The results from the latest Expenditure and Food Survey (EFS) were published in June 2004 (National Statistics 2004). The EFS was established in April 2001 and is jointly funded by the Department of Environment, Food and Rural Affairs (Defra) and the Office for National Statistics (ONS). The survey is effectively a merger of the National Food Survey (NFS) and the Family Expenditure Survey. It still measures household consumption rather than consumption by individuals, by recording all food/drink purchases entering the household during the study period, which has been extended from 1 to 2 weeks. But a main difference is that the quality of the out-of-home consumption data has been improved in that for each household completing a diary, each household member over the age of 7 years now completes a diary on everything they spend on food or drink rather than this being done by a subsample. The advantage of this survey method for out-of-home consumption is that there is less likely to be underreporting, as each respondent keeps his or her own diary, as well as respondents only measuring expenditure on out-of-home consumption rather than consumption per se. Furthermore, incorporation of the two surveys means that information on smoking and a range of other variables is now available for comparison with dietary intake. The survey year runs from 1 April until 31 March. The survey results do not yet include free meals, such as school meals, and consumption and expenditure levels are presented as an average across family members and so do not reflect intakes of individuals.

Household consumption in 2002/03

Fruit and vegetables

The consumption of fruit eaten in the home has risen by 4.3% in comparison with the previous year, to 1206 g per person per week. This is mainly due to an increase in fresh fruit consumption (5.8% higher than 2001/02), in particular citrus, stone and berry fruits. Dried fruit and fruit juice consumption have also increased by 11% and 1.6%, respectively. Most other fruit consumption has declined; for example, apple consumption has fallen by 1.4%. Total fruit consumption (i.e. both in and outside of the home but excluding fruit provided free of charge by employers or schools) is 1214.4 g per person per week. Household vegetable consumption (including potatoes) has declined by 1.7% in 2002/03 to a level of 1965 g per person per week. This is mainly due to a fall in both fresh and processed potatoes. Fresh vegetables, excluding potatoes, consumed at home have shown a modest increase reaching 736 g per person per week and the consumption of canned vegetables is also higher in 2002/03 than in the previous year. Consumption of vegetables (including potatoes) outside the home amounted to an average of 120 g per person per week.

Household consumption of fruit and vegetables combined (excluding potatoes) has risen by 2.5% in 2002/03, this equates to 4.1 portions of fruit and vegetables per person per day (2305 g per person per week). However, it should be noted that this figure includes all fruit juice.
and baked bean intakes and is based on the weight of produce as purchased. Guidelines for the 5 A DAY programme allow inclusion of only one 80 g portion of each of fruit juice and baked beans in 1 day, indicating that this figure of 4.1 portions is likely to be an overestimation. Consumption of fruit and vegetables (excluding potatoes) outside of the home contributed a further 42.77 g per person per week. The Department of Health estimates that on average adults consumed 3.4 portions of fruit and vegetables that count towards 5 A DAY per day in 2002.

Bread, cereals and cereal products

Household bread consumption is currently 756 g per person per week, consumption of bread and sandwiches outside the home contributes a further 9.2 g and 80 g per person per week, respectively. Compared to the previous year, household consumption of white (now 431 g per person per week) and wholemeal bread (now 100 g per person per week) has decreased by 5.3% and 4.9%, respectively, whilst brown bread has risen since last year’s fall by 28% (from 36 g per person per week to 46 g per person per week). There has also been a 2.8% rise in the consumption of rolls and sandwiches. Both household consumption of flour and bun, scone and teacake consumption have risen by 13%. Household consumption of pasta is down by 1.4%, after increases each year since 1997 (now 88 g per person per week). Pizza consumption in the home is also down by 4.1% (now 65 g per person per week), whilst consumption of breakfast cereals remains fixed both in and out of the home, at a combined total of 132.2 g per person per week.

Milk, cream and cheese

Household consumption of milk and cream has declined by 1.6% in comparison to the previous year. The largest decline comes from wholemilk consumption, which has been estimated to have fallen by 20% since 1997. Semi-skimmed milk is the major contributor at 919 mL per person per week. Fully skimmed milk intake has risen by 3.8% to 166 mL per person per week. There has been increased consumption of yoghurt and fromage frais (now 163 g per person per week) and other milk and dairy desserts (now 167 g per person per week), rising by 6.0% and 4.7%, respectively. No significant changes were observed in cream and cheese consumption (20 g per person per week and 112 g per person per week, respectively).

Meat, fish and eggs

Average household consumption of carcase meat (beef, veal, lamb, mutton and pork) has not changed since the previous year remaining at 230 g per person per week. Uncooked poultry (now 199 g per person per week) has fallen by 3.3%, whilst consumption of meat-based ready meals, including takeaways, has risen by 8.4% in the past year. Overall, non-carcase meat (including all poultry and meat products) accounted for 809 g per person per week. Total meat consumption (in and out of the home, including all meat and meat products) came to 1134 g per person per week.

