0.5 per cent in 2015 below the all items rate of inflation as measured by the Retail Price Index. The Retail Price Index is used in Table 1.3 because the Consumer Price Index is not published at the detailed level required.

Table 1.3: Food price evolution, 2007=100

										% change since 2007	% change since 2012	% change since 2014
	2007	2008	2009	2010	2011	2012	2013	2014	2015			
All Items RPI	100	104	103	108	114	117	121	124	125	+25.1	+6.5	+1.0
RPI Food	100	109	115	119	126	130	135	135	132	+31.6	+1.4	-2.3
Bread	100	115	119	119	125	124	131	126	117	+17.2	-5.9	-6.9
Cereals	100	113	121	123	130	136	141	142	138	+38.1	+1.8	-2.9
Biscuits and cakes	100	111	115	120	133	139	143	145	145	+45.5	+4.9	+0.1
Beef	100	115	124	124	129	143	151	155	155	+55.2	+8.7	+0.1
Lamb	100	109	122	128	155	158	153	155	158	+57.5	-0.2	+1.8
Pork	100	115	124	128	135	145	152	150	146	+46.1	+1.1	-2.8
Bacon	100	109	115	113	116	116	123	122	117	+16.9	+0.6	-4.3
Poultry	100	113	116	116	122	123	128	128	120	+20.3	-2.6	-5.8
Fish	100	107	113	120	131	136	141	145	141	+41.1	+3.7	-3.0
Butter	100	123	121	138	159	164	167	177	171	+71.2	+4.6	-3.1
Cheese	100	115	120	122	129	133	134	139	135	+35.2	+1.3	-3.0
Eggs	100	127	131	136	137	135	133	130	119	+18.9	-12.1	-8.4
Milk, fresh	100	114	122	121	122	120	123	121	113	+12.6	-6.2	-6.9
Tea	100	106	118	133	138	139	142	138	132	+31.7	-5.1	-4.3
Coffee and other hot drinks	100	104	112	113	128	136	137	137	136	+36.1	+0.0	-0.3
Soft drinks	100	102	105	112	121	126	128	130	129	+28.7	+2.3	-1.0
Sugar and preserves	100	106	120	121	125	129	129	122	112	+12.2	-12.9	-8.1
Sweets and chocolates	100	107	115	122	132	138	143	146	146	+45.9	+5.4	-0.3
Potatoes	100	111	116	118	125	130	150	144	136	+36.4	+5.3	-5.6
Vegetables other than potatoes	100	108	115	118	121	124	127	120	117	+16.6	-5.9	-3.0
Fruit	100	107	112	121	126	129	139	140	140	+39.9	+8.6	+0.2
of which fresh fruit	100	108	112	121	123	123	136	135	135	+34.9	+9.6	-0.5
Alcoholic drink	100	104	108	112	118	122	126	128	129	+28.6	+5.5	+0.5

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 behaviour in response to higher prices.

For foods within a given food category, price changes are measured by the Retail Price Index, which contains a lower level of detail on food types than the Consumer Price Index. Family Food 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 2015 for different types of food and drink, including estimates of trading down. The table shows the true change in price 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 an increase in expenditure of 46.4 per cent for all households. Quantity of butter purchases decreased by 2.5 per cent and all households managed to reduce their unit price paid (trading down) by 16.6 per cent. Thus the dominant response to the 71 per cent price rise in butter between 2007 and 2015 was to spend more money on butter purchases.

Table 1.4: Consumers' response to food price rises between 2007 and 2015

Percentage changes between 2007 and 2015	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	+32	-7.2	-2.6	16.4	25.6	-4.8	-0.8
Bread	+17	-19.7	-20.1	4.6	10.9	11.1	19.0
Cereals	+38	5.6	7.9	30.3	34.1	-10.6	-1.3
Biscuits & cakes	+45	-1.0	2.5	26.5	25.2	-12.2	-15.7
Beef	+55	-18.7	-25.9	22.1	30.8	-3.4	13.7
Lamb	+58	-36.8	-59.6	-5.3	-3.0	-8.3	52.2
Pork	+46	-7.0	9.1	1.9	23.9	-24.7	-22.3
Bacon	+17	-6.6	-0.1	6.4	17.5	-2.7	0.6
Poultry	+20	-8.1	-1.4	20.5	47.9	8.8	30.2
Fish	+41	-11.5	-18.5	16.4	22.2	-6.6	15.8
Butter	+71	2.5	5.4	46.4	62.0	-16.6	-10.1
Cheese	+35	-5.3	2.1	16.2	29.6	-9.3	-6.1
Eggs	+19	17.8	46.9	24.8	49.0	-9.6	-13.8
Milk	+13	-7.9	-6.3	2.6	7.1	-1.7	-3.4
Tea	+32	-20.7	-4.2	0.7	14.5	-3.4	-7.9
Coffee & hot drinks	+36	-5.9	5.2	35.8	52.3	6.2	8.0
Soft Drinks	+29	-9.2	-16.4	17.2	18.6	0.2	11.4
Sugar & preserves	+12	-15.3	-7.8	12.9	10.2	19.3	8.6
Sweets & chocolates	+46	2.9	3.6	34.8	34.3	-10.3	-11.0
Potatoes	+36	-20.0	-18.0	-7.6	-1.3	-14.2	-11.0
Vegetables	+17	-3.3	-1.7	11.3	15.6	-1.7	2.5
Fruit	+40	-14.7	1.5	16.1	40.3	-2.0	-0.8
of which fresh fruit	+35	-9.6	7.0	20.0	46.6	-0.9	1.6
Alcoholic drinks	+29	-12.2	-13.7	18.0	37.3	4.4	23.9

Table 1.5: Main consumer reaction to food prices between 2007 and 2015 (a)

Main consumer reaction - 2015					
	Trading down	Buying more	Buying less	Spending less	Spending more
All households	Cereals (-11%)	Eggs	Beef	Lamb	Cereals
Trading down (-5%)	Biscuits & cakes (-12%)	Butter	Lamb	Potatoes	Poultry
Buying less (-7%)	Butter (-17%)	Cereals	Potatoes		Eggs
Spending more (+16%)	Eggs (-10%)	Sweets & Chocolate	Tea		Biscuits & cakes
	Pork (-25%)		Sugar & Preserves		Butter
	Pototoes (-14%)		Bread		Beef
	Sweets & chocolates (-10%)		Fruit		Coffee & hot drinks
			Alcoholic drinks		Sweets & chocolates
	Trading down	Buying more	Buying less	Spending less	Spending more
Income decile 1	Biscuits & cakes (-16%)	Eggs	Beef	Lamb	Alcoholic drinks
Trading down (-1%)	Butter (-10%)	Biscuits & cakes	Alcoholic drinks	Potatoes	Butter
Buying less (-3%)	Cheese (-6%)	Butter	Bread		Coffee & hot drinks
Spending more (+26%)	Eggs (-14%)	Cereals	Fish		Eggs
	Pork (-22%)	Coffee & hot drinks	Lamb		Fruit
	Potatoes (-11%)	Fresh fruit	Potatoes		Poultry
	Sweets & chocolates (-11%)	Pork	Soft Drinks		Sweets & chocolates
	Tea (-8%)	Sweets & chocolates	Sugar & preserves		

(a) a positive value indicates trading up

Table 1.4 shows that on average UK households purchased 7.2 per cent less food in 2015 than in 2007 while spending 16 per cent more. Households in income decile 1 (lowest income group) spent 26 per cent more on food in 2015 than in 2007 and purchased 2.6 per cent less.

Households saved an average of 4.8 per cent on their unit price paid by trading down to cheaper products. Trading down saved the lowest income households 0.8 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 spent 22 per cent more for 19 per cent less quantity of beef between 2007 and 2015, while in the same period households in income decile 1 (lowest income group) spent 31 per cent more buying 26 per cent less.
- Since 2007 UK households have bought noticebly less beef, lamb, potatoes, bread, and tea but more eggs and cereals.
- Since 2007 households in decile 1 (lowest income group) have bought less lamb, beef, bread, fish, soft drinks and potatoes, but more pork, eggs and cereals (excluding bread, cakes and biscuits).
- There is an element of trading up with purchases of sugar & preserves and bread, with expenditure either level or increased, but quantities reduced, a feature more marked in the lowest income group households.

Chapter 2 Purchases

2.1 Overview

Comparisons between 2011 and 2015, 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 a clear short term downward trend since 2012, including milk and milk products, meat products, potatoes and bread. Fresh fruit is on a short term upwards trend since 2012.

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 Methodology Papers.

Milk and cheese

Whole milk purchases were 5.1 per cent higher in 2015 than in 2012, equivalent to an increase of 15 mls per person per week. Over the same period, purchases of skimmed and semi-skimmed milks fell by 8.4 per cent. Household purchases of milk and milk products (excluding cheese) have fallen over the last 10 years from a peak in 2006 to a low in 2015. This was mainly driven by reductions in whole milk purchases. Purchases of semi-skimmed milk (which overtook whole milk in the early 1990s) and fully skimmed milk had been generally stable in the last 10 years.

Household purchases of cheese have fluctuated over the last ten years, and no clear trend has shown since 2010. Cheddar type cheeses account for around half of all cheese purchases by weight, at 62 grams per person per week.

