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MINISTRY OF  
AGRICULTURE, FISHERIES AND FOOD

Studies in  
Urban Household Diets  
1944-49

SECOND REPORT OF THE  
NATIONAL FOOD SURVEY  
COMMITTEE

LONDON  
HER MAJESTY'S STATIONERY OFFICE

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1956

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K. G. Fenelon, M.A., Ph.D. (to July 1950); the late Sir Jack Drummond, D.Sc., F.R.I.C., F.R.S. (to August 1952); H. E. Magee, D.Sc., M.R.C.P. (to December 1955); G. S. Bishop, O.B.E. (December 1949–January 1954); M. Compton (July 1950–June 1954); R. E. Stedman (January 1954–August 1955).

W. L. Kendall, M.Sc.(Econ.), served as Secretary of the Committee from May 1949 to January 1954.

## Preface

THE National Food Survey was established in July, 1940, and has been continued to the present time in order to provide an independent assessment of the effectiveness of the national food policy in maintaining an acceptable and nutritionally adequate household diet. Until 1950, the Survey was largely restricted to urban working-class households, but from time to time additional studies were made of food expenditure, consumption and nutrition in other sections of the community. These special enquiries were initiated to meet specific administrative requirements. For example, in 1944 attention was directed to the relation between unsatisfactory housing and the diet and, during the winter of 1947-48, the normal work of the Survey was suspended in order to concentrate the fieldwork on certain occupational groups in which it appeared that output might be adversely affected by the then current food shortages. During the war and early post-war years, the results of the Survey were not published, nor indeed fully analysed; the information extracted was confined to that required to meet immediate needs, but it was always envisaged that once the stress of war and post-war reconstruction was over, the data should be examined in more detail.

In order to make the results of the Survey more generally available, the National Food Survey Committee, which was set up in 1948 to review the existing material, drew up a programme for the analysis of the data for the ten years 1940-49. The First Report of the Committee described trends in consumption in urban working-class households during this period, and similar information relating to expenditure and price trends was given in a Supplement to the Annual Report for 1950. The Committee then concentrated on the Annual Reports for 1951 and subsequent years, and the further analyses of the earlier material promised in the Preface to the First Report have therefore been somewhat long delayed. Nevertheless, in view of the unique character of the material and its interest to nutritionists, sociologists and others, the Committee has had no hesitation in recommending its publication.

It has not, however, been found possible to carry out the full programme of analysis originally envisaged. In particular, the limitations of the data for 1940-43, and especially the physical difficulties encountered in dealing with old and worn punched cards, have prevented any further study of the early war years, when rationing was introduced and dietary habits rapidly changed. The present series of studies relates to the years 1944-49, when the wartime system of controls was in full operation. A free economy, during a period when there was much unemployment and great social inequality, had been replaced by a controlled economy, with full employment, strict rationing of basic foods and a great reduction in group differences of all kinds. The pre-war surveys, carried out by Crawford and Broadley, Boyd Orr and the Carnegie Trust, provide a record of the former conditions, and the present Report of the latter. For comparison with the post-decontrol position, both are needed. If current reports are read against the background of these two contrasted periods, their value will clearly be enhanced.

The general plan of the present Report was drawn up, in accordance with the Committee's recommendations, by Mr. W. L. Kendall and Miss D. F.

## *Preface*

Hollingsworth. Most of the sections dealing with food consumption and expenditure, planned by Mr. Kendall, were prepared by Mrs. E. H. Gibson; Mr. A. H. J. Baines has undertaken the later stages of revision. The sections on the energy value and nutrient composition of the diet were prepared by Miss D. F. Hollingsworth and Miss G. M. Warnock. The chapter on regional differences in the urban working-class diet, the first full-scale study of this kind yet undertaken, was written by Mr. G. R. Price with the assistance of Mr. S. W. J. Tennant. Professor E. F. Nash, who was largely responsible for the development of the Survey during the war years, and Dr. Isabella Leitch have continued to give valuable advice. The Committee desires to renew its thanks to the field and office staff of the London Press Exchange, especially to its director, Dr. Mark Abrams, for the way in which they overcame the many difficulties encountered during these years. Finally, the Ministry and the Committee are indebted to the housewives who willingly took part in the Survey and so provided information which served both as a guide to food policy during this period of social change and as a permanent record of the diet under rationing and control.

NORMAN C. WRIGHT

*Chairman*

*National Food Survey Committee*

*June 1956*

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# I

## Introduction

1. The wartime system of food control, which has had a great and lasting effect on the national diet, was developed gradually after 1939. The principal measures of rationing and price control were in operation by the end of 1941, but the administrative structure had not attained its most complete development until the end of 1943. During 1944, food supplies, although subject to control to a degree not reached previously, were more plentiful than during the preceding war years or the immediate post-war period. Supply difficulties were intensified by the end of hostilities and the pressing needs of Europe, but after 1947 the position again improved and a gradual advance towards decontrol began. The data collected by the National Food Survey between 1944 and 1947 are therefore of particular interest in studying the effect of wartime food policy on the diet of particular groups of the population.

2. The most important effect of the war on household diets was to reduce the differences between those of the working class and the middle class. Although comparisons with dietary levels before the war are necessarily inexact, the results of the Survey clearly indicate a marked diminution in class differences. For many working-class households, this process represented a levelling-up to meet physiological need ; indeed, from a nutritional point of view the working-class diet was probably more satisfactory in 1944 than at any time before the war. Unemployment had almost disappeared ; wage-rates had risen by 40 to 50 per cent since the outbreak of war, while the food component of the working-class cost of living index had increased by only 21 per cent between 1937 and 1944. Part of the increase in real incomes went to purchase a better diet. The middle-class diet, on the other hand, suffered a considerable reduction in variety and palatability. The most obvious causes of this levelling were rationing and the combined pressure of inflation and of taxation on the middle classes, but there were other contributory factors. Thus, even where class differences in consumption persisted, measures of price control and greater standardisation of quality tended to reduce the corresponding differences in expenditure. Again, many of the relatively expensive foods, for which rationing was considered impracticable or unnecessary, became scarce and were not purchased by many middle-class households which would normally have bought them for the sake of variety.

3. The diet in 1944, though wholesome and nutritionally adequate, was thus somewhat dull. Almost the only foods which were available in unlimited quantities were bread, flour, potatoes and oatmeal, which were used fairly extensively by all classes. Indeed, it was a major objective of wartime food policy to maintain these staple foods in unrestricted supply in order to offset the reduction in supplies of meat, fish, eggs and other foods.

4. Food policy was deliberately directed towards the nutritional improvement of the diet of the nutritionally vulnerable groups, expectant and nursing mothers and children, and of the workers generally. The nutritional value of flour was increased because of the increase in extraction rate, and from 1942 calcium

carbonate was added in order to raise the average calcium intake of the population and to counteract any tendency for the higher extraction rate to reduce the availability of the calcium in the diet. Margarine was fortified with vitamins A and D to make it an adequate nutritional substitute for butter. Special distribution schemes for welfare foods were in operation. Important measures were taken to increase the consumption of milk in families with children. The scheme for the supply of milk in schools was extended, and cheap (or, where necessary, free) milk was provided for expectant mothers and for children under school age. Much of the interest of the National Food Survey records for this period lies in the light they throw on the effect of these measures.

### Scope of the Report

5. It is shown in Chapter II that, even under the restrictions obtaining in 1944, middle-class households still bought relatively large amounts of the "protective" foods such as milk, eggs, fresh fruit and green vegetables, while working-class households consumed more bread and potatoes, which are cheap sources of energy. After the war, although supply difficulties at first became more acute (to such an extent that bread was temporarily rationed), the partial resumption of peace-time trade led to some restoration of pre-war habits. Imported fruit became more freely available to take the place of vegetables, and, with the re-opening of the fishing grounds, the supply of fish rapidly increased and partly offset the continued fall in meat supplies. By 1947, there were signs that the differences between the middle- and working-class diets were becoming more marked as a result of the rise in food prices and the return to the market of the more expensive foods. There was, however, no indication of a reversion to the wide class disparity apparent before the war.

6. Chapter III deals with a special sample of poorly accommodated working-class households in 1944, selected from the urban working-class sample on the basis of housing conditions. The separate examination of this sub-sample confirms the general conclusion that dietary differences towards the end of the war were small by pre-war standards. At the same time, the consumption of relatively more bread and potatoes and less milk, eggs, fresh fruit and green vegetables was still characteristic of these households. This was reflected in their relatively low intake of calcium, vitamin A, riboflavin, nicotinic acid and vitamin C, with higher figures for energy value, protein and vitamin B<sub>1</sub>. Another feature of their diet which may be more directly associated with bad housing was their somewhat greater dependence on prepared or partly prepared foods, such as fried fish and chips, canned meat and canned vegetables. Further, these households derived comparatively little benefit from gardens or allotments. Restricted cooking facilities and the absence of gardens both tended to increase the unit cost of the household diet. It is hoped to deal more fully in future Annual Reports with the consumption of manufactured foods and the contribution of garden and allotment produce to the diet.

7. In Chapter IV an attempt has been made to compare differences between the diets of the households of non-manual workers and of workers in lighter and heavier manual occupations. Households with more than one earner were excluded. The dietary pattern of non-manual workers' households in the urban working-class sample was found to approximate to that of the middle class, discussed in Chapter II, with the emphasis on milk, fresh fruit, green vegetables



## *Introduction*

and fish. Their food expenditure per head was only about 1 per cent higher than that of the urban working class as a whole, but 8 per cent higher than that of heavy manual workers. The diet of light manual workers' households was similar to that of the urban working class generally. Heavy manual workers' households consumed less of the protective foods (milk excepted) than the working class generally. Even for milk, their consumption per head was less than that of the other two occupational groups. They ate more bread and potatoes.

8. In this analysis, occupational comparisons were to some extent affected by differences in the composition of the household, since heavy manual workers were found to have larger families than others ; but the two effects could be separated by limiting the enquiry to selected groups of households of similar family composition. Thus, it was found that when attention was confined to childless couples, non-manual workers' households consumed substantially more fruit and milk than those of heavy manual workers, about the same quantity of eggs, meat and vegetables other than potatoes, but less fish, potatoes and bread. In households with two children, where the average age of the adults was lower, the non-manual groups were found to consume more fish and fresh green vegetables. But differences attributable to occupation were found, in all instances, to be considerably less than those associated with family composition.

9. Chapter V deals in some detail with special samples of households of heavy workers engaged in agriculture, the metal industries, mining, shipbuilding and building. The data were collected during the winter of 1947-48 in order to assess the position of workers in these industries while bread and potatoes were rationed. Food expenditure was found to be lowest in the agricultural sample, as was expected in view of the importance of self-supply to workers in that occupation. In the other groups, recorded expenditure per head was about the same as or somewhat higher than in the urban working class as a whole, but the total value of food obtained for consumption was generally less. Expenditure was highest in the group drawn from the metal industries. Consumption records, which are in general accordance with the findings in Chapter IV, show that heavy manual workers' households in general consumed less of the protective foods such as milk, eggs, fruit and fresh green vegetables than other working-class households, but more potatoes, bread and cooked fish. Some part of these differences may be attributable to the effect of the large number of adults and children in the households surveyed, and some to the effect of geographical location ; but even making due allowance for regional differences, a number of special features of the diets of these industrial groups are discernible. Thus, agricultural workers' households relied to a greater extent for their protein upon milk, cheese and bacon, and a high consumption of bread. They consumed comparatively small quantities of vegetables, other than potatoes. Miners' households, in contrast to those of agricultural workers and metal workers, had a high consumption of carcass meat as well as cheese, reflecting their higher ration entitlements, but lower levels of other sources of animal protein. Metal workers' households showed a high level for unrationed meats and fish, and for preserves. The average diet in builders' households, though in many respects similar to that in the other groups compared, was modified by the regional distribution of the building trade ; a large proportion of the sample

came from southern England, and accordingly recorded a relatively high consumption of fresh green vegetables, though not of other vegetables (excluding potatoes).

10. It has already been suggested that the most important factor affecting the diet is the composition of the household. Comparisons between groups may be vitiated unless account is taken of the demographic structure of the samples compared. Chapter VI therefore discusses methods of classification by household composition, and analyses food expenditure according to the classification adopted. The greatest differences in food expenditure per head were found between households containing children and those with none; variations between households classified according to the numbers of adults were small. The addition of a further child to the family was naturally associated with a decrease in consumption per head of most foods, but it is disquieting that the decrease was so steep for those foods which are of special value for children. The major exception to this trend was provided by milk, the consumption of which was safeguarded by the welfare schemes.

11. Chapter VII deals with regional variations in the household diet in 1949. For total food expenditure and total value of food per head, regional differences were small; the highest values were recorded in the South-West, the lowest in the North-West of England. For particular foods there were marked differences between the southern part of England on the one hand and Scotland and the north of England on the other. Consumption of fish, of vegetables other than potatoes and of fruit was relatively higher in the south; that of bread and other cereals and of unrationed meat tended to be higher in the north. In broad outline, differences in expenditure followed the same pattern, which was confirmed by results found for selected family types. For many important foods, including fresh meat, eggs, fish, fats, fruit, and vegetables other than potatoes, average consumption was less in Scotland than in any English region, partly because of higher prices.

12. Regional differences appear to have been relatively permanent, even under conditions of control. The results of the 1949 analysis conform closely to those found in the first half of 1943. Pressure on computing facilities has so far precluded any regional analysis for years subsequent to 1949, though separate results for Scotland were published in 1955.\* Further regional analyses will be made as soon as the pressure of other commitments permits. Meanwhile, it is considered that the 1949 figures will be of practical as well as of historical interest, although their value as an indication of the magnitude of regional differences is limited by the comprehensive character of rationing up to that year.

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\**Domestic Food Consumption and Expenditure, 1953*, H.M.S.O. 1955.

## II

# The Diets of Urban Middle-Class Households 1944 to 1947

13. Before the introduction in 1950 of a national sample covering all social classes, in rural as well as urban areas\*, the continuous survey was limited to urban working-class households. During the years 1944 to 1946 and nine months of 1947, however, a sample of urban middle-class households was also surveyed. The present chapter summarizes differences in consumption, expenditure and nutrient intake between the two groups ; more detailed tables are given in the Appendix, showing consumption quantities, expenditure on fruit and vegetables, for which the differences were greatest, and the contribution of different foods to the nutritional value of the diet.

14. The term "middle-class" in this connection is inexact, since the main basis of the selection was the location of households in middle-class wards of the towns surveyed. Provision was made, however, for distinguishing working-class households occurring in these wards, and similarly for middle-class households located in working-class wards. No distinction was made between the middle and upper classes, and a few upper-class households may have been included in the sample. The description of "middle-class households" given for the guidance of interviewers was as follows :

"Households where the head of the household was earning at least £6 a week before the war ; where the head is now a professional man, a worker in a managerial grade, on own account (except in a small way), or living on a private income. Households where the standard of living is clearly middle-class : e.g., garage for car ; maid or maids kept ; gardener employed. A telephone is often an indication of a middle-class household, but this feature should be considered with the occupation of the head of the household. A privately owned home may be an indication, but it is possible to find a working-class household owning or buying a house. Consider also the size and value of the house, the occupation of the head and the standard of living."

15. In the same way as the "middle class" included some households of a higher social class, the working-class group also included a few of the poorest households which in some systems of classification would be grouped separately. The characteristics of the poorer households are considered in Chapter III.

16. It should be noted that with the above definition of class, resting partly upon the income of the head of the household, it was possible for a "working-class" household with more than one earner to have a total income in excess of that of a "middle-class" household, and for its food expenditure to show the effect of this higher economic standing. Under war conditions, with rising wage levels, particularly for the semi-skilled and for young persons, and with

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\**Domestic Food Consumption and Expenditure, 1950*, H.M.S.O. 1953, paragraphs 7-12 and Appendix A.

an exceptionally high level of employment, this was perhaps more likely to occur than at other times.

**Family Composition of Middle- and Working-Class Households**

17. The numbers of households surveyed and their average size are shown in Table 1. A "household" includes all persons for whom the housewife caters and a "person" is defined as one having at least sixteen meals in the house during the week. With the demobilization of the armed forces, there was a tendency for the size of household to increase over the period, but the average working-class household remained about half a person larger than the middle-class household. The difference arose from the smaller number of both adolescents and children in the middle-class households, though the proportion of children in this group increased steadily over the period.