Overall, there has been a modest fall in fish consumption. Consumption of fresh, chilled or frozen whitefish has continued to fall by 8% in the past year. However, over the same period, there has been an increase in consumption of oil-rich fish by 7.9%. In this survey, average total household fish intake is 154 g per person per week, oil-rich fish accounting for 55 g per person per week. A further 14 g of fish (including all fish and fish products) was consumed outside the home.

Household consumption of eggs remains the same at an average of 1.7 eggs per person per week.

Beverages, confectionery and takeaway foods

Household consumption of mineral water continues to rise with a year on year increase of 6.8% and a 5-year increase of 22% (now 210 mL per person per week). Household consumption of ready-to-drink soft drinks has risen by 3.1% to 677 mL per person per week, in comparison to concentrated soft drinks, which has fallen by 3.4% to 587 mL per person per week. Intake of low calorie carbonated soft drinks at home has also increased by 6%. Household consumption of alcoholic beverages has apparently fallen (1.2%). Household consumption of beer has risen by 3.4%; but lager consumption has fallen by 3.4%. Wine consumption remains unchanged since the previous year, whereas all other alcoholic drink consumption at home has fallen by 1.4%. Total alcoholic drinks consumption (in and out of the home) equals 1428 mL per person per week.

Household confectionery consumption has fallen slightly (by less than 1%) from 128 g per person per week in 2001/02 to 127 g in 2002/03, due to a 2.2% fall in chocolate consumption. Consumption outside the home contributes a further 22 g per person per week.

Household consumption of takeaways has fallen slightly. This is mainly due to a decline in fish takeaways, which has fallen by 6.7%. The most popular takeaways remain unchanged in terms of consumption.
levels and include meat-based Indian and Chinese meals, in addition to rice, chips and pizza.

**Main changes in household consumption between 1975 and 2002/03**

**Food and drink**

Information dating back to 1974 from the NFS has been adjusted to bring it in line with the EFS recordings. These adjustments show that household consumption of milk, eggs and potatoes have fallen since 1975 (33% for total milk consumption and more than 50% for eggs and potatoes). Bread consumption has also fallen by 25% since 1975. In comparison, fresh fruit consumption has risen by over 50% and processed fruit by over 80%. Consumption of cereal products (excluding bread, buns and cakes) has risen by over 90%. Little change has occurred in vegetable consumption since 1975. However, within this time, average consumption of fresh green vegetables has decreased by 32% from 341 g per person per week to 231 g in 2002/03 and intake of other fresh vegetables has increased by 25% from 405 g to 505 g per person per week.

**Energy and nutrients**

Since 1975, household energy intake has steadily declined from an average of 2489 kcals per person per day to 2061 kcals, despite new foods and drinks being introduced to the survey over time. Average total energy intake (in and out of the home) has remained the same in 2002/03 as in 2001/02, at 2301 kcals per person per day. As might be expected, a decline in energy intake since 1975 has led to a decline in intake of many nutrients.

Protein intake fell slightly between 1975 and 1985. Since this time, intake has remained steady at an average of 71.3 g per person per day in the home (6.2 g per person per day outside the home in 2002/03). Fat intake continues to decline, in particular saturates and monounsaturates, whilst polyunsaturates have increased over time. Overall, fat intake from household food has declined by 24% since 1975 to 85.0 g per person per day (92.9 g per person per day when eating out is included). Cholesterol intake was first recorded in 1995 and household intake has remained stable over time. Total average intake including intake from eating out was 259 mg per person per day in 2002/03.

Household consumption of carbohydrate has fallen steadily from 313 g in 1975 to just over 250 g per person per day in 1991. Since this time, carbohydrate intake has remained around the 270 g mark, falling only by 6.9% to 265 g between 2000 and 2002/03. Total average carbohydrate intake (in and out of the home) was calculated at 287 g per person per day in 2002/03. Consumption of non-milk extrinsic sugars (‘added’ sugars) has fallen by 5.4% since figures were first recorded in 1992 (now 82 g per person per day in the home, and 10 g per person per day outside the home). The main sources of non-milk extrinsic sugars include sugar, preserves, soft drinks and confectionery.

Household consumption of fibre (expressed as non-starch polysaccharides) was first recorded in 1992. Since this time, average household intakes have remained constant and were recorded at 13.4 g per person per day in 2002/03 (plus 0.9 g per person per day outside the home in 2002/03).