Chart 2.1: UK purchases of milk and milk products, 1974 – 2015 (millilitres per person per week)

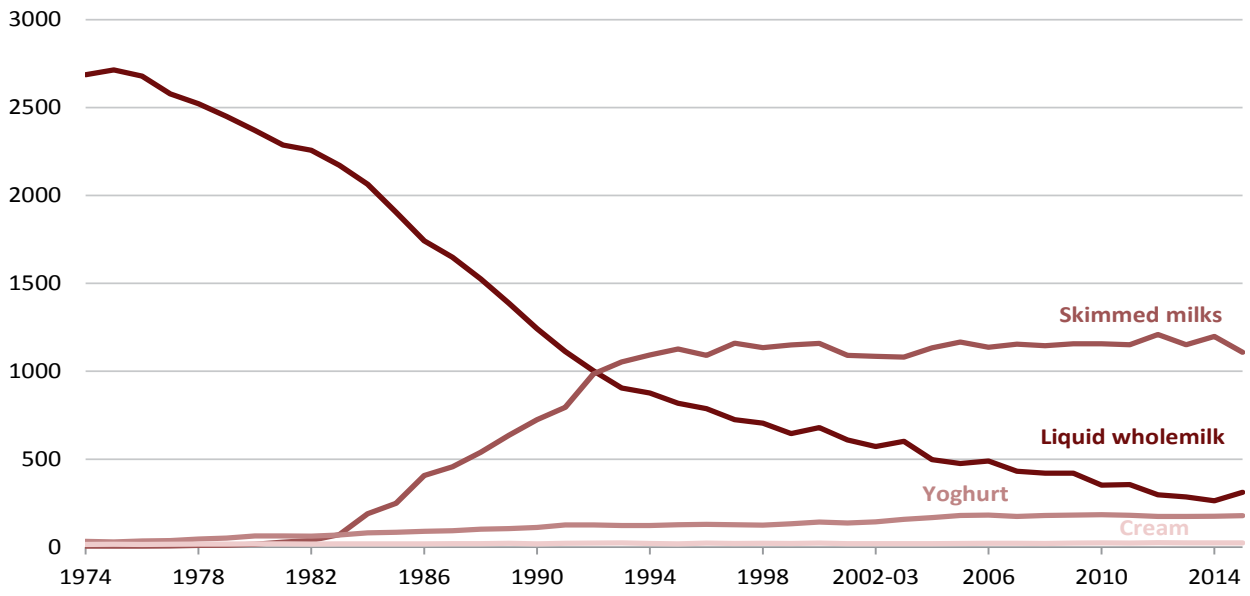


Table 2.1: Quantities of household purchases of food and drink in the UK

		2012	2013	2014	2015	RSE[a]	% change since 2014	% change since 2012	trend since 2012 [b]
							grams per person per week unless otherwise stated		
Milk and cream	(ml)	1901	1847	1849	1827	✓✓✓	-1.2	-3.9	↘
Liquid whole milk (including welfare and school milk)	(ml)	297	285	263	312	✓✓	+18.6	+5.1	
Skimmed milks	(ml)	1209	1152	1198	1108	✓✓✓	-7.5	-8.4	
Yoghurt and fromage frais	(ml)	195	191	191	194	✓✓✓	+1.6	-0.4	
Cheese		114	118	111	112	✓✓✓	+1.4	-1.6	
Cheese, natural		104	107	100	102	✓✓✓	+1.6	-1.8	
Processed cheese		10	11	10	10	✓✓	-0.4	-0.2	
Carcase meat		196	182	195	187	✓✓	-4.2	-4.4	
Beef and veal		104	97	101	102	✓✓✓	+1.0	-1.5	
Mutton and lamb		36	35	37	35	✓	-7.0	-5	
Pork		55	51	57	50	✓✓	-11.7	-9.5	
Non-carcase meat and meat products		793	766	760	742	✓✓✓	-2.4	-6.5	↘
Bacon and ham (cooked or uncooked)		108	103	102	98	✓✓	-3.7	-9.3	↘
Poultry (cooked or uncooked)		251	241	240	231	✓	-4.1	-8.1m	
Meat based ready meals and convenience meat products		164	164	163	164	✓✓✓	+1.1	+0.3	
Fish		144	146	144	146	✓✓✓	+1.7	+1.2	
White fish, fresh, chilled or frozen		21	19	19	18	✓	-7.8	-13.5	
Fish based ready meals and other fish products		52	54	49	52	✓	+6.8	+0.1	
Salmon, fresh, chilled or frozen		12	13	13	15	✓	+10.7	+26.8k	
Eggs	(no.)	1.8	1.8	1.9	1.9	✓✓✓	+0.8	+5.8	
Fats		178	171	158	162	✓✓✓	+2.7	-9.1	↘
Butter		41	42	40	42	✓✓	+5.0	+3.0	
Vegeatble and salad oil		61	58	52	59	✓	+14.8	-2.9	↘
Reduced and low fat spread		43	38	39	35	✓	-9.9	-17.7	↘
Sugar and preserves		124	123	109	106	✓✓	-2.2	-14.2	↘
Potatoes (fresh and processed)		724	682	671	675	✓✓✓	+0.7	-6.8	↘
Vegetables		1086	1102	1080	1103	✓✓✓	+2.1	+1.5	
Fresh green vegetables		183	179	181	181	✓✓✓	-0.2	-1.1	
Other fresh vegetables		551	569	564	575	✓✓✓	+2.0	+4.4	
Processed vegetables [c]		352	354	334	346	✓✓✓	+3.5	-1.6	
Fruit		1107	1114	1096	1093	✓✓✓	-0.3	-1.3	
Fresh fruit		744	744	766	773	✓✓✓	+1.0	+3.9	↗
Processed fruit and fruit products		362	370	330	319	✓✓✓	-3.3	-11.9	↘
Pure fruit juices	(ml)	282	288	247	235	✓✓	-4.5	-16.6	↘
Bread		615	607	555	543	✓✓✓	-2.1	-11.7	↘
White bread		266	247	222	221	✓✓✓	-0.3	-16.9	↘
Brown and wholemeal bread		158	156	150	143	✓✓✓	-5.0	-9.9	↘
Vienna and french bread		28	27	26	24	✓✓	-5.7	-13.0	↘
Cakes, buns and pastries		149	150	147	155	✓✓✓	+5.3	+3.7	
Biscuits and crispbreads		160	165	162	164	✓✓✓	+1.1	+2.4	
Other cereals and cereal products		542	549	560	566	✓✓✓	+1.0	+4.5k	
Beverages		53	52	52	53	✓✓✓	+1.4	-0.4	
Soft drinks [d]	(ml)	1633	1664	1546	1531	✓✓✓	-1.0	-6.3m	
Not low calorie	(ml)	884	878	774	745	✓	-3.7	-15.7	↘
Low calorie	(ml)	749	786	772	786	✓✓	+2	+4.9	
Confectionery		126	128	130	132	✓✓✓	+1.6	+4.7	
Alcoholic drinks	(ml)	700	694	675	678	✓✓	+0.5	-3.2	

(a) Relative Standard Error: 3 ticks: < 2.5%, 2 ticks: 2.5% - 5%, 1 tick: 5% - 10%, no ticks: 10% - 20%, cross: >20%, - not available.
(b) An arrow indicates a statistically significant linear trend since 2012, see website for more details.
(c) Includes frozen, canned and dried vegetables.
(d) Converted to unconcentrated equivalent by applying a factor of 5 to concentrated and low calorie concentrated soft drinks.

Fruit and vegetables

Household purchases of fresh and processed vegetables (excluding potatoes) have shown no clear trend since 2012. There was an increase of 2.1 per cent on 2014 to 1,103g per person per week in 2015, mainly reflecting an increase in 'processed' vegetables. Purchases have generally been declining since 2005, mainly due to a decrease in purchases of fresh green vegetables, which have fallen approximately 25 per cent since 2005.

Potato purchases continued their long term downward trend, with a 6.8 per cent reduction since 2012. Purchases are 20 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 approximately 17 per cent down from their peak in 2006 falling to 1093g per person per week on average in 2015. Purchases are 1.3 per cent down on 2012. Fresh fruit accounts for two thirds of total fruit and fruit juice purchases.

Fruit juice purchases have continued their sharp decline since 2006. Purchases fell by 17 per cent compared to 2012.

Overall purchases of fruit and vegetables rose slightly between 2012 and 2015 driven by consumers spending more on fresh vegetables and fresh fruit. Spending on processed vegetables and fruit fell during the same period.

Chapter 3 analyses fruit and vegetable purchasing over time in terms of recommended daily consumption levels.

In 2015, 3.8 per cent of all the fresh fruit and vegetables entering the household came from free sources, mainly gardens and allotments. This percentage is subject to year on year fluctuations depending on growing conditions in the UK.

Chart 2.2: UK purchases of fresh fruit and vegetables (excluding potatoes), grams per person per week 1942 – 2015