TABLE 1  
*Composition of Households in the National Food Survey Sample 1944 to 1947*

	Households	Persons	Averages per household			
			Adults 21 and over	Adolescents 14-20	Children under 14	Total persons
1944						
Working-class . .	7,623	26,015	2.23	0.31	0.86	3.40
Middle-class . .	1,303	3,868	2.28	0.21	0.48	2.97
1945						
Working-class . .	7,225	24,968	2.18	0.33	0.94	3.45
Middle-class . .	1,046	3,117	2.23	0.19	0.56	2.98
1946						
Working-class . .	8,204	29,260	2.29	0.34	0.94	3.57
Middle-class . .	1,443	4,291	2.21	0.19	0.57	2.97
1947 (Jan to Sept. only)						
Working-class . .	5,942	21,334	2.32	0.31	0.96	3.59
Middle-class . .	605	1,909	2.32	0.17	0.67	3.16

18. A more detailed analysis by family composition was made for the samples taken during the first quarter of 1944, largely according to the number of adults. The results, given in Table 2, are not strictly comparable with those in Table 1, as children were defined in Table 2 as those under 13 years of age. Those households having up to three adults and no other members accounted for 52 per cent of the middle-class sample but only 38 per cent of the working-class, although slightly more single-adult households (including old age pensioner households) were found in the working class. The proportions of households with one child were similar in each sample (about 16 per cent), but the households with two children were more numerous in the working class. Further details of family composition and, in addition, the distribution of the middle-class households according to occupation, are given in Chapter III for the period January to September 1944.

*The Diets of Urban Middle-Class Households 1944 to 1947*

**Food Expenditure and Value of Consumption\* per Head**

19. Table 3 gives yearly averages for food expenditure and value of consumption by middle-class and working-class households. From 1944 to 1946, the Cost of Living Index remained almost stationary at 122-123, but in the summer of 1947, before the series was discontinued, it fell to 117. The old Index reflected chiefly the prices of the subsidised foods; it took no account of the more

TABLE 2  
*Family Composition of Households in the National Food Survey Samples  
First Quarter 1944*

Type of household	Working class				Middle class			
	Persons		Households		Persons		Households	
	No.	%	No.	%	No.	%	No.	%
Households containing up to 3 adults and no children								
1 adult . . . . .	155	2.4	155	8.2	34	2.4	34	7.2
2 adults . . . . .	816	12.7	408	21.4	272	19.1	136	28.9
3 adults . . . . .	495	7.7	165	8.7	222	15.6	74	15.7
<i>Total</i> . . . . .	<i>1,466</i>	<i>22.8</i>	<i>728</i>	<i>38.3</i>	<i>528</i>	<i>37.1</i>	<i>244</i>	<i>51.8</i>
Households containing up to 3 adults and 1 child (under 13 years)								
1 adult and 1 child . . . . .	116	1.8	58	3.1	8	0.6	4	0.9
2 adults and 1 child . . . . .	618	9.6	206	10.9	153	10.7	51	10.8
3 adults and 1 child . . . . .	224	3.5	56	2.9	72	5.1	18	3.8
<i>Total</i> . . . . .	<i>958</i>	<i>14.9</i>	<i>320</i>	<i>16.9</i>	<i>233</i>	<i>16.4</i>	<i>73</i>	<i>15.5</i>
Households containing 1 or 2 adults and 2 children (under 13 years)								
1 adult and 2 children . . . . .	153	2.4	51	2.7	27	1.9	9	1.9
2 adults and 2 children . . . . .	464	7.2	116	6.1	92	6.5	23	4.9
<i>Total</i> . . . . .	<i>617</i>	<i>9.6</i>	<i>167</i>	<i>8.8</i>	<i>119</i>	<i>8.4</i>	<i>32</i>	<i>6.8</i>
Households containing 2 adults and 1 adolescent (13-20 years)	207	3.3	69	3.6	60	4.2	20	4.2
Other types . . . . .	3,172	49.4	614	32.4	483	33.9	102	21.7
<i>Grand Total</i> . . . . .	<i>6,420</i>	<i>100.0</i>	<i>1,898</i>	<i>100.0</i>	<i>1,423</i>	<i>100.0</i>	<i>471</i>	<i>100.0</i>

expensive unsubsidised foods, such as fruit, which were again becoming available. As a result of the increasing supplies of unsubsidised foods at higher prices, food expenditure rose between 1944 and 1947 by about 20 per cent in middle-class and 13 per cent in working-class households. The 1947 figures may be biased by the omission of the last quarter, when food expenditure is thought to have been relatively low, but the rise was already well marked in 1946, when the corresponding increases compared with 1944 were 9 per cent for the middle-class and 6 per cent for the working-class sample. As food expenditure increased, the gap between the two classes widened from 6 per cent

\*Value of consumption is defined as food expenditure plus the value of foods obtained otherwise than by purchase, adjusted for the value of changes in larder stocks.

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in 1944 to 7 per cent in 1945, 8 per cent in 1946 and finally 13 per cent in the first three quarters of 1947. These figures relate to purchases by the households in the sample during the survey week. For the total value of food consumed, including larder stock withdrawals and "free" supplies, the differences were greater, ranging from 18 per cent in 1944 to 23 per cent in January-September 1947.

TABLE 3  
*Estimated Value of Consumption 1944 to 1947*  
(per head per week)

	<i>Middle class</i>				<i>Working class</i>			
	1944	1945	1946	1947 <sup>1</sup>	1944	1945	1946	1947 <sup>1</sup>
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Expenditure on food purchased . . . . .	11 3	11 10	12 3	13 7	10 7	11 0	11 3	12 0
Value of "free" food . . . . .	7	5	4	6	3	2	2	3
Value of food from larder . . . . .	1 6	1 6	1 7	1 9	6	5	6	7
<i>Value of consumption</i> . . . . .	13 4	13 9	14 2	15 10	11 4	11 7	11 11	12 10
As percentage of working-class								
(1) Expenditure . . . . .	106	107	108	113	100	100	100	100
(2) Value of consumption . . . . .	118	119	119	123	100	100	100	100

<sup>1</sup>January to September only.

20. It will be seen from Table 3 that larder stocks, which tended to be used to a greater extent during the survey week than at other times\*, were more important for the middle class than the working class. Self-supplies (indicated in Table 3 as "free" food), which made a special contribution to the diet during the war years, were also generally greater for middle-class households. During the third quarter of 1944 records were collected which show that at that time a larger proportion of middle-class than working-class families in urban areas possessed a garden or allotment.

	<i>Urban middle class</i>	<i>Urban working class</i>
	<i>Per cent</i>	<i>Per cent</i>
Households with both garden and allotment . . . . .	6.0	6.4
Garden only . . . . .	65.4	37.0
Allotment only . . . . .	3.6	6.5
Neither . . . . .	25.0	50.1

The quarterly averages of the value of "free" or self-supplied food (including food obtained free from an employer) and of the value of larder stock withdrawals per head per week for the period 1944-47 are given in Table 4. They

\**Domestic Food Consumption and Expenditure, 1951, H.M.S.O. 1953, Appendix A.*

*The Diets of Urban Middle-Class Households 1944 to 1947*

illustrate the roughly complementary character of free food supplies and stock withdrawals over the year. In each quarter, the total of both was about three times as high for the middle class as for the working class.

TABLE 4  
*Average Value of Free Food and Stock Withdrawals 1944 to 1947*  
(pence per head per week)

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter <sup>1</sup>
<b>MIDDLE CLASS</b>				
Free food . . . . .	1.6	4.3	10.7	3.6
Stock withdrawals . . . . .	22.6	17.0	19.5	14.9
<i>Total</i> . . . . .	<i>24.2</i>	<i>21.3</i>	<i>30.2</i>	<i>18.5</i>
<b>WORKING CLASS</b>				
Free food . . . . .	1.1	2.0	5.2	2.0
Stock withdrawals . . . . .	7.0	4.8	5.4	5.7
<i>Total</i> . . . . .	<i>8.1</i>	<i>6.8</i>	<i>10.6</i>	<i>7.7</i>

<sup>1</sup>1944 to 1946 only.

21. The Survey records do not cover meals taken outside the home, and an attempt has since been made to assess their importance for different groups of households. Between 1944 and 1947, the households in both the middle-class and the working-class samples are estimated to have obtained between 3 and 4 per cent of their total meals outside the home; there was no significant difference between the classes in this respect and little change in the proportion from year to year.

**Expenditure on the Main Foods**

22. In Table 5, average figures for the three full years 1944 to 1946 are given to show the class differences in expenditure on the main foods, which are also expressed as percentages in Table 6. The levelling effect of rationing and control explains much of the similarity in expenditure between the two classes for eggs, cheese, meat, fats, sugar and preserves. The major differences were recorded for milk, fish, fruit and vegetables, and "other cereals"; for bread and potatoes, the order of the classes was reversed.

23. In view of the large disparity between the middle and working classes in expenditure on fruit and vegetables, and the nutritional importance of these foods, fuller details are given in Appendix A. Middle-class expenditure on fruit was higher in all years, but the difference, which amounted to 30 per cent in 1944, increased as more fruit became available, reaching 60 per cent in 1947. Only for tomatoes was the proportionate difference the same at the end of the period as at the beginning. The two classes showed little difference in total expenditure on vegetables, and both increased their expenditure about equally over the period, but the amounts spent on different vegetables varied appreciably. The working-class households consistently spent about 50 per cent more on potatoes; the middle class spent more on the more expensive types of green vegetables and on salads.

TABLE 5  
Domestic Food Consumption and Expenditure by Middle-Class and Working-Class Urban Households 1944-1947  
(per head per week)

	Consumption in oz. except where otherwise stated						Expenditure in pence					
		1944	1945	1946	1947 Jan.-Sept.	Average 1944-1946		1944	1945	1946	1947 Jan.-Sept.	Average 1944-1946
Milk <sup>1</sup> . . . . . pt.	M	4.9	5.1	5.1	5.1	5.0	M	18.7	19.4	19.3	20.0	19.1
	W	4.4	4.4	4.3	4.4	4.4	W	16.0	16.3	15.9	16.5	16.1
Cheese . . . . .	M	2.7	2.6	2.6	2.5	2.6	M	2.1	2.0	2.1	1.9	2.1
	W	2.6	2.5	2.5	2.3	2.5	W	2.1	2.0	2.0	1.6	2.0
Meat . . . . .	M	29.4	27.0	27.0	25.8	27.8	M	32.2	28.9	28.8	29.6	30.0
	W	28.3	26.4	26.6	25.5	27.1	W	30.9	28.7	28.5	27.9	29.4
Fish . . . . .	M	8.7	11.9	12.8	13.4	11.1	M	8.5	12.6	13.8	14.6	11.6
	W	7.6	9.2	10.6	9.5	9.1	W	7.7	10.1	11.3	11.0	9.7
Eggs <sup>2</sup> . . . . . No.	M	3.8	4.2	3.2	3.1	3.7	M	3.8	4.2	3.4	4.9	3.8
	W	2.9	3.0	2.5	2.3	2.8	W	3.5	3.8	3.4	3.8	3.6
Fats . . . . .	M	9.8	9.5	8.9	8.6	9.4	M	6.3	6.2	6.2	6.0	6.2
	W	9.2	8.6	8.2	7.9	8.7	W	6.2	5.9	6.0	5.7	6.0
Sugar and preserves . . . . .	M	17.5	17.5	17.6	18.0	17.5	M	6.3	6.0	6.0	5.6	6.1
	W	15.1	14.6	15.0	15.7	14.9	W	5.7	5.4	5.8	5.8	5.6
Potatoes <sup>3</sup> . . . . .	M	58.6	57.3	60.0	55.5	58.6	M	4.0	3.9	4.5	4.6	4.1
	W	71.3	68.5	73.8	70.8	71.2	W	6.0	6.5	7.1	7.6	6.5
Fresh green vegetables . . . . .	M	23.3	22.9	20.9	16.0	22.3	M	7.1	8.1	7.4	8.5	7.5
	W	20.0	18.5	17.6	12.7	18.7	W	5.9	5.9	5.5	5.9	5.7
Other vegetables . . . . .	M	18.8	20.0	18.9	20.5	19.2	M	4.2	4.8	5.2	6.4	4.7
	W	17.3	17.8	16.9	18.1	17.3	W	4.3	4.8	4.7	5.8	4.6
	M	22.4	27.1	25.3	36.0	24.9	M	8.9	10.9	12.7	21.2	10.8
Fruit <sup>4</sup> . . . . .	W	14.0	15.9	15.7	21.7	15.2	W	6.8	7.8	8.8	13.4	7.8
Bread and flour <sup>5</sup> . . . . .	M	48.5	47.2	45.4	44.5	47.0	M	9.9	10.0	10.3	10.1	10.1
	W	53.2	53.7	52.2	53.5	53.0	W	10.8	11.1	11.6	12.2	11.1
Other cereals . . . . .	M	18.7	20.3	21.3	20.6	20.1	M	11.7	13.2	14.3	16.4	13.1
	W	16.3	17.5	16.4	15.9	16.7	W	11.2	12.6	12.4	14.1	12.0
Beverages <sup>6</sup> . . . . .	M	3.2	3.3	3.4	3.3	3.3	M	5.8	6.2	6.3	6.2	6.1
	W	2.7	2.7	2.9	2.8	2.8	W	5.1	5.3	5.9	5.8	5.4
Other foods <sup>7</sup> . . . . .	M	—	—	—	—	—	M	5.9	6.0	6.9	7.5	6.3
	W	—	—	—	—	—	W	5.1	5.6	6.0	7.3	5.5
All foods . . . . .		—	—	—	—	—	M	135.4	142.4	147.2	163.5	141.6
							W	127.1	131.6	134.8	144.4	131.0

<sup>1</sup>Includes processed milk.

<sup>2</sup>Includes dried egg.

<sup>3</sup>Includes chips and crisps.

<sup>4</sup>Includes tomatoes and dried, canned and bottled fruit.

<sup>5</sup>Includes rolls, muffins, crumpets and fancy bread, all expressed as flour equivalent.

<sup>6</sup>Cocoa and patent drinks, tea, and coffee (powder or bean).

<sup>7</sup>Expenditure only available.



*The Diets of Urban Middle-Class Households 1944 to 1947*

TABLE 6  
*Middle-class Domestic Food Consumption and Expenditure as percentage of those of the Working class 1944 to 1946<sup>1</sup>*

	<i>Consumption</i>	<i>Expenditure</i>
Milk (including processed)	114	119
Cheese	104	105
Meat	102	101
Fish	122	120
Eggs	132	106
Fats	108	103
Sugar and preserves	117	109
Potatoes	82	63
Fresh green vegetables	119	132
Other vegetables	111	102
Fruit	164	138
Bread and flour	89	91
Other cereals	120	109
Beverages	119	113
<i>All foods</i>	—	108

<sup>1</sup>1947 is excluded because data are incomplete for that year.

### Consumption of the Main Foods

24. Differences in consumption are also summarized in Table 5, and are shown in detail in Table I in Appendix A which indicates that middle-class levels of consumption were above those of the working class for milk (including school milk), fish and eggs, fruit, vegetables (other than potatoes), preserves, cereals (other than bread and flour) and beverages.

25. Middle-class consumption of liquid milk, which rose from 4.2 pints in 1944 to 4.5 in 1947, was half a pint higher than working-class consumption, which was 4.0 pints throughout, in spite of the greater proportion of children in the average working-class family and the operation of the National Milk Scheme (now part of the Welfare Foods Service). Milk obtained under the National Scheme and in schools amounted to just over one pint per head per week for the working-class households between 1944 and 1947. In 1944, the middle class drank only two-thirds of this quantity per head, but, with the increasing proportion of children in the middle-class sample in 1947 they took nearly as much per head as the working-class households. The middle class also made greater use of dried skimmed milk, although with the cessation of Lend-Lease supplies this had lost much of its importance in either diet by 1947. The two classes made approximately the same use of the whole dried milk provided for infants.

26. For cheese, meat and fats, class differences were small, but the middle-class consumption of eggs was about one-third higher than that of the working-class. The middle-class households not only consumed more fresh eggs from the larger supplies available to them from domestic poultry, but also purchased more dried egg, which was relatively cheap and plentiful. Their greater use of dried egg and dried milk may have reflected a greater willingness to adopt unfamiliar foods. The class difference was also substantial for fish. Both classes

took advantage of the increased supplies in the post-war years, but the middle-class households bought the more expensive fish and increased their total consumption at a greater rate ; by 1947 their level of consumption had risen from 15 per cent to 40 per cent above that of the working class. Working-class households, on the other hand, bought more fried fish, which increased the average cost.

