

MINIMUM INCOME STANDARD: The food budget standard

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INTRODUCTION

A minimum standard of living includes, but is more than just, food, clothes and shelter. It is about having what you need in order to have the opportunities and choices necessary to participate in society.

(MIS groups' definition of an acceptable minimum)

The food component is required to meet a socially acceptable standard as agreed by focus groups from the general public. In order that the budgets are considered valid it is important that the diets stand individuals in good stead in regard to health and fitness. The role of the MIS nutritionist is to examine the menus, devised by the case-study discussion groups, in the context of the nutritional requirements for that particular group of the population. Each nutrient has a particular function or series of functions in the body and the amount required to maintain good health varies according to age, gender, level of physical activity and state of health. In the early 1990s the Department of Health published a set of dietary reference values (DRVs) for different population groups by age and gender (Department of Health, 1991). The DRVs are estimates of nutrients requirements for each population group, which take account of the distribution of other factors within the group such as health and present lifestyle¹. The reference nutrient intake (RNI) is the upper end of the distribution of nutrient need within the population to ensure that nearly all the group's needs are met. (Thus many in the group will need less than the RNI estimate.)

¹ Boys and girls (aged 0-3 months; 7-9 months; 10-12 months; 1-3 years; 4-6 years; 7-10 years). Males (aged 11-14 years; 15-18 years; 19-50 years; 50+ years). Females with similar age-bands to males, plus additions for pregnancy and breastfeeding.

All foods consumed are included in the test, that is, food and snacks eaten at home, outside the home and the nutritional value of any alcohol included in the diet.

FOOD BUDGETS METHODS

The research method for the Minimum Income Standard project aimed to reconcile the views of experts, who promote a healthy and nutritionally balanced diet, with those of ordinary people, who are best placed to agree a diet that is reasonably healthy, practical in terms of lifestyle, and realistic in terms of preferences and treats. For more detail on the research methods, see the research report (Bradshaw et al., 2008).

The discussion groups

Three levels of discussion took place (task group, checkback group and final negotiation group). The task groups set the menus for the 15 case studies listed below and the following groups checked, confirmed and validated decisions made by the previous groups. At the task group stage single females were recruited to discuss the menus of single females, parents of the appropriate age of child were recruited to discuss the diets of that particular child and so on. When talking about diet, facilitators helped participants first to construct a one-day sample menu, outlining the basic food and drink needed for one day. They then devised a list of alternatives for each meal and snack and described what items might be kept in a household store cupboard to meet the needs for condiments, sauces, pickles, sweeteners and basic cooking ingredients such as flour and sugar. The task group also agreed a common eating structure for weekend or weekdays including snacking, eating out, takeaway meals, alcohol consumption and catering for visitors. The case studies, described below, were assumed healthy. The level of activity of each case study was discussed and rated as high, medium or low according to common expectation about particular age and lifestyle. If social eating and drinking was incurred an agreement was sought on the frequency this took place and what level of spending was acceptable.

Case 1	Single female of working age
Case 2	Single male of working age
Case 3	Female partnered with no children
Case 4	Male partnered with no children
Case 5	Female partnered with children
Case 6	Male partnered with children
Case 7	Lone mother with children
Case 8	Single female pensioner
Case 9	Single male pensioner
Case 10	Female partnered pensioner
Case 11	Male partnered pensioner
Case 12	Baby, toddler aged one
Case 13	Pre-school child aged three
Case 14	Primary-school child aged eight
Case 15	Secondary-school child aged 14

Developing individual, nutritionally adequate, case study menus made it possible to devise family menus by combining the food baskets for the relevant groups of individuals. The checkback groups helped to check the previous group decisions, the acceptability of the changes proposed by the nutritionist and the cost of the food budget. The checkback groups were made up of combined case study representatives, for example partnered men and women discussed menus for couples. A number of other issues were tackled by this group, such as redefining the food or alcohol element of lump sums given for social participation, the higher cost of food during holidays away from home, the occasional festive spending on food, catering for visitors and economies of scale. As a result adjustments were agreed to the food budget to take account of the cost of social spending not essential for health but essential for social inclusion.

The final negotiation groups represented a greater range of combined households, for example, the final pensioner group examined the budgets for both single and couple pensioner households. They were shown the menus, given information on the final cost of the food budget and asked to reflect on how the budgets differed

from actual spending. Actual spending was defined by average spending according to an EFS (Expenditure and Food Survey) analysis of spending by different types of household.