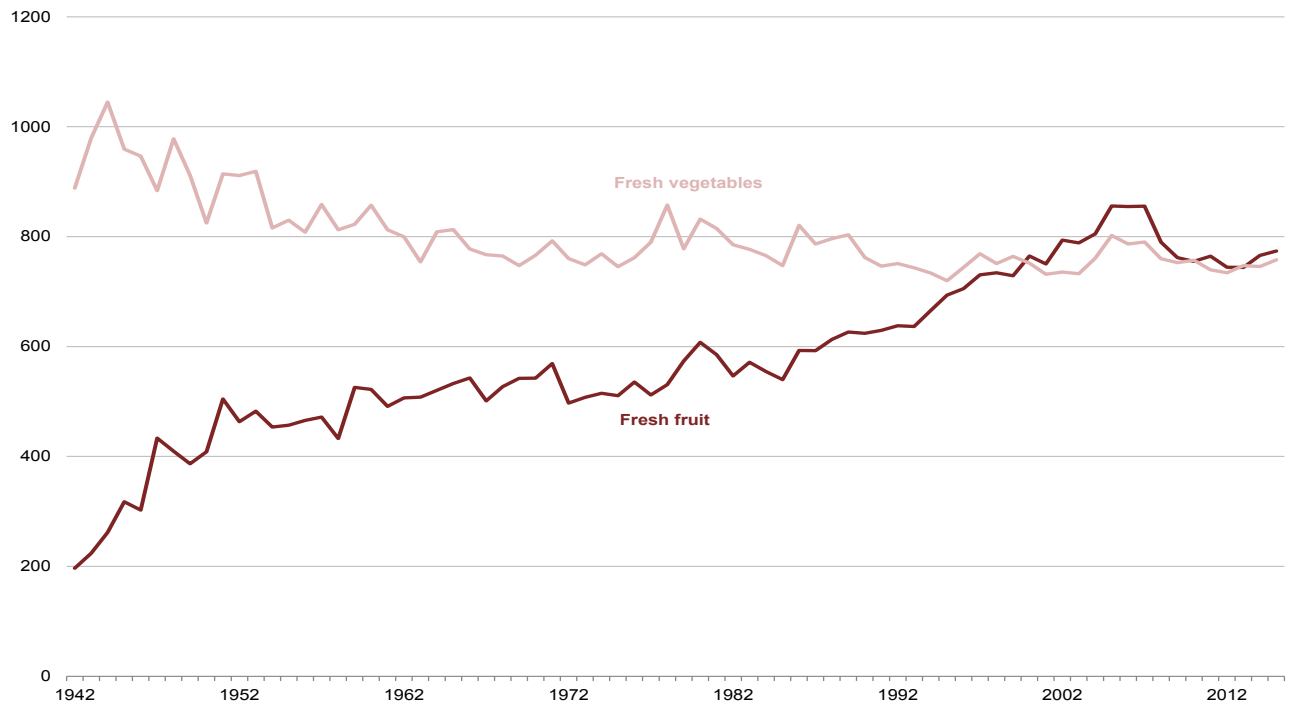
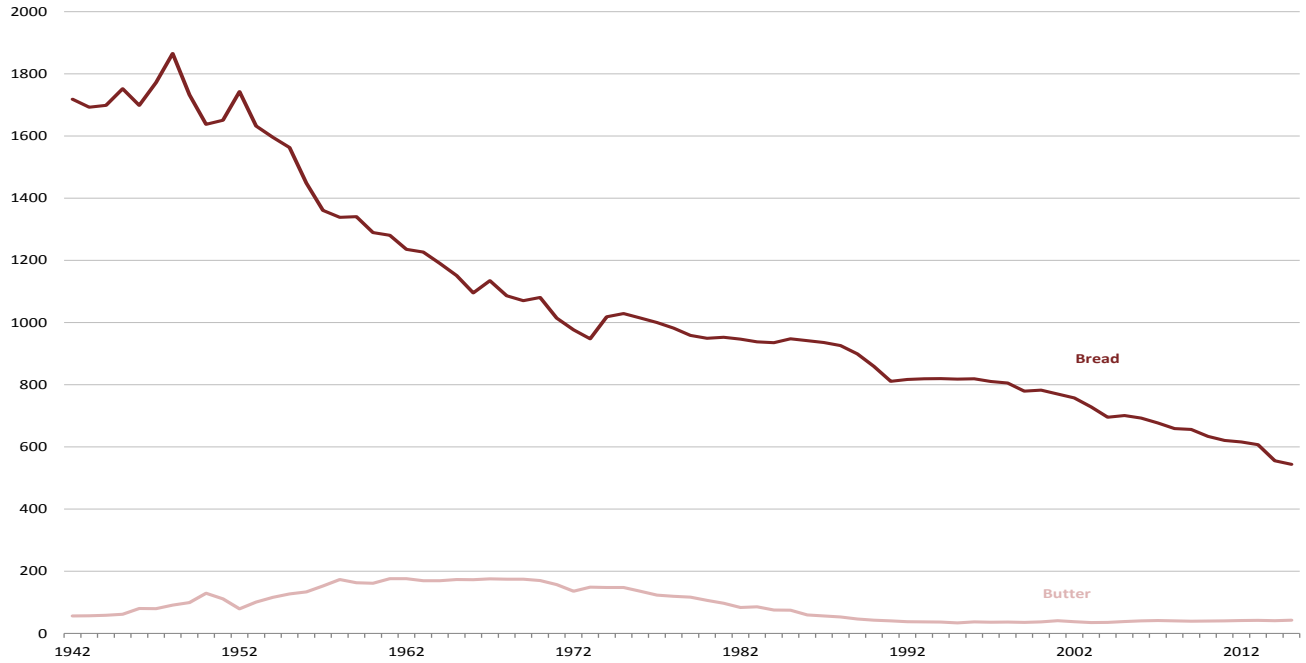


Chart 2.3: UK purchases of bread and butter, 1942 – 2015 (grams per person per week)



Fats (including oils)

Household purchases of fats fluctuated very slightly between 2005 and 2010 and have fallen steadily since 2010. Despite a rise of 2.7 per cent since 2014, purchases have fallen 9.1 per cent since 2012, a change equivalent to 16 grams per person per week. Reduced and low fat spreads purchases continued their decline over the decade and were 18 per cent lower than in 2012 and 10 per cent lower compared to 2014. 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 3.0 per cent higher than in 2012, at 42 grams per person per week. Oils accounted for just over a third of all fat purchases, with average weekly purchases of 59 mls.

Bread

Purchases of bread are on a long term downward trend, with white, brown and wholemeal (which together account for two thirds of purchases) falling by 12 and 17 per cent respectively between 2012 and 2015. Purchases of other breads which include continental and specialty breads, were 6.1 per cent lower in 2015 than in 2012.

75 years ago...

Bread was not rationed until after World War II ended, but the “National Loaf” of wholemeal bread replaced the ordinary white variety, to the distaste of most housewives who found it mushy, grey and easy to blame for digestion problems. From a peak in 1948 household bread purchases have fallen consistently to the present day. The growing availability and popularity of other foods such as rice and pasta have contributed to its decline, together with the rise of pre-packaged sandwiches (which aren’t included in household purchases).

Butter was one of the first foods to be rationed in 1940 along with bacon and sugar. Supplies were kept a little below the pre-war level mainly by offsetting the fall in imports with increased home production of margarine. In January 1940 a ration of butter was 4 ounces per week but in July a combined ration of 6 ounces of butter and margarine was instituted of which not more than 2 ounces could be taken as butter.

Meat

Purchases of raw carcase meat have been on a downward trend since 2010, and after a spike last year, fell again by 4.2 per cent in 2015. Beef, which accounts for around half of raw carcase meat purchases increased by 1.0 per cent on 2014, but fell by 1.5 per cent on 2012. Purchases of pork were 9.5 per cent down on 2012 and 12 per cent down on 2014.

Purchases of 'non-carcase meat and meat products' have declined since 2012, by 6.5 per cent, equivalent to 51 grams per person per week. Most cooked and canned meat categories show downward trends.

Fish

Household purchases of fish and fish products have fallen steadily since 2006 but picked up in 2015 to show a rise of 1.2 per cent on 2012 and 1.7 per cent on 2014 which equates to a rise of 2 grams per person per week. Ready meals, which account for over one third of purchases, rose to 2012 levels after a fall in 2014. Purchases were up by 6.8 per cent on 2014 equivalent to 3 grams per person per week. Purchases of salmon rose by 27 per cent on 2012 and 11 per cent on 2014.

Chart 2.4: UK purchases of selected meats (grams per person per week), 1942 – 2015

75 years ago...

Before 1953, chickens were mainly reared for their eggs not their meat. In that year the first chicken "broiler shed" opened and from this point on chicken's popularity grew and it is now our most popular meat.

During and just after World War II pork and fish purchases were affected in different ways. During the war home production of bacon was sacrificed to save on animal feed and with rationing and short supplies of bacon and ham plus the high cost of pork compared to other meats, this led to a sharp fall in purchases.

Communities set up neighbourhood Pig Clubs to buy a pig, then feed it scraps from the households involved. In many towns, the councils put food waste bins in the streets into which went peelings and scraps to be sent to farms to feed pigs. From a spike in 1944 when supplies were around 90 per cent of pre-war levels, purchases fell to their lowest point in 1947 and gradually increased to mid-war levels by 1950.

Fish was not rationed during the war. Prices increased considerably as the war progressed but they were controlled from 1941. Like other non-rationed items, fish was rarely freely available as supplies dropped to 30 per cent of pre-war levels and long queues built up at fishmongers. After the war, with the return of British vessels to fishing and the greatly increased populations of fish that built up as a result of the suspension of large-scale fishing during the war, supplies of fresh fish were again abundant. With the accompanying shortage of meat, the result was to raise the consumption of fish. This peaked in 1946 and had fallen back to mid-war levels by 1950.

Soft drinks and beverages

Household purchases of soft drinks were 6.3 per cent lower in 2015 compared to 2012, a fall of 15 mls per person per week. Within this category, household purchases of 'not low calorie soft drinks' are on a downward trend since 2012 and fell by 16 per cent between 2012 and 2015 from 884 to 745 grams per person per week. This was mirrored by an upward trend in 'low calorie soft drinks' with household purchases 4.9 per cent higher in the same period up from 749 to 786 grams per person per week. The beverages category mainly comprises tea and coffee – fruit juice is covered in the Fruit and Vegetables section.

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 2009. Purchases in 2015 were down 3.2 per cent on 2012 despite a small rise of 0.5 per cent on 2014. Intake of alcohol (in grams) is examined in Chapter 3.

2.3 Home-grown food

In 2015, 3.8 per cent of fresh fruit and vegetables entering the household came from free sources, mainly gardens and allotments. This is up from 2.8 per cent in 2014. In 2015, the percentage of eggs entering the household which were free or home produced was 3.8 per cent.

The total amount of home-grown fruit and vegetables was 74 grams per person per week in 2015, whilst household purchases of fresh fruit and vegetables (including potatoes) were 1,887 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 .

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

	2009	2010	2011	2012	2013	2014	2015
Fresh green beans	29	29	33	28	29	28	29
Potatoes	3	2	7	3	3	3	4
Onions, leeks and shallots	3	3	4	3	4	2	5
Tomatoes	6	7	6	5	6	5	6
All other vegetables	4	3	4	3	3	3	4
Apples	3	10	9	3	8	3	3
Soft fruit	5	8	10	9	12	6	12
All other fruit	8	1	2	1	1	8	7
Eggs	5.1	5.6	5.7	5.0	7.0	5.0	3.8
Overall percentage	**3.3**	**3.6**	**5.0**	**2.7**	**3.5**	**2.8**	**3.8**

75 years ago...