27. At a level of some 70 oz. per head per week, potato consumption by the working class was about 20 per cent higher than that of the middle class, who consumed more vegetables of other kinds, particularly fresh green vegetables and more especially the expensive types. They bought more fresh peas and beans ; the working class preferred the canned variety.

28. Fruit (including tomatoes) showed the greatest class differences in consumption. From 1944 to 1947, the middle-class figures were generally about 60 to 70 per cent above those for the working class, partly because of their greater home-grown supplies. The difference was least for tomatoes, for which it tended to diminish as supplies improved. For citrus fruits and to some extent for the remaining fresh fruits other than apples, the gap tended to widen as purchases increased. Class differences were greater for consumption than for expenditure, mainly because the middle class obtained more apples and other fruit from their gardens. Middle-class consumption of preserves, particularly jam and marmalade, was high ; here again the availability of home-grown fruit played a part.

29. Bread and flour, taken together, were consumed in much smaller quantities by the middle-class households ; the difference increasing from 9 per cent in 1944 to 17 per cent in 1947, as their consumption fell steadily with the increasing supplies of unrationed foods. This class difference arose solely from the large working-class consumption of bread ; for flour the position was reversed, reflecting the larger consumption of home-baked foods by the middle class. Middle-class consumption was also above the working-class average for all types of cereals other than bread and flour, the difference for the group increasing from 15 per cent in 1944 to 29 per cent in 1947. The contrast was most marked for cakes and biscuits. Middle-class consumption of beverages was also about 18 per cent higher.

30. The normal preference of the middle class for the better varieties of foods was not very marked during the years 1944-46, partly because of the levelling of incomes and partly because of price controls, rationing and the general shortage of many of the more expensive foods. Indeed, working-class households tended to purchase some foods in their cooked or processed and therefore more expensive form ; thus, they ate proportionately more fried fish, cooked and canned meats, chips and canned peas and beans. Further, the middle-class households enjoyed larger "free" supplies of eggs, fruit and vegetables. Hence the cost per unit of consumption was in general no higher for middle-class than for working-class households ; and for eggs, fruit and fish it was appreciably lower.

#### **Energy Value and Nutrient Content of Domestic Food Consumption**

31. The energy value and nutrient content of the household diet of the middle- and working-class samples are shown in Table 7. It should be remembered that

*The Diets of Urban Middle-Class Households 1944 to 1947*

these data are averages per head and take no account of varying household composition of the two samples. The middle-class sample contained a higher proportion of adults, the working-class sample a higher proportion of children, but many adults in this class were engaged on heavy work. Thus, it is not possible to draw conclusions from a direct comparison of the nutritional intake of the two classes because of the differing requirements of children and adults of varying degrees of activity.

32. In Table 7, and other similar tables throughout the report, allowances have been made for cooking losses in the vitamins B<sub>1</sub> and C content of food. Estimates of the losses of both vitamins are those suggested in the Medical Research Council's War Memorandum, No. 14, and it has been assumed that an average of 15 per cent of the vitamin B<sub>1</sub> in all foods, 75 per cent of the vitamin C in leafy green vegetables and 50 per cent in root vegetables were lost in the process of cooking. The β-carotene content of foods has been reduced by two-thirds to make it more comparable with the preformed vitamin A as found in butter\*.

TABLE 7

*Energy Value and Nutrient Content of Domestic Food Consumption 1944 to 1947 (per head per day)*

		1944		1945		1946		1947 (9 months)	
		Working class	Middle class	Working class	Middle class	Working class	Middle class	Working class	Middle class
Energy value	Cal.	2387	2403	2375	2402	2307	2336	2308	2307
Total protein	g.	73	74	76	77	78	78	77	77
Animal protein	g.	35	38	35	40	37	40	36	40
Fat	g.	94	98	92	98	86	92	82	88
Carbohydrate	g.	311	304	309	304	305	300	315	302
Calcium	mg.	868	948	875	945	912	988	996	1054
Iron	mg.	13.5	13.9	12.7	13.3	14.4	14.6	14.3	14.4
Vitamin A <sup>1</sup>	i.u.	3173	3634	2908	3590	2926	3490	2929	3640
Vitamin B <sub>1</sub> <sup>2</sup>	mg.	1.38	1.34	1.25	1.22	1.32	1.28	1.31	1.23
Riboflavin	mg.	1.76	1.87	1.58	1.82	1.65	1.76	1.64	1.75
Nicotinic acid	mg.	13.9	14.0	13.2	13.4	14.5	14.4	12.9	12.9
Vitamin C <sup>1 2</sup>	mg.	40	42	43	47	44	44	44	50
Vitamin D	i.u.	106	123	143	178	137	157	125	155

<sup>1</sup>Excludes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

33. The differences between the diets of the two classes resulted in consistently higher totals for the middle-class intake of calcium, riboflavin and vitamins A and D. The effect of the higher vitamin C content of fruits in the diet of the middle class was counterbalanced, to a great extent, by the larger potato consumption of the working class, so that the differences in the total vitamin C were small. The energy value, protein, iron, vitamin B<sub>1</sub> and nicotinic acid contents of the diets were similar for the two classes: the effects of the higher consumption of bread and potatoes by the working class approximately counterbalance those of other foods by the middle class. In the diets of both classes

\*First Report, *The Urban Working-Class Household Diet 1940 to 1949*, H.M.S.O. 1951, paragraph 140.

the fluctuations in iron, vitamin B<sub>1</sub> and nicotinic acid content were strongly influenced by the changes in the extraction rate of flour throughout these years\*.

34. The acceptability of a diet is often considered to be linked with the quantity of animal protein contained in it. During this period the middle-class households obtained between 51 and 53 per cent of their total protein from animal sources, compared with 46 to 48 per cent for the working class.

35. The sources of the energy value in the diets of both classes are shown in Table 8. The Report of the Committee on Nutrition of the British Medical Association (1950) suggested that while the diet should usually provide at least 25 per cent of its energy value in the form of fat, with increasing physical activity this proportion should be increased to about 35 per cent to prevent the diet becoming too bulky and unsatisfying. It has already been stated that the working-class sample contained a number of people engaged in particularly heavy work, but it will be seen from the following table that the proportion of the total energy value derived from fat in the working class was consistently lower than in the middle class, although it was throughout well above 25 per cent. Thus the working class were slightly more dependent on carbohydrates as a source of energy than the middle class. The two classes obtained almost the same proportion from protein in each year, although the amount varied from year to year.

TABLE 8  
*Proportion of Energy Value derived from Protein, Fat and Carbohydrate  
1944 to 1947  
(percentages)*

	1944		1945		1946		1947 (9 months)	
	<i>Working class</i>	<i>Middle class</i>	<i>Working class</i>	<i>Middle class</i>	<i>Working class</i>	<i>Middle class</i>	<i>Working class</i>	<i>Middle class</i>
Protein . . . . .	12.2	12.3	12.8	12.8	13.5	13.4	13.3	13.4
Fat . . . . .	35.4	36.7	34.9	36.7	33.6	35.4	32.0	34.3
Carbohydrate . . . . .	52.4	51.0	52.3	50.5	52.9	51.2	54.7	52.3

36. Details showing the contributions of different foods to the total energy and nutrient values of the diets of both classes are given in Appendix A, Table 3. The most important feature of these tables is that the order of magnitude of the contributions which the broad groups of food made to the total diet are closely similar for the two classes for every nutrient except protein and vitamin C. The difference in the proportions of animal protein has already been mentioned. Potatoes supplied 42 to 45 per cent of the vitamin C content of the working-class diets, compared with 32 to 36 per cent for the middle-class; and fruit 15 to 21 per cent and 24 to 32 per cent respectively (omitting the 1947 sample which did not cover the whole year).

\*First Report, paragraphs 55, 109 and 177; Annual Report for 1950, paragraphs 31, 32, 59, 99 and 142.

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37. Cereals provided 38 to 39 per cent of the total energy value of middle-class diets and 39 to 41 per cent for the working class. Their importance in providing similar proportions of the total protein, iron and vitamin B<sub>1</sub> in the diets is also shown. Changes in the extraction rate of flour and in the amount of calcium carbonate added to flour were largely responsible for the fluctuations in the contributions from flour and bread to the totals for calcium, iron and vitamin B<sub>1</sub>, riboflavin and nicotinic acid for both classes between 1944 and 1947.

38. Milk with its product, cheese, supplied between 50 and 60 per cent of the calcium in the diet for both classes ; this was the highest proportion supplied by one type of food to any one nutrient.

39. The nutrient intake figures for the two samples shown in Table 7 cannot validly be compared, because the composition of the middle- and working-class samples differed in respect of the proportions of adults to children and adolescents and also as regards the degree of activity of working adults. An attempt has, therefore, been made to compare the intake figures with the scales of nutrient allowances recommended by the British Medical Association. Our adaptation of these scales is shown in Appendix F.

40. As in previous reports, for the estimate of the adequacy of diet, individuals surveyed have been assigned to the categories of persons shown in Appendix F ; adjustments have been made for the numbers of meals eaten away from the home and from sources other than the home ; and an adjustment of 10 per cent has been applied to make allowance for plate and other wastage or spoilage of edible food and also food bought for human consumption and given to domestic pets. Only in tables relating to the adequacy of the diet has this 10 per cent been deducted\*. Estimates of the adequacy of the working- and middle-class diets calculated in this way for 1944-47 are shown in Table 9.

41. The percentages in the Table suggest that throughout the period under review the nutritive value of the diets of both classes was, with two exceptions, well maintained. The only figures falling appreciably below 100 per cent were those for energy value in 1946 and 1947 for the working class, and those for calcium for the working class, in the years 1944 to 1946.

42. There are indications† of slight loss of weight in adults and slight retardation in growth of children during the years 1945 to 1947. Thus, the fall in adequacy of the energy value of the urban working-class diets from 1944 to 1947 may indicate a shortage during the immediate post-war years.

43. The percentages for calcium are of interest in that they illustrate the effect on the adequacy of the urban working-class diet of the doubling in August 1946 of the quantity of calcium carbonate added to flour. During 1944, 1945 and the first half of 1946 it was added at the rate of 7 oz. to 280 lb. of National flour. After August 1946, the rate of addition was 14 oz. to 280 lb. of National flour.

44. The marked increases in the percentages for both classes for iron, vitamin

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\*For a fuller discussion on this method of calculating adequacy, see Annual Report for 1950, paragraphs 96-98 and Annual Report for 1952, paragraph 49.

†Kemsley, W. F. F. (1953), Changes in body weight from 1943 to 1950, *Ann. Eugen. Lond.* **18**, 22. Harries, J. M., and Hollingsworth, Dorothy F. (1953), Food supply, body weight and activity in Great Britain, 1943 to 1949, *Brit. med. J.* **i**, 75.

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B<sub>1</sub> and nicotinic acid between 1945 and 1946 were mainly the result of the rise in the extraction rate of National flour from 80 per cent in 1945 by stages to a maximum of 90 per cent between May and September 1946, when it was again reduced to 85 per cent — the level at which it remained for the remaining months under review here.

TABLE 9  
*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Allowances based on the British Medical Association's recommendations. Urban Working Class and Middle Class 1944-1947 (percentages)*

		1944	1945	1946	1947 (9 months)
Energy value	Urban Working Class	97	96	93	93
	Middle Class	101	102	98	99
Protein	Urban Working Class	99	103	105	104
	Middle Class	106	111	111	112
Calcium	Urban Working Class	89	89	93	102
	Middle Class	101	100	104	112
Iron	Urban Working Class	109	103	116	116
	Middle Class	110	107	117	118
Vitamin A	Urban Working Class	133	103	123	124
	Middle Class	147	146	141	150
Vitamin B <sup>1</sup>	Urban Working Class	141	128	134	132
	Middle Class	143	131	136	143
Riboflavin	Urban Working Class	118	105	109	109
	Middle Class	129	126	121	123
Nicotinic acid	Urban Working Class	143	135	147	132
	Middle Class	149	144	153	141
Vitamin C	Urban Working Class	181	194	199	200
	Middle Class	191	215	201	233

**Comparison with Dietary Levels before the War**

45. A rough comparison can be made between the National Food Survey data and the results obtained during the winter months of 1936-37 by Crawford and Broadley\*. Their class B, in which the annual income of the head of the household was from £250 to £499, may be taken as roughly equivalent to the middle-class sample considered in this chapter, and classes C and D may similarly be taken as representing the working class. On the basis of these definitions, the food expenditure of the working class was 7s. 6d. per head per week and that of the middle class 12s. 6d. — some 67 per cent higher. This may be compared with the National Food Survey estimates of food

\**The People's Food* (1938). Details are given in Appendix C of the Annual Report for 1950, where a comparison is also made with National Food Survey results for that year.

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expenditure, which showed a difference between the classes of 6 per cent in 1944 and 10 per cent in 1946. The reduction in the gap is sufficiently large to remain noteworthy despite differences in the technique of the two surveys. The narrowing of class differences was more pronounced for expenditure than for consumption, since it was partly due to the narrowing of the price range. Before the war there were considerable differences between the prices paid for similar commodities by different classes; during the war these tended to disappear. But even in terms of quantity rather than value there was a considerable degree of levelling. A detailed comparison may be made between the table published in Appendix C of the Annual Report for 1950 and the tables given in Appendix A of the present Report. The general improvement of the working-class diet emerges clearly from the comparison. For the middle class, a decline in consumption in all the main foods except fish, bread and other cereals is shown. It does not follow, however, that this resulted in any impairment of the nutritional adequacy of the diet.

46. The comparison between 1936-37 and 1944-47 figures is of limited value, in view of the different methods used in estimating consumption, as well as the differences in class definition; in particular, the earlier survey was confined to purchases. The class differences at each period, expressed in Table 10 as percentages, may, however, be compared with rather more confidence. Since the pre-war survey was carried out during the winter months, the comparison has been confined to the first and fourth quarters of 1944-46 and the first quarter of 1947. For vegetables and fruit, estimates of consumption before the war are not available, and the comparison has been based on expenditure. Except for sugar and preserves, and cereals other than bread, the social class differences were less, and in most instances substantially less, than in the pre-war period.

TABLE 10  
*Consumption of the Main Foods*  
*Middle-Class average as a percentage of Working-Class*

	1936-37 (Oct-March)	1944-46 (1st and 4th quarters and 1st quarter 1947)
Milk (including processed) . . .	160	114
Cheese . . . . .	115	104
Meat (including bacon and ham)	127	102
Fish . . . . .	171	122
Eggs . . . . .	153	127
Fats . . . . .	125	107
Sugar and preserves . . . . .	114	118
Potatoes . . . . .	109	83
Vegetables, other than potatoes (expenditure) . . . . .	168	112
Fruit (expenditure) . . . . .	262	147
Bread . . . . .	88	81
Flour . . . . .	117	125
Other cereals . . . . .	123	130

### III

## Diets of Poorly Accommodated Urban Working-Class Households in 1944

#### Method of Selection

47. Before 1950, the only occasion on which the National Food Survey analyses dealt with the diets of households at a low economic level was in 1944, when a special sub-sample was drawn for this purpose from the urban working-class sample. Information about total family income was not available, and since food expenditure per head is an imperfect and was, at this time, even an ambiguous and unreliable index of economic standing, an alternative method of selecting households was adopted, based upon living accommodation and housing conditions. The following conditions were selected, any one of which was held to place a household in the special sample, with doubtful cases considered individually as when, for example, overcrowding or damage had arisen from bombing :

- (a) back-to-back houses ;
- (b) no running water in the house or flat ;
- (c) no lavatory belonging solely to the household ;
- (d) more than two persons (excluding visitors) per room, counting all rooms ;
- (e) house in a court reached by a narrow entry from the street ;
- (f) dwelling in bad repair.

48. The extent to which any of these features is held to represent bad housing conditions varies from one part of the country to another. The criterion adopted is not necessarily a consistent standard of poverty, but the analyses show that the group of households selected had important attributes in common, including a low dietary level. These attributes are revealed by a comparison with the remaining households in the urban working-class sample and with the group of middle-class households defined in Chapter II.

#### Occupation and Family Composition

49. The different occupational characteristics of the households in the special sample are shown in Table 11, where the heads of household are classified in six main occupational groups. The proportion of manual workers in the special sample — 44 per cent — was no greater than in working-class households generally ; it was nevertheless their chief form of civilian employment, for 34 per cent of the heads of households in the special sample were pensioners and 18 per cent were in the armed forces — proportions higher than in any other class of household. Less than 4 per cent of the special sample were in the first two occupational groups, compared with 21 per cent in the remaining working-class households and 78 per cent in the middle class.