The nutritional expert

The role of the nutritionist was to check that the diets put forward by the groups met a minimum standard - below which today's healthy guidelines may be compromised. First the one-day menus for individual case studies, created by the task groups, were extended to a full week using the options for alternative meals and meal structure given by the groups. Second the expert added a layer of detail to the menus in preparation for the dietary analysis – that is, standard portion sizes, food weights, volume and quantities of drinks, snacks and sweets. Recipe ingredients were identified and cooking methods described. Where appropriate, specific brands of foods were shown, such as 'Kellogg's' cornflakes or 'Heinz' baked beans. Where diets lacked the recommended levels of fruit and vegetables these were added in readiness for a full dietary check.

The dietary adequacy test was carried out using a software programme called WISP.² For each case study, age, gender, body mass index and activity level was entered into the programme in addition to the daily food intake. In essence the foods consumed were broken down into their nutrient parts and measured against the nutrient requirements of the appropriate group within the population. The suitability of the programme for this analysis was piloted early in the project using consensual menu data from the Irish 'minimal essential' budget standard (MacMahon et al., 2006).

Following the analysis only essential adjustments were made to menus by the nutritionist to compensate for readings outside the acceptable margins. The acceptable margins for adults were, on or above 100 per cent of the RNI required and between 90-110 per cent for energy. The small increase in the energy margin was to compensate for case study BMIs (height and weight ratios) that had a

² Tinuviel Software Company: www.tinuvielsoftware.com

tendency to be on the low side, when compared to what is generally seen today as the norm. Although it is well known that adults who take in significantly more energy than they require have contributed to the 46 per cent of men and 34 per cent of women in England who are overweight (17 per cent and 21 per cent retrospectively classified as obese), the energy output from food needs to meet the needs of the majority of the population group.³ The single female, for example, was given a BMI of 21.5 based on average height and weight of 1.63m and 57.15k (5'4" x 9st 0lbs). (People are classified as overweight if their BMI is above 25.)

The most common change made by the expert to the case-study menus was to increase the amount of fruit and vegetables to 400g per day. Other examples of minor changes are given below:

- Extra mushrooms, broccoli and spinach were added to increase the copper and iron intake;
- Dried fruit was added to the morning cereal for extra fibre;
- Tuna was used as a sandwich filling once a week for added fish source nutrients;
- Dried soup was replaced by an alternative with lower salt levels;
- A polyunsaturated spread such as 'Flora' was used instead of butter and, for adults, full cream milk was replaced by skimmed to reduce the saturated fat intake;
- Where white bread was included, the 'Hovis Best of Both' brand was used. In other instances brown or wholemeal bread was used to increase fibre and B vitamins;
- 50g of sugar per week was added for each person to sprinkle on cereals, etc.

³ British Nutrition Foundation 2004
[http://www.nutrition.org.uk/upload/Nutrient%20Requirements%20and%20recommendations%20pdf\(1\).pdf](http://www.nutrition.org.uk/upload/Nutrient%20Requirements%20and%20recommendations%20pdf(1).pdf)

These small adjustments did not change the nature of the menus agreed by the task group but were nevertheless meticulously recorded for approval at the later group stage. So, for example pizza, fish and chips and chocolate biscuits and wine or beer remained on the menu as before with perhaps extra portions of mushrooms and vegetables and fruit. Some menus needed no changes, others minor changes. The single female pensioner menu needed significant work to decrease the levels of energy without compromising other nutritional values and the nature of the menu presented. Negotiation for change to the pensioner budget reached the final discussion group before the contents satisfied both a consensus of ordinary people and the nutritional expert.

The final task for the expert was to combine the individual menus into family menus as shown in Table 1. In the case of the largest family unit six individual menus were combined into one without compromise to the nutritional adequacy of any family member. Common meals were grouped together to take advantage of economies of scale but many meals were allowed to remain dissimilar to account for the different preferences for food by age and lifestyle. A detailed weekly shopping list was developed, adding in food waste from preparation, cooking and serving, and extras for non-reciprocal visitors. Outstanding issues were noted and data was collected on actual spending reported in the Expenditure and Food Survey (EFS) in readiness for the Final Group discussions.