The Ministry of Food launched its 'Dig for Victory' campaign in October 1939. The campaign was led by an agricultural economist, Professor John Raeburn, who was recruited to the Ministry of Food in 1939, and who would run the campaign until the end of the war.

The campaign encouraged people to transform their front and back gardens into vegetable plots. The goal was to replace imported food, thus freeing up shipping space for more valuable war materials, and to make up for food that was sunk in transit. The campaign's tagline "Spades not ships!" encouraged citizens to start planting on all available land. The National Food Survey reported that around 18 per cent of fruit and vegetable consumption (by value) was home grown during the war years, falling to around 11 per cent thereafter.

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 2012 and 2015, purchases of takeaway food brought home have remained similar. Expenditure on takeaway foods was £1.90 per person per week in 2015, 6.2 per cent higher than in 2012.

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

Purchases	2011	2012	2013	2014	2015	RSE [a]	% change since 2014	% change since 2012	trend since 2011 [b]
				grams per person per week					
Total Meat	55	56	54	56	54	✓✓	-5.0	-3.9	
Total Fish	11	11	10	10	11	✓✓	13.9	8.1	
Total Vegetables	46	43	41	42	45	✓✓	6.6	5.7	
Total Bread	4	5	5	5	5	✓	-4.1	-7.5	
Total Other cereals [c]	40	44	41	41	45	✓✓	8.0	2.2	
Total Miscellaneous	2	2	2	2	2	✓	0.9	12.1	
Expenditure	**2011**	**2012**	**2013**	**2014**	**2015**	**RSE [a]**	**% change since 2013**	**% change since 2011**	
				pence per person per week					
Total Meat	70	72	73	77	74	✓✓	-3.7	2.5	
Total Fish	19	18	18	18	21	✓✓	16.7	17.5	
Total Vegetables	27	27	27	28	30	✓✓	6.4	11.4	
Total Bread	6	8	8	9	8	✓	-9.8	3.6	
Total Other cereals [c]	45	51	47	47	53	✓✓	12.6	4.7	
Total Miscellaneous	3	3	4	3	4	✓	5.8	16.1	
Total	171	179	177	183	190		3.9	6.2	

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

(b) An arrow indicates a statistically significant linear trend since 2012, 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 notable trends in purchases of some categories of eating out food and drink since 2012, such as:

- Confectionery down 11 per cent, and alcoholic drinks down 24 per cent
- Potatoes up 15 per cent, and vegetables up 14 per cent.
- Fresh and processed fruit nearly doubled, with an increase of 96 per cent.

75 years ago...

In May 1942, an order was passed that meals served in hotels and restaurants must not cost over 5 shillings per customer, must not be of more than three courses, and at most one course could contain meat, fish or poultry. This was partly in response to increasing public concerns that “luxury” off-ration foodstuffs were being unfairly obtained by those who could afford to dine regularly in restaurants.

The National Food Survey started reporting eating out in 1994.

Table 2.4: UK eating out purchased quantities of food and drink, 2011-2015

		2011	2012	2013	2014	2015	RSE[a]	% change since 2014	% change since 2012	trend since 2012[b]
Number of households in sample		5692	5596	5144	5134	5080				
Number of persons in sample		13448	13196	12144	12150	12062				
Eating out purchases										*grams per person per week unless otherwise stated*
Alcoholic drinks										
average across whole population	ml	394	355	321	320	326	✓✓	+1.9	-8.3	
average excluding under 14's	ml	472	426	386	320	326	✓✓	+1.9	-23.6	↘
Soft drinks inc. milk drinks	ml	269	254	264	267	259	✓✓✓	-3.1	+1.7	
Other food products [c]		118	103	107	117	127	✓✓	+8.9	+23.4	↗
Beverages	ml	117	118	115	118	117	✓✓	-0.5	-0.7	
Meat and meat products		75	76	70	78	83	✓✓✓	+5.9	+8.6	k
Sandwiches		64	63	64	59	64	✓✓	+7.0	+0.2	
Potatoes (fresh and processed)		62	62	61	65	71	✓✓✓	+8.9	+15.2	↗
Indian, Chinese or Thai food		30	28	31	29	31	✓	+6.3	+10.9	
Vegetables		27	27	25	28	31	✓✓	+9.6	+14.3	↗
Ice cream, desserts and cakes		25	24	25	24	26	✓✓	+7.1	+7.8	
Cheese and egg dishes or pizza		22	21	20	22	22	✓✓	+2.3	+5.2	
Salads		16	17	18	19	19	✓✓	+1.7	+9.8	
Rice, pasta or noodles		15	14	15	16	17	✓✓	+6.1	+17.4	k
Fish and fish products		13	14	13	14	15	✓✓	+5.2	+8.0	
Fresh and processed fruit		12	11	12	12	22	✓✓	+90.5	+95.6	↗
Confectionery		9	8	8	7	7	✓✓	+0.2	-11.2	↘
Soups		10	9	9	9	9	✓	+4.1	+1.5	
Bread		7	7	7	7	7	✓✓	+0.6	+3.2	
Crisps, nuts and snacks		7	6	7	6	7	✓✓	+10.1	+7.0	
Biscuits and chocolate		3	2	2	2	2	✓	+5.5	-1.4	
Yoghurt and fromage frais		2	2	1	2	2		-5.3	-15.5	
Breakfast cereals		1	1	1	1	1		+76.3	+57.1	

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

(b) An arrow indicates a statistically significant linear trend since 2012, see website for more details.

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

Chapter 3 Dietary Trends

3.1 Overview

In this chapter food and drink from household and eating out purchases combined 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 time series 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 per cent 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

- Total energy intake from all food and drink for all households is on a downward trend, 2.9 per cent lower in 2015 than in 2012.
- Saturated fatty acids provided 13.1 per cent of eating out food and drink energy in 2015. Over the three years 2012 to 2015, intake of unsaturated fatty acids showed an upward trend.
- Intakes of Non-Milk Extrinsic Sugars (NMES) measured as a percentage of food and drink energy (excluding alcohol), were lower in 2015 than in 2012. Intake continues to exceed recommended maximum levels.
- The average intake of sodium, excluding table salt, has been on a declining trend since 2007, but remained 11 per cent above the recommended maximum grams per day in 2015.
- Mean intakes of all vitamins and minerals were close to or met the population-weighted Reference Nutrient Intake, where one is set.

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.

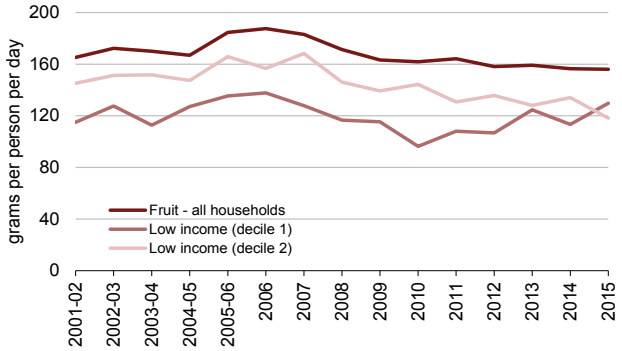
Definitions of certain nutritional terms can be found in the glossary.

3.3 Fruit and vegetables

Government advice on healthy eating is primarily in terms of the “eatwell guide” and the 5 A DAY message. Both recommend a significant increase on current consumption of fruit and vegetables. You can find Public Health guidance on Family Food provides reliable evidence on trends, which are examined in detail here.

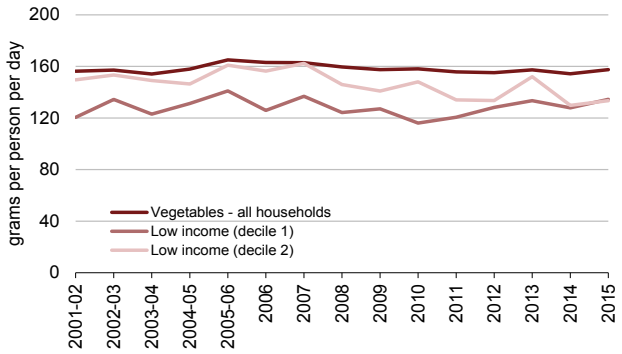
Increasing the consumption of fruit and vegetables is part of Government policy on obesity and healthy eating. Family Food provides evidence of recent reductions in consumption using household purchases as a proxy for consumption. This relies on the assumption that household wastage rates of fruit and 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 14 per cent since then, although the trend is more stable since 2009.
- Lowest income households (decile 1), purchased 11.2 per cent more fruit in 2015 than in 2008, reversing the trend reported in 2014.
- Income decile 2 households purchased 19 per cent less fruit in 2015 than in 2008, eating less fruit than decile 1.

Chart 3.1b: Trends in vegetable purchases



- Overall purchases of vegetables peaked in 2005 and have fallen 1.3 per cent since 2008.
- Lowest income households (decile 1) purchased 8.2 per cent more vegetables in 2015 than in 2008.
- Income decile 2 household purchases increased sharply in 2013, fell back in 2014 but rose slightly in 2015.