*Diets of Poorly Accommodated Urban Working-Class Households in 1944*

TABLE 11

*Distribution of Households according to Occupation of Head 1944  
(January–September only)*

(percentages)

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
I. Private means . . . . .	0	1.2	17.3
Managerial, professional or working on own account . . . . .	0.4	3.5	36.5
<i>Total</i> . . . . .	0.4	4.7	53.8
II. Local and National government employees .	2.8	8.6	8.3
Clerical, shop assistants and storekeepers . .	0.4	7.7	15.7
<i>Total</i> . . . . .	3.2	16.3	24.0
III. Manual Workers . . . . .	43.6	44.9	7.7
IV. Pensioners with other adult earners in family <sup>1</sup> . . . . .	8.5	8.0	2.0
Pensioners without other adult earners in family <sup>1</sup>	25.0	12.7	2.0
<i>Total</i> . . . . .	33.5	20.7	4.0
V. H.M. Services . . . . .	18.5	11.2	5.5
VI. Other . . . . .	0.8	2.2	5.0
	100.0	100.0	100.0
<i>Total number of households</i> . . . . .	248	5,615	1,034

<sup>1</sup>Earnings include unemployment, disablement or sickness grants.

50. Tables 12, 13 and 14 indicate that the average household in the special sample differed greatly in size and composition from other households. It contained fewer adults and adolescents and 50 per cent more children than the average for the remainder of the urban working-class sample. There were two children under fourteen to every three adults in the special sample, compared with about two children to five adults in other working-class households and about one child to every five adults in the middle-class. Further, the large number of pensioner households in the special sample masks the fact that most of the households with children in this group of poorer families were unusually large. Moreover, they included a high proportion of infants; there was, on the average, one child under five in every household with children in the group, compared with one child under five to every two middle-class households with children. Household composition at this time was considerably affected by the mobilisation of adults and the evacuation schemes for children.

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TABLE 12

*Composition of Households in the National Food Survey Samples 1944*

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
<b>AVERAGES PER HOUSEHOLD</b>			
Adults 21 years and over . . . . .	1.91	2.24	2.28
Adolescents 14-20 years . . . . .	0.26	0.32	0.21
Children under 14 years . . . . .	1.28	0.85	0.48
<i>Total persons per household</i> . . . . .	3.45	3.41	2.97
<i>Total number of households</i> . . . . .	339	7,284	1,303
<i>Total number of persons</i> . . . . .	1,168	24,847	3,868

TABLE 13

*Number of Households with and without Children in the National Food Survey Samples 1944 (January-September only)*

	<i>Special Sample</i>		<i>Other Working class</i>		<i>Middle class</i>	
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
Households containing:						
No child under 14 years . . . . .	105	42.3	2,945	52.4	697	67.4
1 or 2 children under 14 years . . . . .	88	35.5	2,183	38.9	311	30.1
3 or more children under 14 years . . . . .	55	22.2	487	8.7	26	2.5
<i>Total</i> . . . . .	248	100.0	5,615	100.0	1,034	100.0
Total number of children under 14 years . . . . .	332		4,722		493	
Average number of children under 14 years per household with children . . . . .	2.32		1.77		1.46	
Total number of children under 5 years . . . . .	140		1,907		180	
Children under 5 years as percentage of total children . . . . .		42.2		40.4		36.5
Average number of children under 5 years per household with children . . . . .	0.98		0.71		0.53	

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TABLE 14

*Adults, Adolescents and Children as percentages of total persons in the National Food Survey Samples 1944*

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
Children under 14 years . . . . .	37.1	25.0	16.0
Adolescents 14-20 years . . . . .	7.4	9.2	6.9
Adults 21 years and over . . . . .	55.5	65.8	77.1
Proportion of non-adults to adults	0.80	0.52	0.30
Adult men . . . . .	20.7	26.2	28.4
Adult women . . . . .	34.8	39.6	48.7
Proportion of women to men . . . . .	1.68	1.52	1.71

**Domestic Food Consumption and Expenditure**

*Food Expenditure and Value of Consumption*

51. The special sample spent 9s. 10½d. per head per week on food, or 7 per cent below the level of the remaining working-class households. Withdrawals from larder stocks during the Survey week were valued at 5d., and "free" food at 1d. This gives a total value of consumption of 10s. 4½d., or 8 per cent below the average for the remainder of the working class. These differences may be compared with a middle-class level of 6 per cent above that of the working class for expenditure and 18 per cent above for value of consumption. The proportion of meals eaten away from home by the special sample was less than 2 per cent, compared with 3 to 4 per cent for the other groups.

*Pattern of Food Expenditure*

52. Table 15 provides a comparison of expenditure between the special sample, the remainder of the working class, and the middle class. Expenditure by the special sample was similar to that in other working-class households for meat and fish, but lower for most other foods, particularly milk, fruit and fresh green vegetables. In contrast, the special sample spent more on potatoes and bread than either of the other classes. The percentage of total food expenditure devoted to each group of foods followed roughly the same pattern in all classes : the special sample spent a slightly higher proportion on meat, potatoes and bread, and a slightly lower proportion on milk, fruit and fresh green vegetables.

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TABLE 15

*Domestic Food Expenditure by Social Class 1944*  
(per head per week)

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Milk . . . . .	13.7	16.1	18.7	12	13	14
Cheese . . . . .	1.9	2.1	2.1	1	1	1
Meat . . . . .	30.4	30.9	32.2	26	24	24
Fish . . . . .	7.7	7.7	8.5	6	6	6
Eggs . . . . .	3.3	3.5	3.8	3	3	3
<i>Total</i> . . . . .	<i>43.3</i>	<i>44.2</i>	<i>46.6</i>	<i>36</i>	<i>34</i>	<i>34</i>
Fats . . . . .	6.0	6.2	6.3	5	5	5
Sugar and preserves . .	5.5	5.7	6.3	5	5	5
<i>Total</i> . . . . .	<i>11.5</i>	<i>11.9</i>	<i>12.6</i>	<i>10</i>	<i>10</i>	<i>10</i>
Potatoes (including chips and crisps) . . . . .	7.5	5.9	4.0	6	5	3
Fresh green vegetables . .	3.7	5.9	7.1	3	5	5
Other vegetables . . . . .	4.5	4.3	4.2	4	3	3
Fruit . . . . .	4.1	6.9	8.9	4	5	7
<i>Total</i> . . . . .	<i>12.3</i>	<i>17.1</i>	<i>20.2</i>	<i>11</i>	<i>13</i>	<i>15</i>
Bread and flour . . . . .	11.7	10.8	9.9	10	8	7
Other cereals . . . . .	10.0	11.2	11.7	8	9	9
<i>Total</i> . . . . .	<i>21.7</i>	<i>22.0</i>	<i>21.6</i>	<i>18</i>	<i>17</i>	<i>16</i>
Beverages . . . . .	4.4	5.1	5.8	4	4	4
Other foods . . . . .	4.2	5.2	5.9	3	4	4
<i>Total Expenditure</i> . . . .	<i>118.6</i> (9s. 11d.)	<i>127.5</i> (10s. 8d.)	<i>135.4</i> (11s. 3d.)	<i>100</i>	<i>100</i>	<i>100</i>

53. The items for which the largest class differences existed in 1944 were fruit and vegetables. The special sample spent 4.1d. or 3.5 per cent of total food expenditure on fruit (including tomatoes), 7.5d. (6.3 per cent) on potatoes and 8.2d. (6.9 per cent) on all other vegetables. Details are given in Tables 16 and 17. Cabbage accounted for two-fifths of the total expenditure by the special sample on fresh green vegetables, compared with less than one-third in the working-class and barely a fifth in the middle-class sample.

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TABLE 16  
*Domestic Expenditure on Vegetables other than Potatoes 1944*  
(pence per head per week)

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
Cabbage and savoy . . . . .	1.5	1.7	1.4
Brussels sprouts . . . . .	0.6	0.7	0.8
Cauliflower . . . . .	0.4	0.7	1.1
Spinach, turnip tops, etc. . . . .	0.2	0.5	0.8
Lettuce and endive . . . . .	0.5	0.9	1.4
Fresh peas and beans . . . . .	0.5	1.4	1.6
<i>Total fresh green</i> . . . . .	<i>3.7</i>	<i>5.9</i>	<i>7.1</i>
Carrots . . . . .	0.6	0.5	0.5
Turnips and swedes . . . . .	0.5	0.3	0.2
Other root vegetables . . . . .	0.2	0.4	0.5
Spanish onions and shallots . . . . .	0.6	0.5	0.5
Dried pulses . . . . .	0.9	0.5	0.3
Canned peas and beans . . . . .	0.8	0.8	0.6
Other canned vegetables . . . . .	...	...	...
Miscellaneous vegetables . . . . .	0.9	1.2	1.6
<i>Total</i> . . . . .	<i>8.2</i>	<i>10.1</i>	<i>11.3</i>

TABLE 17  
*Domestic Expenditure on Fruit 1944*  
(pence per head per week)

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
Tomatoes . . . . .	1.4	1.9	2.2
Citrus fruit . . . . .	0.5	0.6	0.8
Apples . . . . .	1.0	2.1	2.4
Other fresh fruit (including rhubarb)	0.5	1.3	2.0
Canned and bottled fruit . . . . .	0.1	0.1	0.1
Dried fruit . . . . .	0.6	0.9	1.3
<i>Total</i> . . . . .	<i>4.1</i>	<i>6.9</i>	<i>8.8</i>

*Food Consumption*

54. Consumption of the main food groups is summarized in Table 18 ; further details are given in Appendix B. The average liquid and dried milk consumption in the special sample was slightly below the working-class average but, because this sample contained more children than the remainder of the working class or middle class, a higher proportion was in the form of cheap or free milk. The special sample also used less cheese. Unrationed meat was scarce, so that the total consumption per head of meat of all kinds, and the amount of each type, varied little between the classes. As compared with the working class generally, the special sample bought less fresh meat and less bacon. For liquid milk, cheese, rationed and unrationed meat and bacon and ham, the special sample took from 1 to 9 per cent less per head than the remainder of the working class, and the middle class from 2 to 6 per cent more. Differences were larger

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for fish consumption ; the special sample taking 6 per cent less of all fish than the remaining working-class households, and the middle class 16 per cent more. The expenditure was, nevertheless, the same in the two working-class groups — partly because the special sample bought fried fish rather than the cheaper white fish to cook at home. Consumption of shell eggs was affected by the availability of self-supplies, the special sample obtaining substantially fewer than other households ; their consumption of dried eggs was also lower. They obtained 5 per cent less fat than the rest of the working class, and the middle class 6 per cent more ; the greatest difference occurring for suet and dripping. While there was little difference in sugar consumption between the classes, the special sample consumed 20 per cent less preserves than the working class generally, and the middle class 44 per cent more. Other foods followed a rather different pattern. The special sample consumed 7 per cent more potatoes, 15 per cent more bread and 114 per cent more chips than the remainder of the working class, but 34 per cent less green vegetables, 36 per cent less tomatoes, 52 per cent less of other fruits and 25 per cent less flour : for the middle class, differences for these foods were all in the opposite sense.

55. Many of the differences would be consistent with an interpretation in terms of cooking facilities or skill. The small usage by the special sample of dried milk and eggs, flour, fats, preserves and dried fruits suggests less baking in the homes of this class than in the rest of the working class or the middle class ; the larger consumption of fried fish and chips, sausages and canned and prepared meats suggests a greater need to provide for an easily prepared main meal. The higher consumption of bread and potatoes may reflect both the need for cheap energy foods and their ease of preparation. On the other hand, the differences for green vegetables, tomatoes and fruits cannot be fully explained in this way ; probably these foods were regarded by many housewives in the special sample as semi-luxuries.

TABLE 18  
*Domestic Food Consumption by Social Class 1944*  
(*oz. per head per week except where otherwise stated*)

	<i>Special Sample</i>	<i>Other Working class</i>	<i>Middle class</i>
Milk (including condensed and dried) . . . . . pt.	4.1	4.4	4.9
Cheese . . . . .	2.4	2.6	2.7
Meat . . . . .	27.4	28.4	29.3
Fish . . . . .	7.2	7.6	8.8
Eggs (shell and dried) . . . No.	2.4	3.0	3.8
Fats . . . . .	8.8	9.2	9.8
Sugar and preserves . . . . .	14.0	15.2	17.5
Potatoes (including chips and crisps) . . . . .	78.0	71.0	58.6
Fresh green vegetables . . . . .	14.6	22.0	24.8
Other vegetables . . . . .	15.1	15.5	17.3
Fruit . . . . .	7.3	14.3	22.3
Bread and flour (including rolls, muffins and crumpets) . . . . .	73.9	66.7	60.3
Other cereals . . . . .	15.4	16.3	18.7
Beverages . . . . .	2.3	2.7	3.2

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56. In Table 19 the levels of consumption and expenditure are brought together and a comparison with the middle class is made by expressing the levels for each group as percentages of the corresponding figures for the working-class households not in the special sample.

TABLE 19

*Food Consumption and Expenditure per Head in Special Sample and Middle-Class Households as Percentage of Estimates for the remaining Working-class Households 1944*

	Consumption		Expenditure	
	Special Sample	Middle class	Special Sample	Middle class
Milk . . . . .	93	111	85	116
Cheese . . . . .	92	104	90	100
Meat . . . . .	96	103	98	104
Fish . . . . .	94	116	100	110
Eggs . . . . .	80	127	94	108
Fats . . . . .	96	106	97	102
Sugar and preserves . . . . .	92	115	96	110
Potatoes . . . . .	110	83	127	68
Other vegetables . . . . .	79	112	80	111
Fruit . . . . .	51	156	59	129
Bread and flour . . . . .	111	90	108	92
Other cereals . . . . .	94	115	89	104
Beverages . . . . .	—	—	86	114
<i>All foods</i> . . . . .	—	—	93	106

**Energy Value and Nutrient Content of Domestic Food Consumption**

57. The energy and nutritive value of the diets of the two types of urban working-class households, expressed per head per day, are shown in Table 20. The considerably higher consumption of bread by the special sample compensated for the slightly lower consumption of a number of foods such as milk, meat, cheese, eggs and fish, so that the differences between the two groups in the values for energy and most nutrients were small. The lower consumption of foods of animal origin was, however, chiefly responsible for the lower values for vitamin A, riboflavin and nicotinic acid. Again, because of the lower consumption of fruit and fresh green vegetables by the special sample, the vitamin C content of their diet was less than the corresponding value for the remainder of the working class, in spite of their higher consumption of potatoes.

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TABLE 20

*Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup> by Working-Class Households (per head per day)*

	<i>Special Sample</i>	<i>Other Working class</i>
Energy value . . . . . Cal.	2,404	2,385
Total protein . . . . . g.	75	73
Animal protein . . . . . g.	33	36
Fat . . . . . g.	92	94
Carbohydrate . . . . . g.	319	311
Calcium . . . . . mg.	843	869
Iron . . . . . mg.	13.3	13.5
Vitamin A . . . . . i.u.	2,788	3,192
Vitamin B <sub>1</sub> <sup>2</sup> . . . . . mg.	1.42	1.38
Riboflavin . . . . . mg.	1.67	1.76
Nicotinic acid . . . . . mg.	12.9	13.9
Vitamin C <sup>2</sup> . . . . . mg.	35	40
Vitamin D . . . . . i.u.	105	106

<sup>1</sup>Excludes Welfare foods.

<sup>2</sup>With allowance for cooking losses.

58. The sources of the energy value of the diet are shown in Table 21. The greater use of bread by the special sample raised the proportions from both protein and carbohydrate to slightly higher levels than those for the other working-class households. It will be seen that the contribution of fat to the total energy value of the diet for the special sample nearly reached 35 per cent, the level suggested for heavy workers by the British Medical Association's Committee; for other working-class households this level was exceeded.

TABLE 21

*Proportion of Energy Value Derived from Protein, Fat and Carbohydrate. Urban Working Class*

	<i>Special Sample</i>	<i>Other Working class</i>
	<i>per cent</i>	<i>per cent</i>
Protein . . . . .	12.5	12.3
Fat . . . . .	34.4	35.5
Carbohydrate . . . . .	53.1	52.2

59. The percentage contributions of different foods to the diets of the two groups, shown in Table 22, give a clearer picture of the differences in the nutritional patterns. The only notable differences were the greater dependence of the special sample on bread as a source of protein, calcium, iron and vitamin B<sub>1</sub> and on potatoes as a source of vitamin C, and the greater contribution of



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unrationed meats (i.e., liver) to the vitamin A total of the rest of the working class. The special sample obtained a smaller proportion of total protein from animal sources.

