

Estimation of Free Food and Unspecified Meals

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This note explains the methods used to estimate the quantities and nutrient profiles of free and unspecified food in the Family Food reports. It outlines the number of occurrences and the effect of including the estimates in the report. For each type of free food and unspecified meal there is a different method of estimation using information that is available from the survey. The method was first introduced to the 2005-06 Family Food report, and is described in the annex of that report. Since the new methods were adopted no further comparisons have been made of the effects of the estimates on intakes and quantities.

Background

The figures in Family Food are sourced from The Living Costs and Food Survey run by the Office for National Statistics. One element of the survey - The Family Food Module - collects detailed quantity and expenditure information on food and drinks household purchases and itemised lists of food and drink eating out purchases for use by Defra. It is reported on annually in 'Family Food'.

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

Free food

Most categories of free food are estimated in the Family Food reports and datasets. Historically this estimation was not necessary since free food was included in the diary of the National Food Survey, which ceased in the year 2000.

The current Living Costs and Food Survey focuses on items of expenditure, recording quantities of food and drink alongside the expenditure. Where food is free it is not recorded in the diary part of the survey (apart from home-grown and wild food). Instead, questions are asked during the interview about occurrences of free food in the last week. Some of the food types described as free have a cost to the householder, for example meals on wheels, and paid for school meals.

Types of free food

For the household

- Free nursery milk

- Meals on wheels – paid for or free

Eating out

- Free school milk

- Free fruit and vegetables in schools

Free school meals

Paid for school meals

Free meals provided by employer

Free tea/coffee/soft drinks provided by employers

Food purchased on business that gets paid for by the employer

Unspecified meals

For most meals recorded in the diary an itemised list of its components and standard portion sizes are used. Unspecified meals arise in the survey when expenditure is recorded but the item is described only in generic terms such as 'Indian meal'.

Types of unspecified food

Eating out

Indian buffet/shared meal/Indian meal not specified

Chinese/Thai buffet, shared meal or meal not specified

All other ethnic meals

Salad buffet/buffet meal where items not specified

Sandwiches & rolls not specified

Meal - not specified e.g. 'meal' or 'meal at work'

Soft drink where pure juice/juice drink not specified

Overall changes to estimates of energy intake taking into account free food and unspecified meals

The survey is split between 'household purchases' which covers all food that is brought into the household; and 'eating out' which covers all food that never enters the household.

For household purchases, free food and unspecified meals contribute very little on a Kcal basis. Most of the impact is on eating out where roughly 66 kcals are added per person per day. The combined effect on household and eating out is around 3 per cent of the total 2209 kcals per person per day in 2012.

Method for free school fruit

In 2012, the question on participation in the Free School Fruit and Vegetable Scheme (FSFVS) was removed from the survey questionnaire. An alternative methodology has therefore been applied to the 2012 results. It has been assumed

that where a household includes children aged between 4 and 6 years, they are eligible to receive a portion of free fruit (or vegetables) on each day that they attend school. A portion size of 60 grams is assumed. To account for non-participating schools and child non-attendance, a proportionality indicator has been calculated using data from a rolling 3-year average between 2006 and 2011. This factor was applied to all eligible households except those in Northern Ireland where the scheme is not operational.

Method for school meals

Respondents are asked “have your children had any school meals?” If the answer is “yes” the respondent is then asked if the meal was paid for. If the meals were free then the number of children receiving free meals and the number of meals received over the last 7 days is recorded. If the meals were paid for some additional information on the cost of the meal is also obtained.

These unspecified meals have been assumed to comprise a main dish, a portion of potatoes and a portion of vegetables or salad. They have been assumed not to include a dessert. Averaging over all possible main dishes; all types of potatoes and all types of vegetables/salad, leads to a combined portion size of 410 grams for the meal. This is the same size as assumed for unspecified adult meals.

Method for free milk

Respondents are asked “have you had any free school milk?” If the answer is yes the respondents are asked which children/people have received milk and the number of bottles / cartons they received in one week.

Free school milk is treated as eating out. A portion size for free milk of 250 ml is assumed, in line with the recommendations¹ for how much free milk can be given out per person per day.

Method for free work meals

Respondents are asked “have you received any free food/drink from your employer?” If the answer is “yes” the respondent is then asked how many meals they received in the last 7 days.

These unspecified meals have been assumed to comprise a main dish, a portion of potatoes and a portion of vegetables or salad. They have been assumed not to include a dessert. Averaging over all possible main dishes; all types of potatoes and all types of vegetables/salad, leads to a combined portion size of 410 grams for the meal.