Pricing

The cost of food and alcohol eaten out was agreed by consensus as a sum set aside sometimes within cultural and social participation spending and sometimes as a specific amount only for that purpose. Where a cost was needed for eating or drinking outside the home a typical price was used from an external catering outlet (cafés, restaurants or pubs). The calculation of the extra cost for meals or drink consumed outside the home would take into account the cost of a similar meal provided from the supermarket basket. This calculation was necessary for two reasons, first to avoid double counting and second to avoid compromising the

nutritional adequacy of the diet with additional foods over and above what was needed.⁴

The initial pricing of food items was done online at the Tesco grocery website between April 2007 and October 2007 (delivery charges excluded). The final shopping list for food items consumed in the home, however, was priced on-site in a Tesco supermarket in April 2008. Shopping for food on-site in the same supermarket was found to save about 10 per cent of the cost of on-line shopping. The savings occurred mostly as a result of having access to a wider range of goods and being able to buy economical weights, making it possible to assess value for money better. For some items the groups had specified the quality and brand of items required and so the final priced list included a mixture of Tesco Value items, Tesco's own brands and named brands. Pack sizes, in relation to portion size needed, were used to set the lifetime for any item with a shelf life of more than one week⁵. This process provided another element of economies of scale as part items not used and not suitable to be saved for later use were treated as waste. All groups agreed that kitchens would be equipped with a fridge freezer unit.

The results

Table 1 shows the total cost of food and alcohol for eleven family types at April 2008. Food described as the 'extra cost of food eaten outside the home' includes food purchased as takeaways and meals in restaurants, pubs or cafés. Alcohol for home use is purchased from the supermarket, whereas the extra cost of alcohol outside the home reflects the extra cost of alcohol taken with a restaurant meal or in a bar compared to the cost of drinking the same at home. Small amounts shown in the extra costs of food or drink outside the home may indicate that this happens infrequently, for example once per month rather than weekly.

⁴ An example of the calculation of the extra cost of a takeaway meal - A fish and chip supper purchased from a fish and chip shop cost £4.60. The cost of a similar meal purchased from the supermarket was priced at £1.40. Subtracting the supermarket cost from the eating out cost would give an extra cost of eating out of £3.20 (April 2008 prices).

⁵ Example of a calculation of weekly costs for items lasting longer than one week: Frozen peas – 280g per week needed (Tesco pack weight 1kg - price £1.79, April 2008.) This pack would therefore last for 3.5 weeks and the weekly budget cost would be 51p.

All discussion groups agreed that budgets should include some alcohol consumed at home but not all agreed consuming alcohol outside the home was necessary. The alcohol was included in the assessment of the overall nutritional adequacy of the diet. The couple of working age (without children) consumed the most alcohol both at home and outside the home. The single person of working age only consumed alcohol in the home, no alcohol was agreed for outside the home. Couple pensioners also consumed more alcohol than two single pensioners in total. Lone parents drank mainly at home with the occasional drink with a meal outside the home. Couples with children had similar levels of alcohol consumption per person to lone parents but drinking alcohol outside the home was not agreed.

Can two people live (as a couple) comparatively cheaper than the total of two single people? This is about economies of scale and according to this research the total cost of food eaten and in and out of the home is significantly cheaper when two people live as a couple. Running a joint household food budget account (as if a couple) the working age singles would save £11.40 per week and the single pensioners would save £18.71 per week.

Table 1 The cost of weekly food baskets for families

April 2008 prices in £s

	Food eaten at home	Extra cost of food outside the home	Alcohol at home	Extra cost of alcohol outside the home	Total cost **
Households with no children					
Single person working age *	28.60	11.75	4.38	0.00	44.73
Couple working age	50.33	18.97	9.39	4.46	83.16
Single pensioner *	29.73	6.25	2.63	0.37	38.98
Couple pensioner	47.13	6.12	6.53	0.87	60.65
Households with children					
Lone parent, one child (aged 1)	41.54	5.51	3.04	0.45	50.53
Lone parent, two child (ages 3, 8)	59.08	6.63	3.04	0.45	69.19
Lone parent, three child (ages 3, 8, 14)	75.39	9.32	3.04	0.45	88.20
Couple, one child (aged 1)	63.69	5.10	6.06	0.00	74.85
Couple, two child (ages 3, 8)	90.74	6.73	6.06	0.00	103.53
Couple, three child (ages 3, 8, 14)	96.12	8.97	6.06	0.00	111.15
Couple, four child (ages 1, 3, 8, 14)	113.12	8.97	6.06	0.00	128.15

* The mean of male and female cases.