TABLE 22

*Nutrient Contribution to Urban Working-Class Household Diets from Different Foods 1944*

		<i>Special Sample</i>	<i>Other Working class</i>
		<i>per cent</i>	<i>per cent</i>
Calories	All cereals . . . . .	41	40
	All fats . . . . .	12	12
	All potatoes . . . . .	9	8
Total protein	Animal sources . . . . .	44	49
	Bread and flour . . . . .	36	32
Calcium	All milk . . . . .	48	49
	Bread and flour . . . . .	23	20
Iron	Bread and flour . . . . .	37	33
Vitamin A	Root vegetables . . . . .	30	25
	All fats . . . . .	24	21
	Unrationed meats . . . . .	13	19
Vitamin B <sub>1</sub>	Bread and flour . . . . .	41	38
	Potatoes . . . . .	20	18
Riboflavin	All milk . . . . .	32	33
	All cereals . . . . .	23	18
Nicotinic acid	All meat . . . . .	23	23
	Bread and flour . . . . .	30	27
	All vegetables . . . . .	22	24
Vitamin C	All potatoes . . . . .	54	45
	All other vegetables . . . . .	28	30
Vitamin D	Fat fish . . . . .	48	45
	Margarine . . . . .	32	32

60. The adequacy of the diet of the two working-class groups has been estimated in the usual way and the results are shown in Table 23. From these it will be seen that the adequacy of the diets of the two groups was similar, with the special sample having the advantage for the nutrients associated with high bread consumption — energy value, protein, iron and vitamin B<sub>1</sub> — and the rest of the working class for nicotinic acid and the nutrients associated with higher milk and vegetable consumption — calcium, vitamin A, riboflavin and vitamin C.

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TABLE 23

*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Allowances based on the British Medical Association's recommendations—Urban Working-Class Households 1944 (percentages)*

	<i>Special Sample</i>	<i>Other Working class</i>
Energy value . . .	101	97
Protein . . . . .	103	99
Calcium . . . . .	83	89
Iron . . . . .	110	109
Vitamin A . . . . .	121	133
Vitamin B <sub>1</sub> . . . . .	150	141
Riboflavin . . . . .	115	118
Nicotinic acid . . .	137	143
Vitamin C . . . . .	160	181

**Comparison with the Position before the War**

61. It has been shown in Chapter II that during the war there was a levelling between middle-class and working-class diets. It is of special interest to examine this process as it affected the poorest households, but to do so requires a number of major assumptions. In the survey by Crawford and Broadley, covering the winter months of 1936-37, which was drawn upon for comparisons in Chapter II, the lowest class was distinguished by the following criteria :

“*Class D.* No maid or telephone ; no paid domestic help ; cheaper council houses or older houses in rows, or tenements ; two to four rooms ; no garden as a rule. . . . Typical occupations : Lowest grade office and warehouse clerical staff, semi-skilled and unskilled workers, e.g., cotton, coal mining, building ; semi-skilled in seasonal trades, unemployed and old age pensioners.”

62. The similarity between this group and the special sample is sufficient to allow for a comparison of class differences, but it should be noted that the definition of Class D in the Crawford and Broadley sample was wider than that of the special sample in that it was based on both housing and occupation, whereas in the special sample the criterion was housing only, although an analysis of occupations was made (Table 11). The remainder of the working class in 1944 cannot strictly be equated to Crawford and Broadley's Class C, as the latter included only the upper section of the working class, whereas in 1944 the “other working class” category included some poor families who did not happen to be badly housed. However, by 1944 the differences in diet between various sections of the working class had become so small that the comparison is probably not seriously affected. On this basis, a comparison of food expenditure at the two dates is made in Table 24. Part of the large pre-war difference was due to price differentials between classes, which tended to disappear during the war ; but when all allowances are made for the difficulty of comparison, it appears that there was a marked improvement in the diets of the poorest households, both absolutely and relatively.

*Diets of Poorly Accommodated Urban Working-Class Households in 1944*

TABLE 24  
*Domestic Food Expenditure by Social Class 1936-37  
 (October-March) and 1944  
 (per head per week)*

1936-37 (Oct.-March) . . . . .	<i>Class D</i> 5s. 10d.	<i>Class C</i> 7s. 11d.	<i>Class B</i> 12s. 6d.
Percentages (Class C=100) . . . . .	74	100	158
1944 . . . . .	<i>Special Sample</i> 9s. 10½d.	<i>Other Working class</i> 10s. 7½d.	<i>Middle class</i> 11s. 3½d.
Percentages (Other working class=100) . . .	93	100	106

63. The pattern of the diet, represented by the distribution of expenditure between different foods, may also be compared at the two dates. The percentages of total food expenditure on different foods is shown in Table 25 for the classes at each end of the expenditure range. The effect of the war-time food supply conditions is seen in the increased importance, in terms of cost, of vegetables for the lowest class and of cereals for the middle class, and in the diminished importance of the group including fats, sugar, preserves, beverages and miscellaneous foods. Also notable is the relative constancy of the proportions spent on animal protein foods: 45 to 50 per cent in 1936-37 and 48 per cent for both groups in 1944. This resulted from the special sample spending the same proportion of a higher total than Class D before the war, and the middle class spending the same proportion of a lower total than Class B.

TABLE 25  
*Pattern of Expenditure: Percentages of Total Expenditure on Different Foods*

	1936-37 (Oct.-March)		1944	
	<i>Class D</i>	<i>Class B</i>	<i>Special Sample</i>	<i>Middle class</i>
Milk . . . . .	10	10	12	14
Cheese . . . . .	2	1	1	1
Meat and fish . . . . .	28	31	32	30
Eggs . . . . .	5	6	3	3
Fats . . . . .	9	8	5	5
Sugar and preserves . . . . .	6	4	5	5
Vegetables and fruit . . . . .	12	18	17	18
Bread and flour . . . . .	15	7	10	7
Other cereals . . . . .	3	4	8	9
Beverages . . . . .	8	6	4	4
Other foods . . . . .	2	5	3	4
	100	100	100	100

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*Changes in Consumption Levels*

64. Appendix B gives the consumption quantities (purchases only) of Class D before the war, which may be compared with the estimated consumption (purchases with larder stock withdrawals and free food) for the different groups in 1944. If the levels of the middle-class and the poorest households at each date are compared with those of the rest of the working class, it is possible to gauge roughly how class differences have changed for particular foods. The results are shown in Table 26. The wide disparity in liquid milk consumption and, to a lesser degree, in consumption of eggs had been greatly diminished by 1944. For processed milk, positions were reversed. Supplies of skimmed sweetened condensed milk, consumed in large quantities by the poorest households before the war, were reduced during the war, and these households were apparently less ready than the middle class to adopt the new supplies of imported dried skimmed milk. Rationing and price control were largely responsible for the narrowing of class differences for most foods: consumption at the ration level by poorer households meant a substantial rise in their standards. Of the unrationed foods, little change was recorded for bread and flour despite their increased importance, but the special sample consumed more potatoes than the pre-war Class D.

TABLE 26

*Social Class Differences in Household Food Consumption  
1936-37 (Oct.-March) and 1944*

	1936-37 Oct.-March		1944	
	Class D as percentage of Class C	Class B as percentage of Class C	Special Sample as percentage of other Working class	Middle class as percentage of other Working class
Milk, liquid . . . . .	59	167	98	106
other . . . . .	178	34	73	142
Cheese . . . . .	78	111	92	104
Meat, carcass . . . . .	84	124	96	104
Bacon and ham . . . . .	80	136	91	98
Unrationed meat . . . . .	99	183	99	104
Fish . . . . .	79	162	95	114
Eggs . . . . .	68	145	92	130
Fats . . . . .	86	120	95	108
Sugar and preserves . . . . .	88	111	92	115
Potatoes (old and new) . . . . .	100	109	93	84
Potatoes (chips and crisps)	n.a.	n.a.	214	27
Other vegetables . . . . .	n.a.	n.a.	79	112
Fruit (including tomatoes)	n.a.	n.a.	51	156
Bread . . . . .	114	90	115	86
Flour . . . . .	99	116	75	125
Other cereal products . . . . .	83	120	94	115

## IV

# Household Diets of Manual and Non-Manual Workers in the Urban Working Class 1949

65. Over many years, a vast number of specific occupations, as they have occurred in National Food Survey records, has been classified as sedentary, moderately active and active. These groups may be broadly described as consisting of non-manual, light manual and heavy manual workers respectively. If attention is confined to households with only a single earner, this classification provides mutually exclusive groups between whose diets differences are to be expected. An alternative method, namely to consider the occupation of the head of the household alone, has the merit of using the whole sample, but gives confused results if different earners in the same household are drawn from very different occupations.

66. The household diets of different occupational groups may differ for reasons not directly attributable to the occupation, and in particular because of differences in the regional distribution and family composition of the groups. For the most part, the samples are large enough to support a satisfactory analysis by family composition, and sufficiently widely distributed to minimize regional bias, except that the diets of the non-manual workers show the effect of a larger concentration in the southern half of England. Characteristics of the southern diet are described in Chapter VII.

67. The results presented in this Chapter relate to the year 1949. During 1942, 1943 and 1944 a sub-sample of heavy workers' households was drawn from the general sample and analyses of consumption and expenditure were made. No close comparison can be made with the 1949 results, since no analysis by family composition is available for the earlier samples, which were not confined to single-earner households, and, because of their method of selection, tended to over-represent the households with more than one earner, in relation to their frequency in the general population. It is not possible, therefore, to estimate how much of their departure from the urban working-class average is attributable to occupation and how much to family composition. Nevertheless it is noteworthy that the general trends follow fairly closely those shown by the heavy workers' households in 1949, especially in their lower consumption of the protective foods.

### Occupational Composition of the Sample

68. Classification of occupations into manual and non-manual follows the definitions used in the 1931 Census of Population, but in order to distinguish between heavy manual and light manual workers, individual occupations have been separately assessed. *Heavy manual workers* have been taken to include such groups as agricultural workers (of whom some lived in urban districts), certain grades of mechanics, most building workers, blacksmiths, boiler firemen, some types of labourers, bakers and most iron and steel workers. *Light manual workers* include most factory workers and such other workers as shoe-makers and book-binders. *Non-manual workers* include clerks, shop assistants and

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those in personal service. These classifications are based on the Survey records which cover about five thousand individual occupations.

69. Out of a total urban working-class sample of 7,119 households in 1949, 2,623, or 37 per cent, had a single earner (Table 27). These were classified by occupation into the following groups : heavy manual 18 per cent, light manual 60 per cent and non-manual 23 per cent. Of the total number of persons in the working-class sample, 36 per cent were in single-earner households ; and of those in the single-earner households, 19 per cent were in the heavy manual group, 61 per cent in the light manual group and 21 per cent in the non-manual group.

TABLE 27  
*Occupation of Earner in Urban Working-Class Households 1949*

	<i>Single-earner households</i>				<i>All households</i>
	<i>Heavy manual</i>	<i>Light manual</i>	<i>Non-manual</i>	<i>Total</i>	
Households . . . . .	465	1,563	595	2,623	7,119
Percentage of single-earner households . . . . .	17.7	59.6	22.7	100.0	
Percentage of all households . . . . .	6.5	22.0	8.3	36.8	100.0
Persons . . . . .	1,737	5,598	1,898	9,233	25,737
Percentage of all persons in single-earner households . . . . .	18.8	60.6	20.6	100.0	
Percentage of all persons . . . . .	6.7	21.8	7.4	35.9	100.0

**Family Composition of the Sample**

70. The fact that the selected households did not contain supplementary earners meant a smaller average proportion of adults than in the general sample, a larger proportion of children, and very few adolescents. Among single-earner households the proportion of children was highest in those of heavy manual workers which had, on the average, 52 per cent more children than households in the general sample, and 36 per cent more than single-earner households in the non-manual group (Table 28). The heavy manual workers' households were larger than those of the general sample, those of the light manual workers were about the same, and those of non-manual workers were smaller.

TABLE 28  
*Family Composition of Urban Working-Class Households 1949*

	<i>Single-earner households</i>				<i>All households</i>
	<i>Heavy manual</i>	<i>Light manual</i>	<i>Non-manual</i>	<i>Total</i>	
Men 21 years and over . . . . .	1.02	0.98	0.89	0.96	1.07
Women 21 years and over . . . . .	1.03	1.05	1.06	1.05	1.19
Adolescents 14-20 years . . . . .	0.07	0.07	0.06	0.07	0.30
Children under 14 years . . . . .	1.61	1.48	1.18	1.44	1.06
<i>Total</i> . . . . .	<i>3.73</i>	<i>3.58</i>	<i>3.19</i>	<i>3.52</i>	<i>3.62</i>

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71. In Table 29, the distribution of children in the single-earner households is further examined by an analysis of households with one male adult, one female adult and varying numbers of dependants, a group which lends itself to detailed classification. It comprised 52 per cent of all households in the urban working-class sample, and included 75 per cent of all children. More than 60 per cent of households in this group had only one earner, and these formed about 90 per cent of all single-earner households in the class of manual workers, and just under 80 per cent in the class of non-manual workers.

TABLE 29  
*Distribution of Children in Urban Working-Class Households 1949*  
(number of households)

	<i>Single-earner households</i>						<i>All households</i>	
	<i>Heavy manual</i>		<i>Light manual</i>		<i>Non-manual</i>			
	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>	<i>No.</i>	<i>Per cent</i>
1 male and 1 female adult with								
No other . . . . .	93	20.0	268	17.2	109	18.3	908	12.8
1 child . . . . .	115	24.7	454	29.1	163	27.4	1,015	14.3
2 children . . . . .	102	21.9	374	23.9	126	21.2	805	11.3
3 children . . . . .	46	9.9	158	10.1	48	8.1	338	4.7
4 or more children . . . . .	39	8.4	72	4.6	7	1.2	156	2.2
children and adolescents	27	5.8	71	4.5	10	1.6	516	7.2
<i>Total</i> . . . . .	<i>422</i>	<i>90.7</i>	<i>1,397</i>	<i>89.4</i>	<i>463</i>	<i>77.8</i>	<i>3,738</i>	<i>52.5</i>
Other groupings excluding								
Old Age Pensioner households . . . . .	43	9.3	166	10.6	132	22.2	2,818	39.6
Old Age Pensioner households . . . . .	—	—	—	—	—	—	563	7.9
<i>Total</i> . . . . .	<i>465</i>	<i>100.0</i>	<i>1,563</i>	<i>100.0</i>	<i>595</i>	<i>100.0</i>	<i>7,119</i>	<i>100.0</i>

72. In order to allow for some of the effects of the considerable variation in family composition between types of occupation, and between single-earner households and the general sample, the diets of similarly constituted families with different occupations have been compared. Practical considerations limited the comparison to three types of household : families with one male and one female adult only, those with two children in addition, and those with four or more children in addition. Of these, the households with children are examined in Table 30, which shows the variation within occupations by number of children. Only slight differences are to be observed, except for households with four or more children in the non-manual groups. As the number of such households was small, these particular data are subject to a wide margin of error.

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TABLE 30  
*Number and Age of Children in Selected Urban Working-Class Households 1949*  
(average numbers per household)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
Households with one male and one female adult and two children				
Number of children under 1 year . . .	0.22	0.21	0.17	0.18
1-3 years . . . . .	0.70	0.77	0.79	0.69
4-6 years . . . . .	0.47	0.54	0.44	0.51
7-9 years . . . . .	0.34	0.29	0.33	0.34
10-13 years . . . . .	0.27	0.19	0.27	0.28
Average age (estimated) in years . . . .	4.8	4.4	4.8	4.9
Households with one male and one female adult and four or more children				
Number of children under 1 year . . .	0.31	0.35	0.29	0.30
1-3 years . . . . .	1.13	1.12	1.29	1.14
4-6 years . . . . .	0.92	1.17	1.00	1.03
7-9 years . . . . .	1.03	0.93	1.29	0.99
10-13 years . . . . .	1.10	1.04	0.43	1.07
Average number of children . . . . .	4.49	4.61	4.30	4.53
Average age (estimated) in years . . . .	6.2	5.9	5.7	6.1

**Total Food Expenditure**

73. Total household food expenditure per head for the various occupational groups is compared with that for the urban working class generally in Tables 34 and 35. Expenditure was 6 per cent below the working-class average in the heavy manual workers' households, 3 per cent in those of light manual workers, and 1 per cent above in those of non-manual workers. If the comparison is made with the average for single-earner households only, and not with the whole working-class sample, the percentages are 96 for the heavy workers, 100 for light workers and 104 for non-manual workers. The estimated proportion of meals eaten outside the home was about 3.5 per cent for all groups.