¹ European Community subsidy rules allow local authorities and schools to offer nursery and primary school pupils a maximum of 250 ml of subsidised milk a day

Method for unspecified meals

The reason for these omissions from 2001-02 to 2004-05 was that little was known about the content of these meals. In 2005-06 with several years of survey data available it was possible to use data on similar categories where quantities have been provided or estimated and to construct average quantities and average nutrient profiles for unspecified meals. The estimated portion sizes are constructed from related codes as outlined in Table 1.

Table 1: Portion size and composition of unspecified meals

Description	Portion size, grams	Based on
Indian buffet or shared meal or unspecified Indian meal	690	Indian curry + side (samosas) + naan + rice
Chinese or Thai buffet or shared meal or unspecified Chinese or Thai meal	660	Chinese/Thai main course + side (spring roll) + fried rice
All other ethnic meals	675	Average of Chinese/Indian meal
Salad buffet or buffet meal where items not specified	410	Main dish + potatoes + 1 portion of vegetable/salad
Unspecified sandwiches or rolls	180	Average of all other sandwiches
Unspecified meal e.g. 'meal', 'school meal' or 'meal at work'	410	Main dish + potatoes + 1 portion of vegetable/salad
Soft drink where pure juice or juice drink not specified	330	Average size of can of drink

Estimated Nutrient Profiles for unspecified meals

The estimated nutrient profiles are weighted averages of the nutrient profiles for possible meal components. The nutrient profiles for each type of unspecified food are described in Table 2.

Table 2: Nutrient profiles for types of unspecified food

Nutrient		Indian meal	Chinese/ Thai meal	Other ethnic meals	Salad buffet	Sandwiches & rolls	Soft drink	Meal - not specified
		<i>intake per occurrence</i>						
Energy	kcal	740	592	631	499	205	41	499
Vegetable protein	g	27.9	23.3	24.5	21.5	10.1	0.0	21.5
Total Protein	g							
Fat	g	23.5	33.9	31.2	27.0	10.2	0.0	27.0
Fatty acids:								
Saturates	g	3.5	6.6	5.8	7.3	3.0	0.0	7.3
Mono-unsaturates	g	11.1	16.9	15.4	12.1	2.7	0.0	12.1
Poly-unsaturates	g	7.2	8.6	8.2	5.9	3.6	0.0	5.9
Cholesterol	mg	51	89	79	88	33	0	88
Carbohydrate ^(a)	g	111	51	67	45	20	11	45
Total sugars	g	7	12	11	7	2	11	7
Non-milk extrinsic sugars	g	1	9	7	1	0	11	1
Starch	g	104	39	56	39	18	0	39
Fibre ^(b)	g	6.3	4.2	4.7	5.1	1.1	0.0	5.1
Alcohol	g	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Calcium	mg	288	111	158	125	115	6	125
Iron	mg	5.8	5.1	5.3	2.8	1.1	0.0	2.8
Zinc	mg	2.1	1.7	1.8	2.6	1.0	0.0	2.6
Magnesium	mg	65	45	51	61	21	1	61
Sodium ^(c)	g	1.34	1.05	1.13	0.73	0.45	0.01	0.73
Potassium	g	0.62	0.43	0.48	0.96	0.19	1.00	0.96

Thiamin	mg	0.45	0.25	0.31	0.60	0.19	0.00	0.60
Riboflavin	mg	0.23	0.23	0.23	0.30	0.12	0.00	0.30
Niacin equivalent	mg	13.5	10.0	10.9	9.3	4.8	0.0	9.3
Vitamin B ₆	mg	0.6	0.4	0.4	0.9	0.2	0.0	0.9
Vitamin B ₁₂	µg	0.2	1.0	0.8	1.4	0.5	0.0	1.4
Folate	µg	73	59	62	108	23	0	108
Vitamin C	mg	2	3	3	27	2	0	27
Vitamin A:								
Retinol	µg	11	22	19	118	46	0	118
β-carotene	µg	137	201	184	1464	127	0	1464
Retinol equivalent	µg	34	55	49	362	67	0	362
Vitamin D	µg	0.23	0.66	0.54	0.70	0.61	0.00	0.70
Vitamin E	mg	3.37	5.21	4.72	3.81	3.64	0.00	3.81

(a) Available carbohydrate, calculated as monosaccharide equivalent

(b) As non-starch polysaccharides

(c) Excludes sodium from table salt

Links to other data sources and further information about school food

Information about free school meals, free milk, School Fruit and Vegetable Scheme in England:

<https://www.gov.uk/school-meals-healthy-eating-standards>

School food standards, including food-based and nutrient-based standards in England:

www.schoolfoodtrust.org.uk/the-standards/the-nutrient-based-standards

Northern Ireland:

http://www.deni.gov.uk/index/support-and-development-2/5-schools_meals/nutritional-standards.htm

Scotland:

<http://www.scotland.gov.uk/Resource/Doc/47095/0023900.pdf>