** Totals may be subject to rounding errors of +/- 1p.

Table 2 gives the results of a secondary analysis of the food costs of children from combined family budgets at key stages in childhood.

The average cost of food for a child under the age of 16 years, including the extra costs of eating out is £19.34 per week in April 2008. As expected, the weekly food cost of children has a tendency to increase by age of child. In April 2008, a pre-school child was £6.09 cheaper to feed than a secondary school child. However, the cost of feeding a toddler or baby is £2.50 more than a child aged three or four years old, and the cost of a secondary school child includes significant eating out costs compared to younger children. The aim of this exercise is to provide key information for users of the MIS ready reckoner wishing to tailor their estimate of food costs for families to include children of different ages. The estimate is crude in the way that we have not differentiated between boys and girls. Past budget standard work has also shows that differences by gender would likely affect the secondary school child,

as the nutritional requirements for older boys are higher than those of older girls (Oldfield, 1997).

Table 2 The cost of weekly food baskets for children living at home*

April 2008 prices in £s

	Food eaten at home	Extra cost of food eaten outside the home	Total weekly cost of food
Child toddler	16.50	0.50	17.00
Child pre school	14.57	0.92	15.49
Child primary school	19.14	0.92	20.06
Child secondary school	19.08	2.50	21.58

* Costs derived from lone parent menus

MIS compared to actual spending

The MIS budgets have been derived by public consensus (checked by experts) according to what a household needs to maintain good health in the context of its social and economic environment. Therefore there is no reason why MIS budgets should be identical to actual expenditure patterns. Nevertheless it is interesting to observe how near MIS is to actual spending.

In Table 3 for food and Table 4 for alcohol, the MIS is compared with actual spending on food and alcohol in relation to four selected household types. MIS is compared to three levels of expenditure patterns:

- Mean food expenditure of all families of that type in the EFS
- Mean food expenditure of all families of that type in the EFS who are receiving means tested benefits.
- Mean food expenditure of all families of that type in the EFS living in social housing.

The EFS analysis uses five years of data 2001-2006 to achieve a good sample size. Each year the spending recorded in the EFS has been inflated by movements in the Consumer Price Index (CPI) to April 2008, which is the pricing date of MIS. The EFS is based on fortnightly household expenditure diaries.

Single people of working age

Spending on food in the MIS household is near to the EFS average spending for this group although at 25 per cent of total household expenditure it represents a proportionally higher share of the household budget. For EFS households living in social housing and those claiming income support, the MIS household spend an additional £11.87 and £15.04 on food respectively. However, few single people are found living in social housing, which is usually only available for vulnerable young adults. Those living on Income Support are clearly not spending sufficient to achieve a nutritionally adequate diet relative to the norms agreed by public consensus. Conversely, MIS alcohol expense is low compared to actual spending in all cases for single person households; a third of spending in average EFS households; £3.66 less than households living in social housing; and £1.86 less than those on Income Support. As a proportion of total expenses the MIS single working age household only spends 2.8 per cent of its budget on alcohol, which is about half that reported in the EFS.

Pensioner couple

For the pensioner couple MIS spending on food is near to average spending by people claiming Pension Credit and those pensioners living in social housing, and £12.35 less than the mean of all households reported in the EFS. MIS food budgets make up 26.6 per cent of the total budget standard, which is a slightly higher proportion of spending than found in pensioner couples living in social housing or those pensioners claiming Pension Credit and a significantly higher proportion of total spending for all households (18 per cent). The MIS amount for alcohol is within a pound of actual spending in households claiming Pension Credit or those living in social housing and £3.43 per week less than average pensioner households. Proportionally all households spend around three per cent of their total expenditure on alcohol.

Couple with two children

For couples with children the MIS spending on food falls about midway between average and spending for people living in social housing, with people living on Income Support spending significantly less. For similar households on Income Support they spend almost £30 a week less than the MIS groups say they need to spend to conform to the agreed socially expected norms for low-income households. MIS households spend the lowest proportion of total budget and the lowest actual amount on alcohol compared to the average household, households on Income Support and households living in social housing.