74. In view of the differing average sizes of families between one type of occupation and another, total family expenditure is of interest, particularly since the households examined in this Chapter were all dependent upon a single earner. The lighter economic burden of the non-manual households, despite their higher expenditure per head, stands out clearly.

	Household food expenditure per week	Percentage of household food expenditure for all single-earner households
	<i>s. d.</i>	
Heavy manual . . . . .	47 11	102
Light manual . . . . .	47 6	101
Non-manual . . . . .	44 2	94
All single-earner households . . . . .	46 11	100



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**Pattern of Food Expenditure**

75. Table 31 indicates the proportion of household food expenditure devoted to different foods. In the non-manual workers' households, 38 per cent of expenditure was devoted to milk\*, unrationed meat, fish, fresh green vegetables and fruit, as compared with 32 per cent in heavy manual workers' households. These foods are usually associated with a higher standard of living. On the other hand, the non-manual workers' households spent only 11 per cent on potatoes, bread and flour, compared with 15 per cent in the heavy manual group.

TABLE 31  
*Percentage Distribution of Total Domestic Food Expenditure in Occupational Groups in the Urban Working Class 1949*

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
<b>ALL FOODS</b>				
Milk, cheese, eggs . . . . .	17.1	17.8	18.7	17.6
Meat and fish . . . . .	23.8	22.8	23.3	23.8
Vegetables and fruit . . . . .	20.9	22.0	22.2	21.4
Cereals . . . . .	19.8	19.0	17.6	19.0
Other foods . . . . .	18.4	18.4	18.2	18.2
	100.0	100.0	100.0	100.0
<b>SELECTED FOODS</b>				
Milk, unrationed meat, fish, fresh green vegetables and fruit . . . . .	32.2	34.8	38.4	35.3
Potatoes, bread and flour . . . . .	15.2	13.4	11.2	13.6

**Value of Consumption**

76. To compare levels of total consumption, it is necessary to add to the value of purchases the estimated value of supplies of food from gardens and similar sources, and of net larder stock withdrawals during the Survey week (Table 32). The effect, compared with the expenditure levels alone, is to increase the differences between the three occupational groups.

TABLE 32  
*Food Expenditure and Value of Consumption by Occupational Groups in the Urban Working Class 1949 (per head per week)*

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Expenditure . . . . .	12 10	13 3	13 10	13 8
Percentages (All households=100)	94	97	101	100
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Value of consumption . . . . .	13 7	14 3	15 2	14 6
Percentages . . . . .	94	98	105	100

\*The sale of liquid milk was unrestricted during the 15 weeks ended 9th July, 1949, when it was most plentiful.

**Main Foods : Consumption and Expenditure**

77. Table 33 summarizes food consumption and expenditure for the main items, and Table 34 shows the comparison, as percentages, with the working class generally. Detailed tables are given in Appendix C.

78. The heavy workers' households recorded consumption levels above the working-class average only for potatoes and other vegetables (except fresh greens) and for bread and flour. Their consumption of these foods reflected the higher energy requirement of the group, which counterbalanced the tendency for a household with young children to have a low bread consumption. The heavy manual group consumed 4 per cent more bread and flour (in terms of flour equivalent), than the urban working-class average, as compared with 6 per cent less by the light manual groups and 16 per cent less by the non-manual group. On the other hand, consumption in heavy workers' households was substantially less than the working-class average for a number of foods particularly important for young children. They recorded 19 per cent less fruit, 18 per cent less fish and fresh green vegetables, and 7 per cent fewer eggs. As noted above, expenditure showed a slightly dissimilar pattern. Some expenditures of this group were proportionally higher than for the working class generally, because of a larger consumption of canned fruit and of fried fish, and smaller quantities of self-supplied eggs. On the other hand, they tended to purchase cheaper varieties of vegetables.

79. The diet of the light workers' households was similar in pattern to that of the urban working class generally, but the effect of the large number of children in the household is seen in the higher consumption of milk and the lower consumption of bread.

80. Non-manual workers' households spent slightly more than the average on most foods, but 15 per cent less on bread and flour, and 19 per cent less on potatoes. Consumption of milk was 12 per cent above the average. Since these households bought more at the full price, as well as obtaining a high proportion of welfare milk, their expenditure was as much as 9 per cent above the average. Total food expenditure was higher than in the other groups and slightly above the figure for all households.

81. Since children under 5 were entitled to only half the adult ration of meat and had no tea entitlement, consumption of both these foods by the non-manual workers' households was less than the working-class average. Their preference for more expensive foods is shown by their higher expenditure on fish, and on fresh green vegetables (including such expensive items as peas and beans), which exceeded the average by a higher proportion than their consumption. The largest differences from the working-class average were recorded for fruit (including tomatoes), for which consumption exceeded the average by 25 per cent and expenditure by 22 per cent.

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TABLE 33

*Domestic Food Consumption and Expenditure by Occupational Groups in the Urban Working Class 1949*

(per head per week)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
CONSUMPTION	oz.	oz.	oz.	oz.
		(unless otherwise stated)		
Milk . . . . . pt.	4.8	5.1	5.4	4.8
Cheese . . . . .	2.1	2.0	2.1	2.2
Meat <sup>1</sup> . . . . .	22.0	21.2	22.0	22.7
Fish . . . . .	6.9	7.1	8.6	8.4
Eggs <sup>2</sup> . . . . . No.	2.8	3.1	3.3	3.0
Fats . . . . .	10.5	10.7	10.9	10.7
Sugar and preserves . . . . .	16.7	17.2	17.3	17.1
Potatoes <sup>3</sup> . . . . .	73.4	67.7	61.3	68.9
Fresh green vegetables <sup>4</sup> . . . . .	12.4	14.7	16.2	14.9
Other vegetables . . . . .	17.6	16.1	16.0	16.1
Fruit . . . . .	18.1	22.7	28.0	22.4
Bread and flour <sup>5</sup> . . . . .	55.6	50.2	45.2	53.9
Other cereals . . . . .	17.1	18.1	18.4	17.4
Tea . . . . .	1.9	1.8	1.9	2.0
EXPENDITURE	d.	d.	d.	d.
Milk . . . . .	16.9	18.9	21.0	19.3
Cheese . . . . .	1.8	1.8	2.0	2.0
Meat <sup>1</sup> . . . . .	28.1	27.6	28.5	29.3
Fish . . . . .	8.6	8.7	10.2	9.8
Eggs <sup>2</sup> . . . . .	7.6	7.7	8.1	7.5
Fats . . . . .	8.0	8.2	8.4	8.3
Sugar and preserves . . . . .	8.0	8.4	7.9	8.2
Potatoes <sup>3</sup> . . . . .	10.2	9.3	7.6	9.4
Fresh green vegetables <sup>4</sup> . . . . .	3.6	5.0	5.9	5.2
Other vegetables . . . . .	6.3	6.2	5.8	6.1
Fruit . . . . .	12.1	14.5	17.6	14.3
Bread and flour <sup>5</sup> . . . . .	13.2	12.0	11.0	13.2
Other cereals . . . . .	17.4	18.3	18.2	17.9
Tea . . . . .	4.4	4.6	4.8	4.9
Other foods . . . . .	8.0	8.1	9.2	8.5
Total food expenditure . . . . .	154.2	159.3	166.2	163.9
	(12s. 10d.)	(13s. 3d.)	(13s. 10d.)	(13s. 8d.)

<sup>1</sup>Includes canned corned meat and bacon.

<sup>2</sup>Includes dried egg.

<sup>3</sup>Includes chips and crisps.

<sup>4</sup>Includes leafy salads and legumes.

<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets, all expressed as flour equivalent.

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TABLE 34

*Domestic Food Consumption and Expenditure by Occupational Groups as percentage of all Households in the Urban Working Class 1949*

	<i>Single-earner households</i>		
	<i>Heavy manual</i>	<i>Light manual</i>	<i>Non-manual</i>
<b>CONSUMPTION</b>			
Milk . . . . .	100	106	112
Cheese . . . . .	95	91	95
Meat, rationed . . . . .	98	95	96
unrationed . . . . .	95	91	99
Fish . . . . .	82	84	102
Eggs . . . . .	93	103	110
Fats . . . . .	98	100	102
Sugar and preserves . . . . .	98	101	101
Potatoes . . . . .	106	98	89
Fresh green vegetables . . . . .	83	99	109
Other vegetables . . . . .	109	100	99
Fruit . . . . .	81	101	125
Bread and flour <sup>1</sup> . . . . .	103	93	84
Other cereals . . . . .	98	104	106
Tea . . . . .	95	90	95
<b>EXPENDITURE</b>			
Milk . . . . .	88	98	109
Cheese . . . . .	90	90	100
Meat, rationed . . . . .	98	96	97
unrationed . . . . .	91	90	98
Fish . . . . .	88	89	104
Eggs . . . . .	101	103	108
Fats . . . . .	96	99	101
Sugar and preserves . . . . .	98	102	96
Potatoes . . . . .	108	99	81
Fresh green vegetables . . . . .	69	96	113
Other vegetables . . . . .	103	102	95
Fruit . . . . .	85	101	122
Bread and flour . . . . .	100	91	83
Other cereals . . . . .	97	102	102
Tea . . . . .	90	94	98
Other foods . . . . .	94	95	108
<i>Total food expenditure</i> . . . . .	<i>94</i>	<i>97</i>	<i>101</i>

<sup>1</sup>As flour equivalent.

**Diets of Similar Families in Different Occupational Groups**

82. In order to show the influence within the occupational groups of variations in numbers of children, the diets of the two-adult households referred to in paragraph 73 above are tabulated in detail in Tables 3 and 4 of Appendix C. The average food expenditure of households with different numbers of children is shown in Table 35, and the relative importance of the variation in expenditure due to occupation and family composition is indicated in Table 36. The tables show that within each occupational group the average expenditure per head in households without children was 30 to 40 per cent higher than in households

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with two children, and that among the latter it was at least 20 per cent higher than in households with four or more children. On the average the households without children spent about 75 per cent more per head on food than those with four or more. Compared with these differences those associated with occupation almost sink into insignificance.

TABLE 35

*Food Expenditure by Households with 1 male and 1 female adult in the Urban Working Class 1949*  
(per head per week)

Number of children in the household	Single-earner households			All single-earner households with one male and one female adult and no adolescents	All households with one male and one female adult and no adolescents
	Heavy manual	Light manual	Non-manual		
0 . . . . .	s. d. 17 0	s. d. 17 10	s. d. 18 1	s. d. 17 9	s. d. 17 3
2 . . . . .	12 9	12 8	13 0	12 9	12 11
4 or more . . . . .	10 4	10 2	9 8 <sup>1</sup>	10 2	10 3
Average for all households with one male and one female adult and no adolescents	14 0	14 4	15 2	14 4	13 6

<sup>1</sup>The sample included only a small number of non-manual workers with 4 or more children.

83. Table 36 also shows that the relatively high average expenditure of the non-manual workers' households was partly due to the greater preponderance of smaller households among them ; when households of identical composition are compared their average expenditure is only slightly in excess of that of the light manual workers' households. Among the heavy workers' households on the other hand it is only those without children, of the groups here distinguished, whose expenditure fell below the average for households of the same type in all occupational groups.

TABLE 36

(i) *Food Expenditure per head of certain family types by occupational groups as percentage of that of all single-earner households of the same family type in the sample*

Number of children	Single-earner households			
	Heavy manual	Light manual	Non-manual	All households
0 . . . . .	96	100	102	100
2 . . . . .	100	100	102	100
4 or more . . . . .	101	100	(95)	100

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(ii) *Food Expenditure of certain family types as percentage of that of all single-earner households in the particular occupational group*

	Single-earner households		
	Heavy manual	Light manual	Non-manual
Number of children			
0 . . . . .	121	124	119
2 . . . . .	91	88	85
4 or more . . . . .	74	71	(63)
All single-earner households .	100	100	100

84. Similar comparisons are made for each of the main foods. Ranges between the highest and lowest levels are given in absolute quantities and not in percentages, but they show clearly the much greater magnitude of the difference due to family composition than of that due to occupation.

85. Table 37 indicates that milk consumption was lowest in the heavy manual households and highest in non-manual households, except in households with four or more children for which the sample was small. In households without children, the difference per head per week amounted to as much as 0.9 pint, 20 per cent more being consumed by non-manual households than by heavy manual households. With increasing numbers of children, the difference appears to diminish. The ranges in consumption between households of different family composition within the same occupation were slightly wider. In all occupations, the highest level was recorded for households with two children, which were usually better off economically than those with four or more. Households without children did not have the advantage of cheap milk.

86. The expenditure range between households of different family composition was also much larger than that between occupations. Within the heavy manual group, households with no children spent 42 per cent per head more than households with four or more children. This was directly the result of the cheap milk for children, as is evident from the following figures of cost per pint in different types of household :

	Heavy manual	Light manual	Non-manual
Households without children . . . . .	d. 5.1	d. 4.8	d. 4.9
Households with four or more children .	2.9	2.9	(3.0)

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TABLE 37  
All Milk  
(per head per week)

	Consumption (pt.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	4.4	4.9	5.3	22.3	23.6	25.8
2 children . . . . .	5.0	5.3	5.6	17.0	18.2	19.9
4 or more children . . . . .	4.4	4.8	(4.6)	12.7	13.9	(13.8)

87. Consumption of eggs was highest in the light manual workers' households ; childless households in this group consumed 12 per cent more per head than childless households in the group of heavy manual workers. The expenditure range for the same households was 5 per cent. The average cost of an egg depends necessarily on the incidence of free supplies. It is seen from Table 38 that eggs tended to be cheapest for the light manual workers' and dearest for the heavy manual workers' households. This accounts for the smaller differences in total expenditure.

88. When the range between family types within the same occupation is considered, there is a substantial difference, both in consumption and expenditure on eggs. Within the light manual workers' group, childless households consumed 54 per cent more per head and spent 39 per cent more per head than households with four or more children.

TABLE 38  
Eggs<sup>1</sup>  
(per head per week)

	Consumption (No.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	3.3	3.7	3.4	8.8	8.6	8.2
2 children . . . . .	3.0	3.2	3.2	8.7	7.7	8.3
4 or more children . . . . .	2.1	2.4	(2.5)	6.4	6.2	(6.7)

<sup>1</sup>Includes dried egg as shell egg equivalent.

89. Meat consumption was not greatly affected by type of work (Table 39). Heavy workers' households, in spite of their lower food expenditure per head, consumed slightly more than the other groups. They obtained more fresh rationed meat (with a larger entitlement for miners) and canned corned beef,

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less bacon, except in the households with two children, and, in the childless households, more unrationed meat. Expenditure showed similar ranges, although there is evidence that the heavy manual group ate slightly more expensive and non-rationed meats. The meat ration was higher for adults than for children under 5, and the consumption varied with family composition. Childless households in the heavy manual group consumed 70 per cent per head more than the households with four or more children, and spent 59 per cent more.

TABLE 39  
*All Meat*<sup>1</sup>  
(per head per week)

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	29.6	28.0	28.1	36.8	34.8	36.9
2 children . . . . .	21.3	20.6	20.1	27.8	26.8	27.2
4 or more children . . . . .	17.4	17.8	(18.9)	23.2	22.8	(24.2)

<sup>1</sup>Includes bacon and unrationed meat.

90. Differences in fish consumption (Table 40) were similar to those for meat. The range of consumption between occupational groups was small, and that between families of different composition was substantial. Both expenditure and consumption were high in childless households, and declined steeply in all occupational groups where there were children. Consumption of fish, and particularly of the relatively expensive fried fish, was highest in heavy workers' households without children.

TABLE 40  
*Fish*  
(per head per week)

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	14.9	13.3	12.2	17.4	16.5	14.2
2 children . . . . .	5.7	6.4	7.1	7.1	7.8	8.6
4 or more children . . . . .	4.4	3.9	(8.7)	6.0	4.8	(5.2)

91. There were substantial differences in bread and flour consumption both between occupational groups and between families of different composition



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(Table 41). Among childless households, those of heavy workers consumed 28 per cent per head more bread than those of non-manual workers. Within the heavy manual group, childless households consumed 22 per cent per head more than households with two children and 17 per cent per head more than households with four or more children. It is noteworthy that, in all occupational groups, bread consumption per head was higher in households with four or more children than in those with only two. This no doubt reflects the former group's lower standard of living and also the higher average age of the children in larger families (Table 30). The consumption of flour was highest in childless households; in other types of household, with the possible exception of non-manual households having four or more children, flour consumption varied little.