Since 1975, average intakes of vitamin A have declined; this is likely to be due to the fall in liver consumption as well as milk consumption, which reduces the amount of retinol in the diet. Total average vitamin A intake (in and out of the home, including retinol and β-carotene) is now 856 μg per person per day. Vitamin C intake has increased since 1975 by 26% to date, and total average intake both in and out of the home is now 74 mg per person per day. This is likely to be due to increased fruit juice consumption in particular as well as increased soft drinks, many of which are fortified.

Household calcium intake fell by 24% between 1975 and 1991; reflecting reductions in milk intake as well as the decline in overall energy intake. Since 1992, intakes have remained steady with no major decrease or increase occurring. Total average intakes (both in and outside of the home) in 2002/03 were recorded at 993 mg per person per day. Iron intake has also declined by 15% since 1975; total intakes are now 11.9 mg per person per day. Intakes of potassium, sodium, zinc and magnesium have all remained relatively stable during the period information on these has been collected. In 2002/03 total intakes for potassium, sodium (table salt not recorded), zinc and magnesium were recorded at 3.14 g, 3.03 g, 9.2 mg, 282 mg, respectively.

Alcohol consumption from food and drink in the home has increased by 21% since 1995; however, in 2002/03, intakes declined slightly, possibly indicating the end of a trend. Total alcohol intake (including both inside and outside the home) from food and drink is now 13.3 g per person (14 years and over) per day. This averages approximately 1.7 units of alcohol per person per day. The Department of Health advises that there are no significant risks to health, if men consume no more than 3–4 units of alcohol a day and women no more than 2–3 units a day.

Eating out consumption in 2002/03

Table 1 shows the change since 2001/02 in consumption of foods eaten outside of the home. The largest increase in consumption was for cheese and egg dishes and pizza, rising by 3.9% since 2001/02 and salad dishes, rising by 3.5%. Intakes of soft drinks, meat, sandwiches, vegetables and ice cream, desserts and cakes have also risen slightly since the previous year. The largest fall in consumption was for alcohol (4%) and beverages such as tea and coffee (5%). There were also reductions in total fish and fish products (4.5%) and potatoes (3.3%).

Approximately 9% of energy and nutrient intake comes from food and drink consumed outside of the home, with the exception of alcohol, which contributes 37% outside the home. Intakes of calcium, riboflavin, iron, fibre, vitamin B_{12}, retinol equivalents and vitamin D are all lower for foods and drinks consumed outside of the home, whereas intakes of added sugars, vitamin

<table>
<thead>
<tr>
<th>Table 1</th>
<th>UK average consumption of food and drink eaten out in 2002/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grams per person per week unless otherwise stated</td>
<td>2001/02</td>
</tr>
<tr>
<td>Alcoholic drinks (mL)</td>
<td>732</td>
</tr>
<tr>
<td>Soft drinks including milk drinks (mL)</td>
<td>373</td>
</tr>
<tr>
<td>Beverages (mL)</td>
<td>154</td>
</tr>
<tr>
<td>Meat and meat products</td>
<td>94</td>
</tr>
<tr>
<td>Potatoes</td>
<td>88</td>
</tr>
<tr>
<td>Sandwiches</td>
<td>80</td>
</tr>
<tr>
<td>Vegetables</td>
<td>34</td>
</tr>
<tr>
<td>Ice cream, desserts and cakes</td>
<td>31</td>
</tr>
<tr>
<td>Cheese and egg dishes and pizza</td>
<td>25</td>
</tr>
<tr>
<td>Salads</td>
<td>16</td>
</tr>
<tr>
<td>Rice, pasta and noodles</td>
<td>15</td>
</tr>
<tr>
<td>Fish and fish products</td>
<td>15</td>
</tr>
</tbody>
</table>


Percentage contributions to energy from all food and drink

Table 2 shows the percentage of total energy (including alcohol) obtained from fat, saturated fatty acids, and non-milk extrinsic sugars from food and drink consumed both in and outside of the home. As the results show, both total fat and saturated fatty acid consumption have declined and their contribution to energy intake is getting closer to the dietary reference values (DRVs). Non-milk extrinsic sugars have also declined, despite slight fluctuations since 1994.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Changes in the proportion of total energy intake from fat and added sugars from all food and drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy intake, including energy from alcohol kcal</td>
<td>2387</td>
</tr>
<tr>
<td>From fat %</td>
<td>38.7</td>
</tr>
<tr>
<td>From saturated fatty acids %</td>
<td>15.2</td>
</tr>
<tr>
<td>From non-milk extrinsic sugars %</td>
<td>15.1</td>
</tr>
</tbody>
</table>

Eating out estimates from 1994 to 2000 are based on the National Food Survey and considered less reliable.

DRV, dietary reference value.

household shop per person now costs £19.42 in comparison to £20.94 in 1975.