Lone parent with one child

For lone parent households, especially households with one older child rather than a toddler, spending on food is almost identical to average spending both proportionally and actually. However, given that almost half of lone parents are dependent on Income Support, the distribution of incomes is narrow. The situation for alcohol is similar to that found in couple households with children where the MIS budgets represent the lowest proportion and the lowest cost compared to the three comparisons with EFS spending.

Table 3 MIS food expenditure compared with actual mean expenditure per week (April 2008)

Household type	EFS all households		EFS Income Support		EFS social housing		MIS	
	Mean £	% *	Mean £	% *	Mean £	% *	Mean £	% *
Single working age	39.53	15.1	25.30	20.7	28.47	19.3	40.34	25.0
Pensioner couple	65.60	18.1	53.58	23.2	52.81	24.9	53.25	26.6
Couple with 2 children	111.55	18.3	67.58	23.5	82.16	23.6	97.47	26.3
Lone parent with one toddler child	52.27	20	41.56	35.7	44.80	24.5	47.05	22.4
Lone parent with one secondary school child							51.63	20.0

* % is the proportion of total household expenditure spent on food.

Table 4 MIS alcohol expenditure compared with actual mean expenditure per week (April 2008)

Household type	EFS all households		EFS Income Support		EFS social housing		MIS	
	Mean £	%	Mean £	%	Mean £	%	Mean £	%
Single working age	12.82	4.9	6.24	5.1	8.04	5.4	4.38	2.8
Pensioner couple	10.83	3	6.69	2.9	7.11	3.4	7.40	3.7
Couple with 2 children	17.99	2.9	6.86	2.4	10.67	3.1	6.06	1.6
Lone parent with one child	7.00	2.7	3.94	2.4	4.47	2.4	3.48	1.6

A MIS family food budget standard has been established for eleven family types, which represent 79 per cent of all single-unit household types in the UK. One of the main purposes of exploring so many household types is to establish a new equivalence scale that sets out the relative spending for households of different size and composition. Column three of Table 5 below demonstrates the proportion of cost needed by other households if the couple of working age without children needs to spend £83.16 per week on food in April 2008. Therefore a single person of working age needs £44.73 per week which is more than half of a couple's expenditure to maintain the same norms as established by public consensus in the MIS standard. Although an equivalence scale's primary use is for testing inequality it is a useful tool for keeping budget standards up to date in the long term without having to repeat the whole research process for every household type.

Table 5 **Equivalence scales when the couple without children is equal to 1.00**

Households	Weekly food budget April 2008 (including alcohol) £s per week	Food equivalence
Single working age	44.73	0.54
Couple working age	83.16	1.00
Single pensioner	38.98	0.49
Couple pensioner	60.65	0.73
Lone parent one child	50.53	0.61
Lone parent with two children	69.19	0.83
Lone parent with three children	88.20	1.06
Couple with one child	74.85	0.90
Couple with two children	103.53	1.24
Couple with three children	111.15	1.34
Couple with four children	128.15	1.54

Comments

This research shows that focus groups of similar individuals in terms of age, gender and life-stage were able to discuss and agree a diet that is reasonably healthy, practical in terms of lifestyle, and realistic in terms of preferences and treats. Subsequent checks by the nutritional expert showed that these diets needed only minor adjustments to achieve nutritional adequacy and that increasing the amounts of fruit and vegetables to five-a-day in line with government guidelines would, in most cases, have achieved the required standard.

The cost of food and alcohol is dependent on family type and family size. In April 2008, single pensioners need to spend almost £36 a week on food and £3 a week on alcohol, while the largest family we have, which is a couple and four children, need to spend £122 on food and £6 a week on alcohol to meet the minimum income standard. In most cases the minimum income standard is more and at times substantially more than actual spending on food for people with incomes made up of Income Support/Pension Credit and, to a lesser extent households living in social housing. Comparative households spending less than the MIS on food may not be

achieving a basic level of nutrient requirements and in the long term this may well have health implications, particularly for vulnerable family members. For this reason we did not make the food and drink component of the budgets (which includes alcohol) a variable cost in the MIS Ready Reckoner.

In order that MIS remains a useful tool for policy in the future it needs to reflect rising living standards in the short term and changing tastes and preferences in the long term. The current strategy, discussed in Oldfield and Bradshaw (2008), is to uprate budgets annually using an index of average expenditure and to rebase budgets periodically in order to capture changes in living standards.

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Further information on the project can be found at:

www.minimumincomestandard.org