Table 3.1: Household purchases of fruit and vegetables

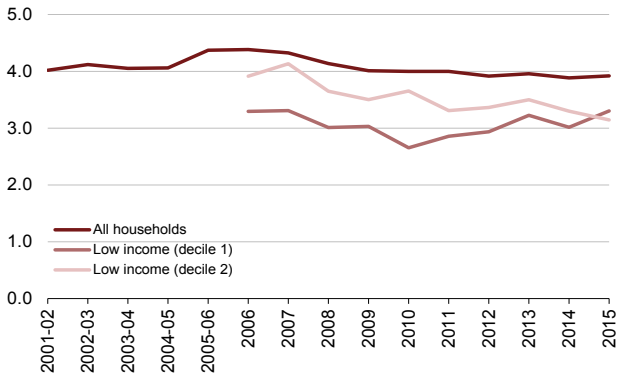
Grams per person per week	2008	2009	2010	2011	2012	2013	2014	2015	% change since 2008
All households									
Fruit and vegetables excluding potatoes	2317	2246	2240	2240	2193	2216	2176	2195	-5.2
Fruit	1199	1143	1133	1150	1107	1114	1096	1093	-8.9
Vegetables	1118	1103	1107	1090	1086	1102	1080	1103	-1.3
Income decile 1 households									
Fruit and vegetables excluding potatoes	1686	1697	1487	1600	1645	1807	1688	1850	9.7
Fruit	816	807	675	756	747	873	793	908	11.2
Vegetables	870	890	812	844	898	934	895	942	8.2
Income decile 2 households									
Fruit and vegetables excluding potatoes	2044	1961	2047	1853	1885	1960	1847	1762	-13.8
Fruit	1022	975	1010	915	950	896	939	827	-19.1
Vegetables	1022	986	1037	939	935	1064	908	934	-8.6

Table 3.1 shows that:

- Fruit and vegetable purchases were 5.2 per cent lower in 2015 than 2008.
- For income decile 1 the drop is 9.7 per cent, and for decile 2 it is 14 per cent.
- In 2015 income decile 1 households purchased 16 per cent less fruit and vegetables than all households, and 5.0 per cent more than those in income decile 2.

Family Food estimates of fruit and vegetables can be compared against 5 A DAY consumption guidelines by assuming 80 grams per portion. This 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 3.9 portions of fruit and vegetables per person per day in 2015.
- Lower income households (deciles 1 and 2) have consistently purchased smaller quantities of fruit and vegetables.
- Income decile 1 households purchased 3.3 portions of fruit and vegetables per person per day in 2015, while Income decile 2 households purchased 3.1 portions .

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 levels have dropped since. The Health Survey for England also shows:

- For adults, fewer men than women consumed the recommended five or more portions of fruit and vegetables on the previous day (25 per cent and 28 per cent respectively). For children,20 per cent of boys and girls consumed at least five portions on the previous day.

- Higher consumption was also associated with higher income, and vice versa: 30 per cent of men and 35 per cent of women in the highest income quintile had consumed five or more portions on the previous day compared with only 19 per cent of men and 23 per cent of women in the lowest quintile. The same pattern was seen in children.

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 2012/13-2013/14 show that mean consumption was below 5 portions per day – 4.0 portions/day for adults and 2.8 portions/day for children 11-18 years. There was no difference in consumption when comparing 2008/10 with 2012/14.

WRAP estimates that in 2015 households in the UK generated 7.3 million tonnes of food waste, of which 4.4 million tonnes was avoidable (i.e. food that could have been eaten). This is equivalent to £470 per year for the average household. The report is available at http://www.wrap.org.uk/content/household-food-waste-uk-2015-0.

3.4 Energy intake

Levels of obesity are linked with the risk of developing diseases such as; type 2 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, please see http://content.digital.nhs.uk/catalogue/PUB20562.

Reducing levels of obesity is Government policy, and details can be found at https://www.gov.uk/government/policies/obesity-and-healthy-eating. 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.

Context: Nutritional intake estimates

It is a widely recognised characteristic of self reported diary surveys such as Family Food that survey respondents tend to under report their purchases (and so implied nutrient intakes based on purchased quantities are also likely to be underestimates). Empirical comparisons of sales and duty data for alcohol in particular suggest that reported alcohol consumption could be 40-60 per cent lower than the reality. For other food and drink, reporting is likely to be closer to actual purchases, but underreporting is likely to feature and some food types may be underreported to a greater extent than others.

Although such surveys are completely confidential, respondents may under report for a range of reasons, from self consciousness to simply forgetting to record purchases. 'Top up' and eating out purchases are probably more likely to be missed than the main household shop. There is no evidence to say whether levels of underreporting have changed over time but it is plausible that changes in household shopping and eating patterns may have contributed to increased underreporting.

Users should bear this issue in mind, when considering trends in estimated intakes and the values for individual years. For example the downward trend in energy intake estimates can appear counter-intuitive at face value given other evidence on the prevalence of obesity. Factors affecting obesity and other health issues are complex. Family Food trends are broadly consistent with other sources, such as the National Diet and Nutrition Survey which also show reported energy intake in decline, although NDNS intakes are also known to be underreported.

There are much more data and analysis available about health and diet from Public Health England.

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
2014					1916	226	2142	1916	226	2142	70
2015					1933	240	2173	2009	240	2173	68

(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 3.3.
(e) Change in methodology makes the estimate of the year on year change unreliable between 2000 and 2001-02.

Based on food and drink purchases, total energy intake per person was 1.6 per cent lower in 2015 than in 2012. 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 2173 kcal per person per day in 2015. However, users should use estimates of absolute energy intakes with care: see ‘Context’ below.

Energy intake from eating out was 9.6 per cent lower in 2015 than in 2012. Average energy intake from eating out was 240 kcal per person per day in 2015 accounting for 11 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.

Chart 3.3: Average energy intake from food and drink since 1940

- Energy intake per person declined 14 per cent between 1974 and 2015 (shown as 68 for 2015 in the index of change).

Chart 3.4: Energy derived from household food and drink 2001-2015

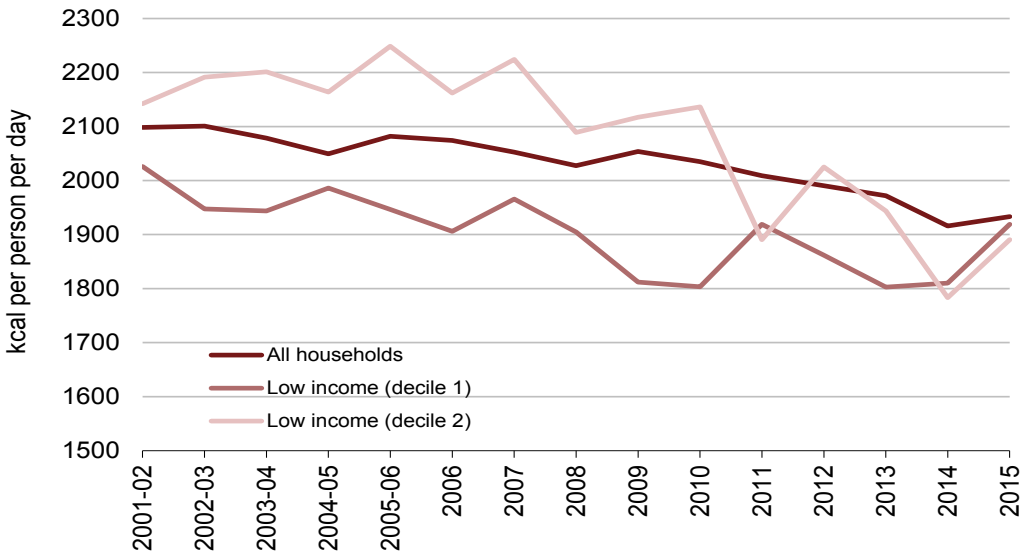


Chart 3.4 shows that:

- Energy intake from household food across all households was 4.7 per cent lower in 2015 than in 2008.
- Income decile 2 households (second lowest group) energy intake from household food rose in 2015 to 1828 kcals per person per day – below the national average and 12 per cent less than in 2008.
- Income decile 1 households (lowest income group) energy intake from household food rose by 5.5 per cent in 2015 to 1910 kcals per person per day.
- Income decile 1 households (lowest income group) had 0.3 per cent less energy intake from household food in 2015 than in 2008.

Table 3.3 shows the contribution of foods to total household energy intake.

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)	30	1.6%
Other milk and cream	132	6.8%
Cheese	56	2.9%
Carcase meat	51	2.6%
Non-carcase meat and meat products	201	10.4%
Fish	30	1.6%
Eggs	17	0.9%
Fats	162	8.4%
Sugar and preserves	54	2.8%
Fresh and processed potatoes	42	2.2%
Fresh green vegetables	5	0.2%
Other fresh vegetables	18	0.9%
Processed vegetables	130	6.7%
Fresh fruit	45	2.3%
Processed fruit and fruit products	50	2.6%
Bread	181	9.4%
Flour	30	1.6%
Cakes, buns and pastries	75	3.9%
Biscuits and crispbreads	110	5.7%
Other cereals and cereal products	251	13.0%
Beverages	6	0.3%
Other foods	80	4.1%
Soft drinks	38	2.0%
Confectionery	82	4.3%
Alcoholic drinks	56	2.9%
Total	**1934**	**100.0**

(a) includes energy from alcoholic drinks

Table 3.4 Energy and nutrient 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]	162	7	4	316	..	3	123	18	4	39	88
Cheese	56	5	3	95	..	-	106	5	-	22	51
Carcase meat	51	3	1	2	..	-	17	3	-	..	..
Non-carcase meat and meat products	201	13	5	28	1	..	492	10	2	65	126
Fish	30	2	..	12	..	..	68	3	..	6	3
Eggs	17	1	..	6	..	-	20	6	-	-	17
Fats and oils	162	18	6	3	..	..	75	9	..	78	130
Sugar and preserves	54	..	..	2	..	14	3	..	..	1	..
Fresh potatoes	42	..	..	4	..	-	2	8	7	-	-
Fresh green vegetables	5	..	..	9	..	-	2	14	6	91	15
Other fresh vegetables	18	..	..	16	..	-	8	19	7	1435	239
Processed vegetables	130	5	1	25	1	1	178	23	6	269	50
Fresh fruit	45	..	..	10	..	-	65	12	16	33	5
Processed fruit	50	3	1	9	..	5	14	11	12	14	3
Bread	181	2	1	116	1	..	329	24	..	2	7
Flour	30	..	..	8	..	-	..	1	-	-	-
Cakes, buns and pastries	75	3	1	17	..	5	68	3	..	4	13
Biscuits	110	5	3	27	..	6	78	3	..	3	1
Other cereal products [b]	251	5	2	79	3	4	264	39	1	44	26
Beverages	6	..	..	6	..	1	7	8	..	..	1
Other food [c]	80	4	1	23	..	6	375	14	1	98	19
Soft drinks	38	-	-	8	..	10	14	3	10	37	6
Confectionery	82	3	2	20	..	11	18	2	..	5	6
Alcoholic drinks	56	..	..	6	..	1	6	2	..	..	..
Total household intake	1933	81	30	849	10	66	2	238	72	2245	809
Percentage of total intake per person per day from household purchases											
	%	%	%	%	%	%	%	%	%	%	%
Milk and cream [a]	8	9	14	37	2	4	5	7	5	2	11
Cheese	3	6	10	11	-	-	5	2	-	1	6
Carcase meat	3	4	5	-	3	-	1	1	-	-	-
Non-carcase meat and meat products	10	16	15	3	11	-	21	4	3	3	16
Fish	2	2	1	1	2	-	3	1	-	-	-
Eggs	1	1	1	1	2	-	1	3	-	-	2
Fats and oils	8	22	19	-	-	-	3	4	-	3	16
Sugar and preserves	3	-	-	-	1	21	-	-	-	-	-
Fresh potatoes	2	-	-	-	2	-	-	3	10	-	-
Fresh green vegetables	-	-	-	1	1	-	-	6	8	4	2
Other fresh vegetables	1	-	-	2	3	-	-	8	10	64	30
Processed vegetables	7	7	3	3	9	1	8	10	9	12	6
Fresh fruit	2	-	-	1	2	-	3	5	23	1	1
Processed fruit	3	3	2	1	2	7	1	5	16	1	-