TABLE 41  
*Bread and Flour*  
(per head per week)

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
<b>BREAD</b>						
One male and one female adult with:						
no other . . . . .	72.3	67.1	56.4	13.8	13.0	11.3
2 children . . . . .	59.0	52.0	44.5	11.0	9.4	8.4
4 or more children . . . . .	61.6	57.6	(46.0)	11.7	10.4	(8.4)
<b>FLOUR</b>						
One male and one female adult with:						
no other . . . . .	10.2	8.9	8.0	1.9	2.1	2.3
2 children . . . . .	6.4	6.6	6.5	1.5	1.5	1.4
4 or more children . . . . .	5.0	5.9	(9.3)	1.3	1.4	(1.8)

92. As with bread and flour, there were substantial differences in the consumption of potatoes between occupational and family types, the trend being towards greater consumption by the families of heavy workers and by the childless households (Table 42). Heavy workers' households without children consumed 27 per cent per head more than childless non-manual workers' households, and 29 per cent per head more than households with four or more children in the heavy manual group. Similar trends were recorded for expenditure, but among childless households those of heavy manual workers spent as much as 54 per cent more per head than those of non-manual workers, though only 17 per cent more per head than heavy workers' households with four or more children. The smallness of the latter difference is a reflection of the heavier unit cost in the larger families, and arises largely from the greater consumption of chips by these families.

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TABLE 42  
*Potatoes*<sup>1</sup>  
(per head per week)

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	85.2	75.5	67.2	11.7	10.9	7.6
2 children . . . . .	74.2	66.8	61.0	9.5	9.0	7.8
4 or more children . . . . .	66.0	64.9	(49.0)	10.0	8.9	(6.7)

<sup>1</sup>Includes chips and crisps.

93. The summary figures for all vegetables, excluding potatoes (Table 43), are complicated by the varying effects of different types of vegetable. Nevertheless, marked differences in consumption were recorded between family types, though not between occupational groups. In the heavy manual group, childless households consumed 118 per cent more per head than the households with four or more children, and 60 per cent more per head than the households with two children. In terms of expenditure, the greater quantities of expensive vegetables, such as peas and beans, used by the households of non-manual and light manual workers offset the greater quantities of cheap root vegetables which the heavy workers' households consumed. As a result, although the consumption per head of all vegetables by childless households in the heavy manual group was 6 per cent higher than in the corresponding non-manual group, expenditure per head was 8 per cent less. Details of expenditure suggest that the heavier the occupation, the cheaper the varieties of vegetables consumed. Differences between families were much larger than between occupations: within the heavy manual group, childless households spent 108 per cent more per head than the households with four or more children.

TABLE 43  
*Vegetables (excluding potatoes)*  
(per head per week)

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	45.2	45.8	42.4	15.2	17.2	16.5
2 children . . . . .	28.3	28.3	29.9	9.1	10.3	10.8
4 or more children . . . . .	20.7	20.5	(18.8)	7.3	7.1	(6.0)

94. The greatest difference between occupational groups was in consumption of and expenditure on fruit (Table 44). Among childless households, the non-manual group consumed 60 per cent more per head than the heavy manual and 24 per cent more per head than the light manual group. For expenditure

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the differences were similar. Differences between family types in the same occupational group were even wider ; for example, in the heavy manual group, childless households consumed 142 per cent more per head than households with four or more children, and spent 157 per cent more. Compared with households with two children, they consumed 24 per cent more per head and spent 29 per cent more per head.

TABLE 44  
*Fruit (including tomatoes)*  
*(per head per week)*

	Consumption (oz.)			Expenditure (d.)		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
One male and one female adult with:						
no other . . . . .	23.3	30.0	37.2	15.7	20.7	25.0
2 children . . . . .	18.7	22.1	26.5	12.2	14.0	16.1
4 or more children . . . . .	9.6	14.9	(20.0)	6.1	8.3	(12.6)

**Energy Value and Nutrient Content of Domestic Food Consumption**

95. The energy value and nutrient content of household diets for the three groups are shown in Table 45. It will be noted that because of the larger amount of bread and flour taken by the heavy workers' households, the values for energy, total protein, carbohydrate, iron, vitamin B<sub>1</sub> and nicotinic acid were higher than for the non-manual group. The converse is true for the values for animal protein, fat, calcium, vitamin A, riboflavin and vitamins C and D, because of the higher consumption of milk, fats, fresh vegetables and fruit by the non-manual group. For most nutrients, the light manual group was intermediate between the other two.

TABLE 45  
*Energy Value and Nutrient Content of Domestic Food Consumption 1949<sup>1</sup>*  
*(per head per day)*

	Single-earner households		
	Heavy manual	Light manual	Non-manual
Energy value . . . . . Cal.	2,442	2,393	2,339
Total protein . . . . . g.	76	74	73
Animal protein . . . . . g.	33	34	36
Fat . . . . . g.	91	91	93
Carbohydrate . . . . . g.	331	319	303
Calcium . . . . . mg.	1,036	1,050	1,048
Iron . . . . . mg.	13.6	13.3	13.0
Vitamin A . . . . . i.u.	3,268	4,938	3,924
Vitamin B <sub>1</sub> <sup>2</sup> . . . . . mg.	1.32	1.27	1.22
Riboflavin . . . . . mg.	1.63	1.66	1.68
Nicotinic acid . . . . . mg.	12.6	12.2	12.1
Vitamin C <sup>2</sup> . . . . . mg.	48	51	53
Vitamin D . . . . . i.u.	172	202	220

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowance for cooking losses.

96. As mentioned in paragraph 35, the Committee on Nutrition of the British Medical Association expressed the opinion that while the diet should usually provide at least 25 per cent of the energy value in the form of fat, with increasing physical effort this proportion should be increased to about 35 per cent to prevent the diet from becoming too bulky and unsatisfying. Examination of the sources of the energy value for the diets of the three types of household (Table 46) shows that carbohydrate, and not fat, provided the extra calories required in the manual workers' households in 1949. The fact that these households obtained less than 35 per cent from fat does not necessarily mean that the manual workers themselves did so. The data in Table 46 refer to the average for the whole household.

TABLE 46

*Proportion of Energy Value derived from Protein, Fat and Carbohydrate 1949*

	<i>Heavy manual</i>	<i>Light manual</i>	<i>Non-manual</i>
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Protein . . . . .	12.4	12.4	12.4
Fat . . . . .	33.5	34.4	35.8
Carbohydrate . . . . .	54.1	53.2	51.8

97. Because of the differences in family composition in the three groups of households, it is difficult to assess the significance of the variations shown in Table 45. In Table 47, therefore, the data have been further divided to show the nutrient intake of two-adult households containing no child, two children and four or more children.

98. Table 47 shows the influence on the energy value and the protein, iron, vitamin B<sub>1</sub> and nicotinic acid intakes by each type of family of the higher bread and flour consumption in the manual workers' households; the steep fall in calcium with the addition of children in all occupational groups, in spite of their greater need for this nutrient; and the contrast in the levels of vitamins A and D for the families containing children in the manual and non-manual workers' households. In each of the groups the highest proportion of the total protein derived from animal sources was for the households with two children. The lowest percentage (43 per cent) was shown for the heavy workers' households containing four or more children.

TABLE 47  
*Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup>*  
*by Family Composition 1949*  
*(per head per day)*

	No. of Children	Single-earner households with one male and one female adult		
		Heavy manual	Light manual	Non-manual
Energy value . . . Cal.	0	2,873	2,825	2,710
	2	2,434	2,332	2,223
	4 or more	2,163	2,149	(1,920)
Total protein . . . g.	0	93	91	86
	2	75	71	68
	4 or more	65	65	(59)
Animal protein . . . g.	0	42	41	42
	2	34	34	35
	4 or more	28	29	(30)
Fat . . . . . g.	0	107	107	107
	2	92	91	89
	4 or more	78	80	(77)
Carbohydrate . . . g.	0	384	374	350
	2	326	307	286
	4 or more	300	292	(247)
Calcium . . . . mg.	0	1,162	1,162	1,145
	2	1,051	1,039	1,028
	4 or more	927	957	(887)
Iron . . . . . mg.	0	17.1	16.8	15.6
	2	13.4	12.7	12.2
	4 or more	11.3	11.6	(10.6)
Vitamin A . . . i.u.	0	3,847	4,062	4,157
	2	3,474	3,903	4,440
	4 or more	2,444	3,072	(4,734)
Vitamin B <sub>1</sub> <sup>2</sup> . . . mg.	0	1.57	1.53	1.39
	2	1.29	1.22	1.16
	4 or more	1.16	1.36	(1.00)
Riboflavin . . . mg.	0	1.92	1.95	1.91
	2	1.65	1.64	1.66
	4 or more	1.39	1.46	(1.41)
Nicotinic acid . . mg.	0	16.3	15.7	14.8
	2	12.3	11.6	11.4
	4 or more	10.6	10.6	(10.2)
Vitamin C <sup>2</sup> . . . mg.	0	59	66	69
	2	49	53	56
	4 or more	40	48	(55)
Vitamin D . . . i.u.	0	145	191	230
	2	191	234	256
	4 or more	124	174	(334)

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

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99. Table 48 shows the sources of the energy value of the diet according to family composition. A comparison with Table 46 indicates that dependence on fat for calories again decreased from non-manual to heavy manual workers' households, for each family type. The proportion from carbohydrate rose in both manual groups with the addition of children but remained almost unchanged in the non-manual group. The proportions of energy obtained from protein decreased with the addition of children in each occupational group, but while these proportions tended to fall from childless heavy manual to childless non-manual households, they remained stationary for the households with two children and tended to rise in the corresponding households with four or more children.

TABLE 48  
*Proportion of Energy Value derived from Protein, Fat and Carbohydrate by Family Composition*

	No. of Children	Single-earner households with one male and one female adult		
		Heavy manual	Light manual	Non-manual
Protein . . . . .	0	<i>per cent</i> 13.0	<i>per cent</i> 12.9	<i>per cent</i> 12.7
	2	12.3	12.2	12.3
	4 or more	12.0	12.2	(12.4)
Fat . . . . .	0	33.5	34.1	35.6
	2	34.2	35.1	36.2
	4 or more	32.5	33.4	(36.1)
Carbohydrate . . . . .	0	53.5	53.0	51.7
	2	53.5	52.7	51.5
	4 or more	55.5	54.4	(51.5)

100. The adequacy of the diet of the single-earner households in the heavy manual, light manual and non-manual workers' groups has been estimated in the usual way and is shown in Table 49. From these figures it will be seen that the average diets of all occupational groups were adequate in 1949.

TABLE 49  
*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup> with Allowances based on the British Medical Association's recommendations by Occupational Groups 1949*

	Single-earner household		
	Heavy manual	Light manual	Non-manual
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Energy value . . . . .	99	103	104
Protein . . . . .	102	105	108
Calcium . . . . .	105	107	108
Iron . . . . .	119	117	113
Vitamin A . . . . .	148	221	172
Vitamin B <sub>1</sub> <sup>2</sup> . . . . .	135	138	138
Riboflavin . . . . .	108	117	123
Nicotinic acid . . . . .	129	132	137
Vitamin C <sup>2</sup> . . . . .	232	246	256

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

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TABLE 50

*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup> with Allowances based on the British Medical Association's recommendations by Family Composition and Occupational Groups 1949 (percentages)*

	No. of Children	Single-earner households with one male and one female adult		
		Heavy manual	Light manual	Non-manual
Energy value . . . . .	0	95	102	109
	2	101	102	102
	4 or more	94	100	(93)
Protein . . . . .	0	112	119	124
	2	103	102	101
	4 or more	88	95	(89)
Calcium . . . . .	0	132	130	131
	2	106	105	104
	4 or more	88	93	(87)
Iron . . . . .	0	132	129	122
	2	123	116	112
	4 or more	104	111	(102)
Vitamin A . . . . .	0	143	150	157
	2	161	180	207
	4 or more	126	160	(243)
Vitamin B <sub>1</sub> <sup>2</sup> . . . . .	0	132	140	142
	2	135	135	134
	4 or more	126	136	(122)
Riboflavin . . . . .	0	106	117	128
	2	112	118	125
	4 or more	99	111	(112)
Nicotinic acid . . . . .	0	137	144	151
	2	129	128	131
	4 or more	115	124	(124)
Vitamin C <sup>2</sup> . . . . .	0	268	296	316
	2	246	268	282
	4 or more	196	243	(285)

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

101. Corresponding estimates have been made, and are shown in Table 50, for the households containing no child, two children and four or more children. This Table demonstrates the general similarity in adequacy between the different occupational groups when they are of the same family composition. In each occupational group, the percentages decreased with the rise in the number of children for protein, calcium, iron, nicotinic acid and vitamin C. For vitamin A,

percentages were greatest in the two manual groups for the households with two children, and in the non-manual group for the households with four or more children. In the two manual groups the addition of children made little difference for vitamin B<sub>1</sub>, while for riboflavin there was a slight rise for the households with two children. However, in the non-manual households percentages for vitamin B<sub>1</sub> and riboflavin decreased with the addition of children. If the small number of households containing four or more children in the non-manual workers' group are excluded, the only figures notably below 100 per cent will be seen to be protein and calcium for the heavy workers' households containing four or more children.

## V

# Household Diets of Different Groups of Heavy Workers 1947-1948

102. In Chapter IV, comparisons were made between the household diets of non-manual workers and of light and heavy manual workers, on the basis of data collected during 1949. The groups so studied were sufficiently clearly defined and large in number to make possible a partial standardization by family composition, and sufficiently widely distributed to render regional differences almost negligible. The data in the present Chapter relate to manual workers' households drawn from five different industries : agriculture, metal, mining, shipbuilding and building. These special samples were collected for administrative reasons during the months October 1947 to March 1948, when bread and potatoes were rationed, and the results reflect the deterioration in the supply position at that time. They are affected by regional and family size differences for which it is not possible to make full allowance. For foods with a marked seasonal variation, the limitation of the enquiry to the winter months is of importance. Nevertheless, the data are the only tabulated records which are available for a discussion of dietary differences between households dependent on different industries.

### Selection of the Samples

103. Samples of the following types of household were sought and housewives were asked to record the diet of their households for one week in a log book in precisely the same way as housewives in the normal National Food Survey. The households visited were those of workers in :

- (a) agriculture
- (b) mining
- (c) building
- (d) iron and steel and non-ferrous metals
- (e) shipbuilding

104. To be eligible for selection, households had to contain one or more adult males employed in *manual* work in the industry concerned. In the miners'



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group the adult had to be an underground worker. To obtain these samples, it was not possible to use the random method of selection used for the general sample. The method adopted was for the investigator first to select local factories and obtain suitable addresses from them, and to proceed to build up the complete sample by "snowballing", the process by which one housewife of the required type provided additional addresses of similar housewives. The number of households of the different types surveyed each month are given in Table 51. For the month of January 1948, the special surveys were replaced by a general sample and the records of households of the required industrial type were selected from this general sample. The data for metal workers and shipbuilding workers suffer from two additional limitations; they relate to the concluding months of 1947 only, so that they are more affected by seasonal factors than the other groups, and the total number of shipbuilders' households included was only 162, and of metal workers' households 258.

TABLE 51

*Numbers of Households in Occupational Samples October 1947 to March 1948*

	<i>Oct. 1947</i>	<i>Nov. 1947</i>	<i>Dec. 1947</i>	<i>Jan. 1948</i>	<i>Feb. 1948</i>	<i>Mar. 1948</i>	<i>4th Quarter 1947 (Total)</i>	<i>1st Quarter 1948 (Total)</i>	<i>Grand Total</i>
Agriculture . . .	173	142	82	2	45	73	397	120	517
Mining . . .	—	61	75	26	188	122	136	336	472
Building . . .	105	130	87	49	103	69	322	221	543
Metal . . .	135	110	13	—	—	—	258	—	258
Shipbuilding . .	89	65	8	—	—	—	162	—	162

**Composition of the Samples**

105. The samples were limited to households of manual workers engaged in the heavier types of work. From the analyses of the 1949 data in Chapter IV it is known that households of this category are generally large and include more than the average number of children. The sizes of households in the special samples of 1947 and 1948 were even larger than was suggested by the later data. The metal and agricultural workers' households were nearest to the heavy manual workers' average size of 3.73 persons found in 1949, but the samples of builders, miners and shipbuilders in 1947 and 1948 recorded households with an average size of 4.24 to 4.43 persons. As compared with an average of 1.02 children under 14 per household in 1949, these three groups recorded about 1.25 under 13. The average number of adults was also higher. These differences in family size and composition must be attributed at least in part to the methods by which the sample was selected. Households with several earners are likely to be over-represented both among the workers in any particular industry or occupation and again among a sample chosen from the workers, since the possibility of inclusion increases in the first case with the total number of earners the household contains and in the second with the number of its members employed in the industry or occupation. For these reasons the 1947-1948 samples cannot be regarded as comparable with those discussed in other chapters. The differences in family composition have a substantial influence on the diet and particularly affect the comparison with the

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general urban working-class sample. The variations in family composition from one industry to another were, however, much smaller.