**Household comparisons**

The survey compares a number of household differences, they include region, income and ethnic origin, the key points of which are highlighted below.

**Regional comparison**

Household consumption of fruit and vegetables (excluding potatoes) remains at its highest in England and is lowest in Northern Ireland. Northern Ireland also has the lowest intakes of cheese, fish, sugar and preserves and alcohol, but the highest intake of fresh potatoes. As expected from this result, Northern Ireland has the lowest intake of energy and nutrients. Scotland continues to have the highest consumption of soft drinks and England consumes the highest amount of alcoholic drinks outside the home.

Comparisons within England show that household consumption of milk and cream, non-carcase meat, potatoes, beverages and drinks are lowest in London, but this may be because consumption of foods eaten out is highest in London. Fruit and vegetable (excluding potatoes) consumption is highest in the south-west and east despite expenditure being highest in the north-west.

Consumption of alcoholic beverages is highest in the north-east. Overall energy intakes are highest in the north-west and lowest in London. London also has the lowest proportion of energy from total fat and saturates, but the highest proportion of carbohydrate in the diet.

**Demographic comparisons**

**Income**

Households were split into five income quintiles, quintile 5 having the highest income. Each quintile represented 20% of the households included in the study. Quintile 5 had the highest intake of vitamins and minerals including iron, folate and vitamin C, but quintile 1 had the highest consumption of calcium, vitamin B12, vitamin A and vitamin D.

The percentage of energy derived from fat, saturated fatty acids, monounsaturated fatty acids and carbohydrate was higher in the lower income groups. Alcohol intake increases through each income group, and is highest in quintile 5. Quintile 1 had the lowest consumption of foods eaten out; 21% of the overall expenditure was spent on foods eaten out in comparison to 40% for quintile 5.

**Education**

Since 2001/02, the EFS has used a household reference person (HRP) to compare certain demographic changes. The HRP is the person who is legally responsible for the household, if more than one person meets these criteria then it is the person with the higher income, and if this is the same then it is the eldest household resident.

Household consumption of milk and cream, fats, sugars, cereals, beverages and confectionery is highest where the HRP ceased full time education aged 14 years and under. This group also had the lowest intake of soft and alcoholic beverages, and was the least likely to consume food or drink outside the home. Households where the HRP was in full time education until at least 22 years of age had the highest consumption of cheese, fish, fruit, vegetables and alcoholic drinks and the lowest intakes of all meat, sugars, potatoes, beverages and confectionery.

**Ethnic origin**

Households where the HRP was white (96% of households) tended to have higher household consumption of cheese, potatoes and alcoholic drinks. Households where the HRP was of Asian origin consumed higher intakes of cereals, fats and oils. Higher intakes of fish, sugar and preserves were observed in households where the HRP was of Black origin and higher intakes of fruit and confectionery were observed in households where the HRP was of Chinese origin.

For food and drink consumed out of the home, households where the HRP was of Black origin had the lowest consumption of all food items. Expenditure on alcohol outside the home was lowest in households where the HRP was of Asian origin. Households headed by a HRP of Chinese origin had the highest consumption of meals eaten out and households headed by a HRP of white origin had the highest consumption of snacks and drinks outside the home.

Intakes of energy and nutrients were highest in White households and lowest in Chinese and other households. White and Mixed households derive the highest proportion of energy from fat and the lowest from carbohydrate, whereas the reverse is true for Asian, Chinese and other households.

**Conclusion**

The methodology used for the EFS has been revised to take account of some of the limitations of the method-
ology of the former NFS. The results for the 2002/03 survey indicate that firstly, fresh fruit consumption has risen by 5.8% since 2001/02 and by more than 50% since 1975. For potato consumption, the reverse is true; since 1975, fresh potato consumption has fallen by over 50%.

Overall, average energy intake from all food and drink has remained the same in 2002/03 as in 2001/02. However, since 1964, average energy intake from consumption of food and drink in the home (the major contributor) has progressively declined; this could partly be due to the increase in out-of-home consumption, but even taking this into account, there seems to have been a gradual reduction. Furthermore, this reduction runs counter to the huge increase in obesity in the UK over the past few decades and again reinforces the fact that physical activity plays a vital role in the battle against obesity.

Good progress has been made in reducing intakes of total fat in particular and saturates, however, intakes are still higher in the lower socio-economic groups. The reverse is true for micronutrient intake – intakes of micronutrients are lower in lower socio-economic groups. Consumption of foods fortified with various vitamins and minerals may be a useful way of improving nutrient status, particularly in the lower socio-economic groups, in the context of a varied diet based on the Balance of Good Health food guide (Theobald 2004). This though, should not be the only option considered when endeavouring to tackle the socio-economic divide, and improvements in physical and economic access to a balanced diet need also to be considered.

References