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	9	3	2	14	14	..	14	10	..	..	1
Flour	2	..	..	1	2	-	..	1	-	-	-
Cakes, buns and pastries	4	4	4	2	3	7	3	1	..	..	2
Biscuits	6	6	8	3	5	8	3	1	..	..	..
Other cereal products [b]	13	7	6	9	24	6	11	16	1	2	3
Beverages	..	..	..	1	2	1	..	3	..	..	..
Other food [c]	4	5	4	3	4	9	16	6	1	4	2
Soft drinks	2	-	-	1	..	15	1	1	13	2	1
Confectionery	4	4	6	2	3	17	1	1	..	..	1
Alcoholic drinks	3	..	..	1	3	2	..	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

3.5 Nutrient intakes from eating out

Eating out accounted for 11 per cent of total energy intake in 2015. 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 3.5.

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

3.6 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. In July 2015 SACN published its report on carbohydrates and health, which included new recommendations for intake of free sugars and fibre, based on new definitions. Work to produce intake estimates based on the new definitions is underway. In this report sugar and fibre intakes are reported based on the old definitions and compared with the original recommendations.

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 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

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	13	1	..	4	..	..	26	1	..	7	2
Meat and meat products	27	2	0.6	7	..	..	59	2	..	22	11
Fish and fish products	5	..	-	1	-	..	5	..	..	..	..
Cheese and egg dishes and pizza	7	..	0.2	4	-	..	11	2	..	5	5
Potatoes	18	1	..	1	..	-	3	5	2	..	..
Vegetables	4	..	-	2	-	..	9	2	..	46	8
Salads	2	..	-	1	-	..	2	1	..	20	4
Rice, pasta and noodles	3	..	-	..	-	-	1	..	..	..	..
Soups	1	..	-	..	-	..	6	..	-	..	..
Breakfast cereals	..	..	-	..	-	..	1	..	..	..	..
Fruit	1	..	-	..	-	..	..	..	..	1	..
Yoghurt	..	..	-	..	-	..	..	..	-	-	..
Bread	3	..	-	1	-	-	5	..	-	..	1
Sandwiches	18	1	0.3	10	..	..	39	2	..	12	6
Beverages	2	..	-	2	-	..	1	..	..	..	..
Soft drinks including milk	11	..	..	6	-	2	2	1	1	1	1
Alcoholic drinks	19	..	-	3	-	1	4	4	..	..	..
Confectionery	5	..	..	1	-	1	1	..	-	..	..
Ice cream, desserts and cakes	12	1	0.3	3	-	1	9	..	..	4	5
Biscuits	2	..	-	..	-	..	1	..	-	..	..
Crisps, nuts and snacks	5	..	..	..	-	..	7	..	..	..	..
All food & drink eaten out [a]	155	6	2.0	49	0.7	6	194	22	4	118	44
As a percentage of total intake per person per day from food and drink purchased for consumption outside the home											
	%	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Indian, Chinese and Thai meals or dishes	9	11	6	8	19	3	13	5	2	6	4
Meat and meat products	17	24	29	15	19	1	30	9	4	18	26
Fish and fish products	3	4	2	3	2	..	3	2	..	..	1
Cheese and egg dishes and pizza	5	7	8	9	6	..	6	11	3	4	11
Potatoes	12	12	5	2	8	-	2	22	35	..	1
Vegetables	2	2	1	4	7	1	5	8	8	39	18
Salads	1	1	1	2	3	..	1	3	10	17	8
Rice, pasta and noodles	2	1	1	1	2	-	1	1	..	..	..
Soups	..	..	..	..	1	..	3	1	-	..	..
Breakfast cereals	..	..	..	..	..	..	1	..	..	..	..
Fruit	..	..	..	..	..	1	..	1	5	1	..
Yoghurt	..	..	..	1	..	..	..	..	-	-	..
Bread	2	2	2	3	2	-	3	1	-	..	1
Sandwiches	12	14	13	20	14	..	20	9	5	10	13
Beverages	1	1	2	4	2	2	1	1	1	..	1
Soft drinks including milk	7	2	3	12	1	43	1	3	21	1	3
Alcoholic drinks	12	..	..	7	6	22	2	18	5	..	..
Confectionery	3	3	5	3	1	11	..	..	-	..	..
Ice cream, desserts and cakes	8	10	14	6	4	13	5	2	1	3	11
Biscuits	1	1	1	1	1	2	..	..	-	..	..
Crisps, nuts and snacks	3	5	6	1	2	2	4	1	1	..	..

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.

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

Based on the food and drink purchases, average micronutrient intakes were all above or close to the weighted reference nutrient intakes[1] (RNI) in 2015.

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

Income decile 1 households (lowest income group) had 7.9 per cent less energy intake from household food in 2015 than in 2007.

Other demographic variables as well as income are important and not considered here.

Table 3.6: Summary of recommendations

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.**
Percentage of energy intake derived from non-milk extrinsic sugar	**Original recommendation: population average intake of NMES should contribute no more than 11 per cent of food energy** **New recommendation: population average intake should contribute no more than 5% of total dietary energy**
Fruit	**At least 400g of fruit and vegetables per day equivalent to the 5 A DAY guidance.**
Vegetables excluding potatoes	**At least 400g of fruit and vegetables per day equivalent to the 5 A DAY guidance.**
Fibre	**Original recommendation: Population average intake of at least 18g per day non starch polysaccharides for adults** **New recommendation: Population average intake of at least 30g per day AOAC fibre for adults. Lower amounts for children.**

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

Table 3.7 UK energy and nutrient intakes in the UK in 2015 as a percentage of weighted Reference Nutrient Intakes

		Nutrient intakes in 2015			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	1933	240	2173	92	12	103
Energy excluding alcohol [b]	kcal	1884	226	2110	89	11	100
Protein	g	65.6	9.2	74.7	142	20	163
Calcium	mg	849	71	920	123	10	133
Iron	mg	10.2	1.2	11.4	99	12	111
Zinc	mg	7.8	1.0	8.8	97	13	110
Magnesium	mg	255	28	283	96	11	107
Sodium [c]	g	2.33	0.32	2.65	155	22	176
Potassium	g	2.78	0.37	3.15	87	12	98
Thiamin	mg	1.52	0.20	1.72	180	25	205
Riboflavin	mg	1.71	0.14	1.86	149	13	162
Niacin equivalent	mg	30.3	4.4	34.7	216	32	248
Vitamin B_6	mg	1.8	0.3	2.1	142	28	169
Vitamin B_{12}	µg	5.4	0.6	6.0	386	43	429
Folate	µg	238	40	278	127	21	148
Vitamin C	mg	72	9	81	188	23	211
Vitamin A (retinol equivalent)	µg	809	105	913	131	17	148

(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. 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’, available at https://www.gov.uk/government/publications/sacn-salt-and-health-report.

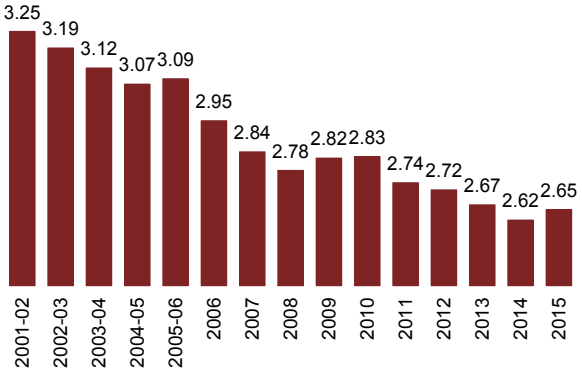
Family Food provides evidence of trends in sodium intake but underestimates the actual intake levels as it excludes the contribution from table salt purchases (because table salt also has non-food uses in the household).

The total intake of sodium is estimated to have been generally fallingyear on year, although with levels in 2015 2.4 per cent lower than in 2012, a statistically significant downwards trend. Eating out accounted for 22 per cent of sodium intake. Sodium intake from eating out rose 10 per cent in 2015 compared to 2012. Major contributors to the sodium content of household food purchases in 2015 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 3.4.

The biggest contributors to sodium intake, from Table 3.4, 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 2015, 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 an 11 per cent reduction in mean salt intake between 2005/6 and 2014, to 8.0g per day based on urinary sodium excretion, which is accepted as the best method for assessing sodium intake.

Chart 3.5 Recent trend in sodium intake from food for household and eating out (in grams per person per day)



- Sodium intakes fell steadily between 2001-02 and 2008, by 0.46 grams.
- Since 2008 the reduction has continued but slowed. A new low level of 2.62 grams was reached in 2014, 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 6.6 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. In its report on carbohydrates and health published in summer 2015, SACN recommended that the term 'free sugars' should be adopted in place of non-milk extrinsic sugars. Free sugars are defined as sugars added to food or those naturally present in honey, syrups and unsweetened fruit juices. They exclude lactose in milk and milk products. This is similar, though not identical, to the definition of NMES. SACN recommended that intake of free sugars should account for no more than 5 per cent of daily dietary energy intake, halving the previous recommendation, based on NMES. Work to develop a detailed definition of free sugars in order to estimate intakes is underway. In the meantime intakes of NMES will continue to be presented.

Total intake of non-milk extrinsic sugars is on a long term downwards trend and fell 7.3 per cent between 2012 and 2015. Intake of NMES, as measured as a percentage of food and drink energy (excluding alcohol) was 12.8 per cent, 0.7 percentage points below the 2012 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 9.7 per cent of eating out food and drink energy in 2015. Eating out purchases account for around 8.1 per cent of total NMES intake.

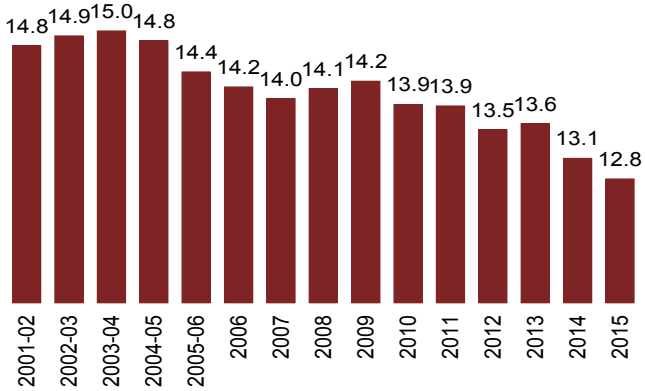
The sugar naturally present in milk and milk products (lactose) is excluded from the definition as it is not considered to have adverse effects on teeth. The recommendation was that intake of NMES should account for no more than 11 per cent of food energy intake. There is a new recommendation for free sugars - see Table 3.6.

According to Family Food, the percentage of energy derived from NMES exceeds the recommended maximum levels for the population average diet. In 2015, the population derived 12.8 per cent of food energy from NMES, which is 1.8 percentage points over the previous maximum recommended level and substantially above the new recommendation for free sugars.

Table 3.4 shows that most NMES come from the food categories; 'sugar and preserves', soft drinks, confectionery, and cakes and biscuits.

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

Chart 3.6 Recent trend in the percentage of food energy derived from NMES from household and eating out food and drink



- 12.8 per cent of energy came from NMES in 2015.
- 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, followed by a reduction of 0.5 percentage points in 2014 and a further reduction of 0.3 percentage points in 2015.

Fat and saturated fatty acids

Average 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.

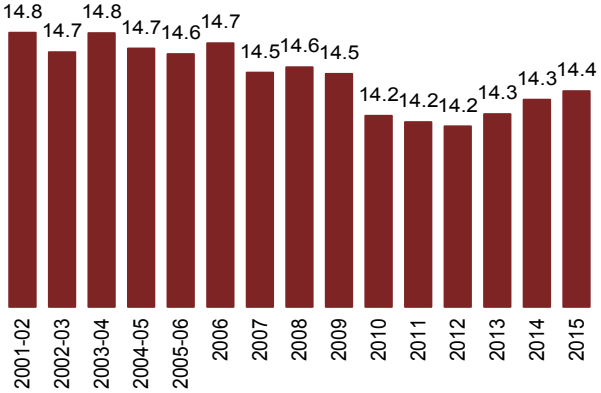
The National Diet and Nutrition Survey provides supporting evidence that saturated fatty acid intakes exceed the recommended maximum in all age groups. It reports a lower estimate for total fat intake that is in line with the recommended level for most age groups.

The decline in total intake of saturated fatty acids (measured in grams per person per day) ceased in 2015, with no siginficant change from 2012. In 2015, 14.4 per cent of food and drink energy (excluding alcohol) was derived from saturated fatty acids.

Saturated fatty acids provided 13.1 per cent of eating out food and drink energy in 2015, as in 2014. Eating out purchases provided 9.8 per cent of saturated fatty acid intakes. Over the three years 2012 to 2015, intake of unsaturated fatty acids showed an upward trend. Monounsaturated fatty acids rose by 1.7 per cent, while intakes of polyunsaturates fell by 0.8 per cent. See Table 3.8.

Table 3.4 shows that most saturated fatty acids come from purchases of ‘fats and oils’, ‘non-carcase meats and meat products’, ‘milk and cream’ and cheese.

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



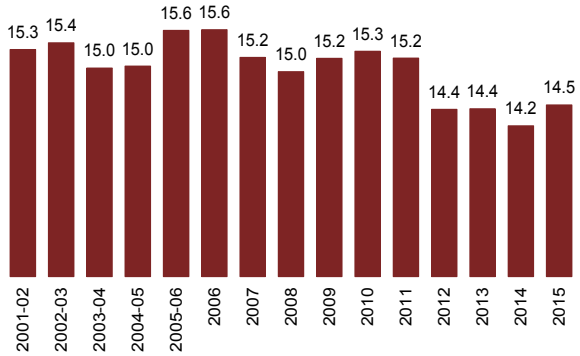
- Between 2001-02 and 2015, the percentage of food energy derived from saturated fatty acids showed an overall declining trend, although the trend has been upwards since 2012 .
- During the same period, the percentage of energy from fat was generally stable, with an average of 39.1 per cent.
- Both are above the recommended levels.

Fibre

The recommendation for fibre intake set by COMA in 1991 was for an average of 18 grams/day for adults, based on non-starch polysaccharides measured by the Englyst method. In its report on carbohydrates and health published in summer 2015 (https://www.gov.uk/government/publications/sacn-carbohydrates-and-health-report), SACN recommended that a broader definition of fibre should be adopted, based on the AOAC method, and that the new recommendation based on this definition should be 30g per day, an increase of about 6g/day compared with the previous recommendation. There is strong evidence to indicate that diets high in fibre are associated with a lower risk of cardiovascular disease, type 2 diabetes and bowel cancer for adults. Work to estimate fibre intakes based on the new definition is underway. In the meantime intakes will continue to be published based on the previous definition.

Fibre intake in 2015 rose from 2014, at an average of 14.5 grams per person per day. This was a 0.4 per cent rise from 2012.

Chart 3.8 Recent trend in fibre intake in grams per person per day



- Fibre intake in 2015 was 14.5 grams per person per day, a return to the levels in 2012 and 2013.
- Fibre intake had been relatively stable from 2007 to 2011 after peaking in 2005 and 2006.
- Fibre intake remains below the 2015 recommended level by 3.5 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 2015.

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 between 2012 and 2015, intakes of most vitamins and minerals showed downward trends, notably retinol , thiamin and vitamin B6, with decreases of 9.2, 3.2 and 2.6 per cent respectively. Over the same period, niacin equivalent and vitamin E 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 2011 and 2015.

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

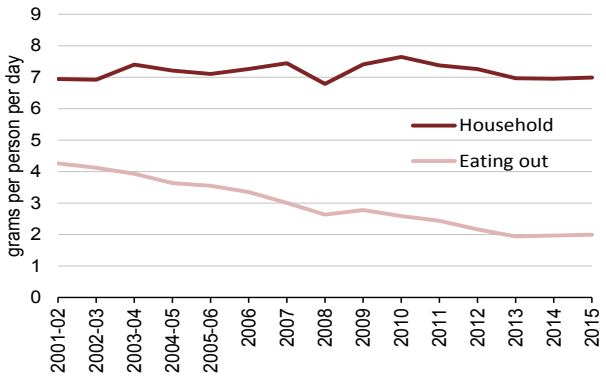
absolute level of intake is almost certain to be an underestimate due to under-reporting of alcoholic drinks. However, the trends are likely to be valid.

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 rose 0.7 per cent in 2015 to 8.9 grams per person per day. Eating out intake accounted for 22 per cent of total alcohol intake in 2015. In 2015, eating out intakes of alcohol were 8 per cent lower than in 2012 and up until 2014 showed a significant downward trend.

Chapter 2 shows that household purchases of alcoholic drinks rose by 0.5 per cent in 2015 and are 3.2 per cent lower than in 2012. Eating out purchases rose by 1.9 per cent in 2015 and is 8.3 per cent lower than 2012. Chapter 2 shows that alcohol intake from household and eating out combined in 2015 was 0.9 per cent higher than 2014 and 4.9 per cent lower than in 2012.

Chart 3.9 Trend in intake of alcohol in grams per person per day



- Alcohol intake from eating out purchases declined 53 per cent between 2001-02 and 2015.
- Alcohol intake overall rose 0.7 per cent in 2015 to 9.0 grams per person per day (averaged over the entire UK population).

Table 3.8 UK average energy and nutrient intakes from all food and drink 2010-2015

		2011	2012	2013	2014	2015	% change since 2014	% change since 2012	Trend since 2012	% from food eaten out in 2015
Total energy and nutrient intakes [a]										*average intake per person per day*
Energy	kcal	2245	2209	2192	2142	2173	+1.4	-1.6	↘	11.0
	MJ	9.4	9.2	9.2	9.0	9.1	+1.4	-1.6		11.0
Energy excluding alcohol	kcal	2176	2143	2129	2080	2110	+1.5	-1.5		10.7
Total Protein	g	77.2	75.9	74.8	74.3	74.7	+0.5	-1.5		12.3
Fat	g	92	91	91	89	92	+2.6	+0.5		0.0
Fatty acids:										
Saturates	g	34.3	33.7	33.7	33.1	33.8	+1.8	+0.0		9.8
Monounsaturates	g	35.8	35.5	35.8	35.2	36.1	+2.7	+1.7		12.7
Polyunsaturates	g	16.2	16.3	16.0	15.6	16.2	+4.1	-0.8		14.2
Cholesterol	mg	252	249	244	244	247	+0.9	-1.1		14.9
Carbohydrate [b]	g	276	271	269	260	262	+0.8	-3.2	↘	9.2
Total sugars	g	124	120	119	115	114	-0.4	-4.6	↘	7.2
Non-milk extrinsic sugars	g	81	77	77	73	72	-0.9	-6.8	↘	8.1
Starch	g	152	151	149	145	148	+1.8	-2.2	↘	10.8
Fibre [c]	g	15.2	14.4	14.4	14.2	14.5	+2.1	+0.4		11.6
Alcohol	g	9.8	9.4	8.9	8.9	9.0	+0.7	-4.7		22.2
Calcium	mg	955	937	934	915	920	+0.6	-1.9	↘	7.7
Iron	mg	11.8	11.4	11.4	11.2	11.4	+1.2	+0.1		10.6
Zinc	mg	9.2	9.0	8.8	8.8	8.8	+0.6	-1.5	↘	11.8
Magnesium	mg	287	284	282	280	283	+1.0	-0.6		10.0
Sodium [d]	g	2.74	2.72	2.67	2.62	2.65	+1.3	-2.4	↘	12.1
Potassium	g	3.21	3.16	3.13	3.12	3.15	+0.9	-0.5		11.6
Thiamin	mg	1.62	1.78	1.74	1.71	1.72	+0.7	-3.1	↘	11.8
Riboflavin	mg	1.92	1.89	1.87	1.86	1.86	+0.0	-1.7	↘	7.8
Niacin equivalent	mg	33.6	33.0	34.8	34.6	34.7	+0.3	+5.3	↗	12.7
Vitamin B_6	mg	2.4	2.1	2.1	2.1	2.1	+0.3	-2.5	↘	16.2
Vitamin B_{12}	µg	6.2	6.1	6.0	6.1	6.0	-1.6	-2.2		9.8
Folate	µg	298	282	278	274	278	+1.4	-1.7	↘	14.3
Vitamin C	mg	77	82	82	79	81	+1.5	-2.1	↘	10.9
Vitamin A:										
Retinol	µg	533	521	511	489	478	-2.4	-8.4	↘	9.3
β-carotene	µg	2187	2558	2572	2579	2606	+1.1	+1.9		13.9
Retinol equivalent	µg	900	950	941	921	913	-0.8	-3.9	↘	11.5
Vitamin D	µg	3.10	3.06	3.17	3.08	3.06	-0.9	-0.2		11.2
Vitamin E	mg	12.33	12.17	12.44	12.09	12.59	+4.1	+3.4		13.0
As a percentage of food and drink energy excluding alcohol										
Fat	%	38.1	38.3	38.5	38.7	39.1	+1.1	+2.1		
Fatty acids:										
saturates	%	14.2	14.2	14.3	14.3	14.4	+0.4	+1.6		
monounsaturates	%	14.8	14.9	15.1	15.2	15.4	+1.2	+3.3		
polyunsaturates	%	6.7	6.9	6.8	6.7	6.9	+2.6	+0.8		
Carbohydrate	%	47.6	47.5	47.4	47.0	46.6	-0.7	-1.7		
Non-milk extrinsic sugars	%	13.9	13.5	13.6	13.1	12.8	-2.3	-5.3		
Protein	%	14.2	14.2	14.0	14.3	14.2	-0.9	+0.0		

Table 3.7 continues over the page

Table 3.8 continued

		2011	2012	2013	2014	2015	% change since 2014	% change since 2012
As a percentage of weighted reference nutrient intake [f]								
Energy [e]	%	107	105	105	102	103	+0.7	-2.2
Energy exc alcohol [e]	%	104	102	102	99	100	+0.7	-2.1
Protein	%	168	166	163	163	164	+0.9	-1.0
Calcium	%	139	136	136	133	134	+0.5	-1.8
Iron	%	115	111	112	110	111	+0.8	-0.2
Zinc	%	115	112	111	110	111	+0.9	-1.1
Magnesium	%	108	107	106	106	106	+0.7	-0.8
Sodium [d]	%	184	182	179	176	177	+0.8	-2.8
Potassium	%	100	99	98	98	99	+0.9	-0.4
Thiamin	%	193	211	206	204	206	+1.0	-2.7
Riboflavin	%	168	165	164	163	164	+0.6	-1.0
Niacin equivalent	%	242	237	237	249	251	+0.9	+6.1
Vitamin B_6	%	194	175	175	170	172	+1.3	-1.5
Vitamin B_{12}	%	449	440	439	437	441	+0.9	+0.3
Folate	%	158	150	150	146	147	+1.1	-1.8
Vitamin C	%	200	214	214	207	209	+0.9	-2.6
Vitamin A (retinol equivalent)	%	145	153	153	148	150	+1.1	-1.9

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

		2015 Household	% change since 2012 Household	Trend since 2012	Eating out	% change since 2012 Eating out	Trend since 2012
Total energy and nutrient intakes [a]							*average intake per person per day*
Energy	kcal	1933	-2.9	↘	240	9.6	↗
	MJ	8.1	-2.9	↘	1.0	9.6	↗
Energy excluding alcohol	kcal	1884	-2.9		226	10.9	
Total Protein	g	65.6	-3.3		9.2	12.7	↗
Vegetable Protein	g	39.6	-3.6	↘			
Animal Protein	g	26.0	-2.7	↘			
Fat	g	81	-0.9		11	12.6	↗
Fatty acids:							
Saturates	g	30.5	-1.0	↘	3.3	10.7	↗
Monounsaturates	g	31.5	0.1		4.6	13.9	↗
Polyunsaturates	g	13.9	-2.7	↘	2.3	13.1	↗
Cholesterol	mg	210	-3.2	↘	37	13.7	↗
Carbohydrate [b]	g	238	-4.3	↘	24	8.4	↗
Total sugars	g	106	-4.9	↘	8	0.6	
Non-milk extrinsic sugars	g	66	-7.1	↘	6	-3.6	↘
Starch	g	132	-3.7	↘	16	12.9	↗
Fibre [c]	g	12.8	-1.2	↘	2	15.1	↗
Alcohol	g	7.0	-3.7		2.0	-7.7	
Calcium	mg	849	-2.6	↘	71	8.4	↗
Iron	mg	10.2	-1.2	↘	1.2	11.7	↗
Zinc	mg	7.8	-3.1	↘	1.0	12.8	↗
Magnesium	mg	255	-1.6	↘	28	10.4	↗
Sodium [d]	g	2.33	-4.07	↘	0.32	11.7	↗
Potassium	g	2.78	-2.09	↘	0.37	13.1	↗
Thiamin	mg	1.52	-5.07	↘	0.20	15.0	↗
Riboflavin	mg	1.71	-2.58	↘	0.14	10.7	↗
Niacin equivalent	mg	30.3	4.5	↗	4.4	11.2	↗
Vitamin B_6	mg	1.8	-5.0	↘	0.3	13.0	↗
Vitamin B_{12}	µg	5.4	-3.7	↘	0.6	13.2	↗
Folate	µg	238	-3.8	↘	40	12.9	↗
Vitamin C	mg	72	-3.9	↘	9	15.3	↗
Vitamin A:							
Retinol	µg	433	-10.1	m	44	12.6	↗
β-carotene	µg	2245	-0.3		361	18.0	↗
Retinol equivalent	µg	809	-5.9	↘	105	15.7	↗
Vitamin D	µg	2.71	-1.5		0.34	11.2	↗
Vitamin E	mg	10.96	2.3		1.63	12.1	↗
As a percentage of food and drink energy excluding alcohol							
Fat	%	38.6	2.0		43.7	1.6	
Fatty acids:							
Saturates	%	14.5	1.9		13.1	-0.2	
Monounsaturates	%	15.0	3.1		18.3	2.7	
Polyunsaturates	%	6.6	0.1		9.2	1.9	
Carbohydrate	%	47.4	-1.5		40.1	-2.3	
Non-milk extrinsic sugars	%	13.2	-4.3		9.7	-13.1	
Protein	%	13.9	-0.4		16.2	1.6	

Table 3.9 continued

		2015 Household	% change since 2012 Household	Trend since 2012	2015 Eating out	% change since 2012 Eating out	Trend since 2012
As a percentage of weighted reference nutrient intake [f]							
Energy [e]	%	92	-3.6		12	10.5	
Energy exc alcohol [e]	%	89	-3.6		11	11.7	
Protein	%	144	-2.8		20	14.0	
Calcium	%	124	-2.6		10	8.9	
Iron	%	99	-1.6		12	13.5	
Zinc	%	98	-2.8		13	13.9	
Magnesium	%	96	-2.0		11	11.7	
Sodium [d]	%	156	-4.6		22	12.2	
Potassium	%	87	-2.1		12	14.5	
Thiamin	%	181	-4.8		25	16.2	
Riboflavin	%	151	-2.0		13	12.1	
Niacin equivalent	%	219	5.2		32	12.5	
Vitamin B_6	%	144	-4.1		28	14.2	
Vitamin B_{12}	%	398	-1.1		43	15.6	
Folate	%	126	-4.1		21	14.3	
Vitamin C	%	185	-4.5		23	16.6	
Vitamin A (retinol equivalent)	%	133	-4.0		17	18.3	

(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.

About Family Food

Over the 75 years of the survey, 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 2015.

Survey organisation

Family Food 2015 is a report on the 2015 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 2015 for the LCFS in Great Britain, of which 10,349 were eligible households (i.e. were not empty properties or business addresses). In Great Britain 4,760 households co-operated fully in the survey. The overall response rate for the 2015 LCFS was 46 per cent in Great Britain. In Northern Ireland 158 households co-operated out of a sample of 255, a response rate of 62 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.

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 steering group

We 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.

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Northern Ireland Statistics and Research Agency

Family Food production team

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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

Data in spreadsheet format are available to download from the Defra website.

The Family Food data are spreadsheets containing survey estimates for years 2001/02 onwards. The UK household consumption and the UK household expenditure spreadsheets show results 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 2014) 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.