TABLE 52

*Family Composition of Occupational Samples October 1947 to March 1948*

	Children under 13 years		Adolescents 13 to 20 years		Adults		Total Persons	Average Number		Total		
					Female	Male		Adults and Adolescents	Children			
					%	%		%	%			
Agriculture . . .	559	26	259	12	611	29	688	33	2,117	3.01	1.08	4.09
Mining . . .	606	30	200	10	559	28	638	32	2,003	2.96	1.28	4.24
Building . . .	681	29	289	12	644	27	760	32	2,374	3.12	1.25	4.37
Metal . . .	268	26	131	13	299	29	322	32	1,020	2.91	1.04	3.95
Shipbuilding	200	28	89	12	200	28	229	32	718	3.20	1.23	4.43
Urban working-class Jan. 1948	676	25	268	10	921	34	825	31	2,690	2.61	0.87	3.48

106. Differences in the location of these industries were sufficiently marked to be taken into account. There are significant differences in the character of the general diet between the north and south\*. The analysis of the 1949 data showed that in the north there was a higher consumption per head of meat, cooked fish, bread and flour; whereas the consumption per head of milk, cheese, fresh fish, fats, sugar and preserves, vegetables (other than potatoes), fruit, and cereals (other than bread and flour) was relatively higher in the south. These differences in the general diet are reflected in the selected industries : shipbuilding, for example, is concentrated in specific areas in Scotland and the north of England. The metal industries and building are the most widely spread, though the former show a tendency to concentrate in the Midlands and the north. An attempt is made in paragraphs 113-117 to indicate the effect of these regional differences.

**Food Expenditure and Value of Consumption**

107. The level of household food expenditure (Tables 53 and 54) was highest for the metal workers and, because of self-supplied foods, lowest for those in agriculture. When allowance is made for self-supplies by valuing total consumption within the home, the value of consumption in agricultural households is also found to be lower than that of the other households. This is not attributable to family composition differences, since the agricultural households in the sample were smaller and had fewer children than households in the other industries, with the exception of metal workers; nor does it arise from the regional effect discussed in Chapter VII. With the exception of agriculture, differences in the value of consumption between the selected industries were small, but most groups recorded levels below that of the urban working class generally. The larger size of the selected households undoubtedly contributed to this result. Food expenditure also varies with the earnings of the household and, although the classification in this Chapter is based solely on the presence in the household of at least one adult worker of the required type, the comparison in Table 54 with the relative earnings of all operatives in the industry

\*See Chapter VII.

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is of interest. Table 54 also shows that with the exception of agriculture, households of workers in these heavy industries had less recourse to free foods than the working class generally, and their expenditure levels were accordingly higher.

TABLE 53

*Selected Industries: Household Food Expenditure and Value of Consumption  
October 1947 to March 1948  
(per head per week)*

	<i>Agriculture</i>		<i>Mining</i>		<i>Building</i>		<i>Metal<sup>1</sup></i>		<i>Shipbuilding<sup>1</sup></i>	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Expenditure on food	9	5.6	12	7.7	12	2.2	13	0.8	12	7.5
Value of food taken from gardens and allotments or ob- tained free from employer . . . .	2	6.5		8.0		5.2		2.2		1.6
<i>Value of consumption</i>	12	0.1	13	3.7	12	7.4	13	3.0	12	9.1

<sup>1</sup>October to December 1947 only.

TABLE 54

*Selected Industries: Comparison of Earnings, Household Food  
Expenditure and Value of Consumption*

	<i>Earnings<sup>1</sup> October 1947</i>	<i>Percentages of urban working class average, January 1948</i>	
		<i>Food expenditure</i>	<i>Value of consumption</i>
Agriculture . . . .	79 <sup>2</sup>	78	90
Mining . . . .	96	104	98
Building . . . .	91	100	95
Metal . . . .	} 110 <sup>3</sup>	108	100
Shipbuilding . . . .		104	97

<sup>1</sup>Weekly per male worker aged 21 and over in the industry, expressed as percentage of all industries (Ministry of Labour).

<sup>2</sup>April 1947 to March 1948

<sup>3</sup>No separate figures available.

**Expenditure on the Main Foods**

108. Table 55 shows expenditure by industrial groups on the main foods, no allowance having been made for the effects of differences in regional distribution or family composition of the various groups. In a number of instances, seasonal effects were so marked that comparisons with the metal and shipbuilding industries can only be made on the basis of 1947 records. Where six-monthly averages are given, those for the 1947 data are shown in brackets. The main differences were recorded between agriculture and the other four industries. This was largely to be expected in view of the greater use made by rural households of self-supplies, but not all the differences can be explained in this way.

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The rural households spent substantially less on eggs, meat, fish, vegetables and fruit.

109. The remaining four industries may be compared with the averages shown by the general sample of the urban working class. Households in the selected groups spent more on vegetables, more on cereals, and (except for the miners' households) more on unrationed meats. The higher expenditure on vegetables is largely accounted for by potato expenditure, which was 40 to 60 per cent above the urban working-class average. Except in the building group, expenditure on fresh green vegetables in the selected industrial groups was less than for the working class generally. The high expenditure on cereals was the result of the large amount spent on bread and flour.

TABLE 55  
*Domestic Food Expenditure by Households in Different Industrial Groups*  
(pence per head per week)

	October 1947—March 1948			October 1947—December 1947		January 1948
	Agriculture	Mining	Building	Metal	Ship-building	Urban Working class
Milk . . . . .	15.5	13.3	15.1	14.2	14.5	15.7
Cheese . . . . .	2.7	2.2	1.4	1.5	1.5	1.4
Meat, rationed . . . . .	12.0	16.1	13.4	12.8	14.4	14.0
Bacon . . . . .	1.9	3.0	2.5			2.5
	(1.6) <sup>1</sup>	(1.7) <sup>1</sup>	(1.8) <sup>1</sup>	2.0	2.2	
Other meat . . . . .	8.3	10.9	14.1	14.6	18.0	12.7
Fish, fresh and processed . . . . .	5.1	6.4	7.1	8.3	8.5	8.7
Other fish . . . . .	3.3	6.3	6.4	6.7	5.8	5.8
Eggs . . . . .	1.9	5.8	4.7			3.9
	(1.3) <sup>1</sup>	(3.2) <sup>1</sup>	(3.2) <sup>1</sup>	3.6	3.5	
Potatoes <sup>2</sup> . . . . .	2.3	9.4	7.8	10.4	10.0	6.6
Fresh green vegetables . . . . .	0.9	3.9	5.4	4.1	2.4	5.0
Other vegetables . . . . .	2.1	6.0	5.6	6.6	6.4	5.1
Fruit . . . . .	6.0	13.5	12.5	16.6	12.4	13.5
Bread and flour . . . . .	13.6	14.6	13.6	13.3	15.6	12.2
Other cereal products . . . . .	16.6	17.8	14.3			17.0
	(15.8) <sup>1</sup>	(18.6) <sup>1</sup>	(13.3) <sup>1</sup>	19.4	13.1	
Other foods . . . . .	21.4	22.4	22.2	22.7	23.2	21.4
<i>Total expenditure</i> . . . . .	<i>113.6</i>	<i>151.6</i>	<i>146.1</i>	<i>156.8</i>	<i>151.5</i>	<i>145.5</i>

<sup>1</sup>Figures in brackets are Oct.-Dec. 1947 averages to enable a comparison to be made with corresponding figures for metal and shipbuilding workers.

<sup>2</sup>Includes chips and crisps.

110. Of the four non-agricultural groups, miners' households spent least on milk, since they contained the highest proportion of children with an entitlement to supplies of cheap milk. They spent most on cheese and on rationed meat, with their special allowances, but least on other meat and fish. Their expenditure on cereals, with that of the metal workers, was highest, and their expenditure on fresh green vegetables, with that of the shipbuilders, was lowest.

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Workers in the building industry, with those in shipbuilding, recorded the highest expenditure on unrationed meat and on fresh green vegetables. Metal workers' households spent most, not only on cereals, but also on fish, vegetables (excluding fresh green vegetables) and fruit. The high level of expenditure on unrationed meat in the shipbuilding group was accompanied by an expenditure on fish second only to that of the metal workers, the highest expenditure on bread and flour, and the lowest expenditure on fresh green vegetables.

**Consumption of the Main Foods**

111. Details of food consumption by households in the selected industries are set out in Table 56, which has been limited to the last quarter of 1947 in order to remove the effects of ration changes and seasonal differences in the comparisons between the different industries. Some effect of seasonality remains in the comparison with the working class generally, since the supply of eggs, for example, might be expected to be about 25 per cent higher in January 1948 than in the last quarter of 1947. On the other hand, consumption of fresh green vegetables and of fruit (other than citrus fruit) is usually lowest about January. The quantities per head per week shown in Table 56 are expressed in Table 57 as percentage differences from the working-class average. As noted above, these differences reflect the effects not only of occupation but also of regional differences and differences in family composition.

TABLE 56  
*Domestic Food Consumption by Workers in Selected Industries*  
*Fourth Quarter 1947*  
*(oz. per head per week except where otherwise stated)*

	<i>Agriculture</i>	<i>Mining</i>	<i>Building</i>	<i>Metal</i>	<i>Ship- building</i>
Milk . . . pt. or equivalent pt.	4.1	3.6	3.7	3.6	3.7
Cheese . . . . .	4.0	3.1	2.3	2.2	2.3
Meat, rationed, fresh . . . . .	11.8	14.7	13.1	12.2	12.7
Bacon . . . . .	2.7	1.2	1.3	1.5	1.6
Other meat . . . . .	9.9	10.9	13.6	14.1	17.0
Fish, fresh and processed . . . . .	6.3	6.1	8.6	8.7	8.7
Other fish . . . . .	1.9	3.6	3.4	3.8	3.4
Eggs . . . . . No.	1.8	1.5	1.6	1.3	1.3
Fats . . . . .	7.7	7.6	7.8	7.7	7.4
Sugar . . . . .	9.5	9.8	10.9	10.1	10.5
Preserves . . . . .	7.8	5.2	4.8	6.4	5.6
Potatoes . . . . .	63.8	69.0	70.5	77.8	75.7
Fresh green vegetables . . . . .	11.0	10.5	16.2	12.2	7.1
Other vegetables . . . . .	13.7	21.5	17.0	21.9	23.4
Fruit . . . . .	17.6	15.1	17.9	21.8	16.4
Bread and flour . . . . .	79.4	80.2	75.5	74.5	80.9
Other cereals . . . . .	19.3	16.0	13.3	18.8	18.4
Beverages . . . . .	2.6	2.4	2.6	2.6	2.4

112. Table 57 shows that the four non-agricultural groups, when compared with the urban working class generally, consumed less bacon and slightly less milk, but more cooked and canned fish. All five groups, including agricultural households, consumed less fruit and eggs, and slightly less fats and beverages, but more bread and flour and potatoes.

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TABLE 57

*Domestic Food Consumption by Selected Industries. Fourth Quarter 1947  
As percentage of Urban Working-Class consumption January 1948*

	<i>Agriculture</i>	<i>Mining</i>	<i>Building</i>	<i>Metal</i>	<i>Ship- building</i>
Milk . . . . .	105	92	95	92	95
Cheese . . . . .	167	129	96	92	96
<b>Meat</b>					
Rationed, fresh . . . . .	90	112	100	93	97
Bacon . . . . .	150	67	72	83	89
Other . . . . .	71	78	97	101	121
<i>All meat</i> . . . . .	84	93	97	96	108
<b>Fish</b>					
Fresh and processed . . . . .	73	71	100	101	101
Other . . . . .	63	120	113	127	113
<i>All fish</i> . . . . .	71	84	103	108	104
Eggs . . . . .	90	75	80	65	65
Fats . . . . .	96	95	98	96	92
Sugar . . . . .	90	93	104	96	100
Preserves . . . . .	144	96	89	118	104
Potatoes . . . . .	118	128	131	144	140
Fresh green vegetables . . . . .	87	83	128	96	56
Other vegetables . . . . .	74	116	92	118	126
<i>All vegetables</i> . . . . .	104	118	122	131	125
Fruit . . . . .	76	65	77	94	71
Bread and flour . . . . .	115	116	109	108	117
Other cereals . . . . .	104	86	72	101	99
<i>All cereals</i> . . . . .	113	110	101	106	113
Beverages . . . . .	93	86	93	93	86

**Food Consumption : Occupational and Regional Variations**

113. The differences shown in Tables 56 and 57 are affected by the regional differences studied in Chapter VII. If, for a particular food, the working-class averages for the regions in which an industry is concentrated show a marked variation from the national working-class average, and the industrial group concerned shows a variation of a similar order, it may be supposed that it is the regional rather than the occupational effect which is operative, since the workers in a particular industry are in a minority even in those regions where the industry tends to concentrate. If, on the other hand, there is a wide disparity between the two variations, it may be inferred with more confidence that there is a true occupational effect.

114. Until a more refined method of isolating occupational from regional and other effects is available, too much weight should not be attached to small

differences between one industrial group and another ; but, although each item may be given only a qualified acceptance, the cumulative effect suggests certain broad similarities and certain clear differences in the patterns of the various diets. Thus, the high consumption of potatoes and of bread and flour (but not other cereals), and the low figures for eggs and fruit and (except in agricultural households) for milk and bacon appear to be truly characteristic of the industrial groups studied, rather than of the regions where they live. For fresh green vegetables, on the other hand, the differences were probably regional rather than occupational, except for agricultural households. In particular, the very low figure found for shipbuilding is fully explained by its concentration in Scotland and the North. For building workers' households, however, consumption was high even when allowance is made for the greater influence of the southern diet ; it was associated with a level for other vegetables (apart from potatoes) which was low in comparison with the other heavy industries.

**115.** The agricultural diet differed widely from the rest ; it was characterized by a very high consumption of cheese and bacon, fairly high milk consumption, and relatively low consumption of other animal protein foods, including carcass meat, unrationed meat and fish. As in other heavy industries, consumption of bread and potatoes was high, but the figure for vegetables, other than potatoes and fresh greens, was low in comparison with other industrial groups. Consumption of sugar was rather low, and of preserves very high. Since the agricultural workers' households had a wide geographical dispersion, their diet showed no marked regional features. In some respects, particularly the low consumption of fish, it was no doubt characteristic of rural as opposed to urban areas, though regional differences also had some effect, as in the other industries.

**116.** The additional entitlements of cheese and rationed fresh meat in miners' households clearly affected their demand for bacon, unrationed meat and fresh fish. Metal workers' households consumed a diet generally similar to that of other non-agricultural groups, though their liking for preserves was shared only by the agricultural households.

**117.** Occupational differences are undoubtedly affected by differences in family composition as well as by regional differences ; but in view of the method of selecting the samples it is impracticable to examine the effect of the former. The detailed analyses presented in Chapter VI relate primarily to the effect of children in households in which the adult component is one man and one woman ; but the special samples reviewed in this chapter contained relatively large numbers of adults and adolescents as well as children, and no detailed study of the effect of additional adults was practicable.

#### **Energy Value and Nutrient Content of Domestic Food Consumption**

**118.** As mentioned in paragraphs 5 and 102, bread and potatoes were rationed in 1947-48. The effect of this on the diets of households where at least one member could be considered as having a higher than average expenditure of energy was therefore of special interest.

**119.** The average energy and nutritive value of the household diet per head per day are shown in Table 58. Similar averages for urban working-class households in January 1948 are also included. However, in comparing the results, it should be kept in mind that, in addition to the greater energy requirements of the male adults and probably also the female adults in the industrial samples, the com-

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position of the industrial samples was different from that of the urban working-class household sample. The latter contained fewer children, so that the differences shown in this Table are less than they would have been had the family composition been more similar. A comparison of the composition of the household within the industrial group itself shows that, in both the agricultural and the metal workers' sample, there were smaller proportions of children under 13 years of age than in the other industrial groups. This last difference within the groups under study is, however, smaller than that found between these groups and the urban working-class sample generally.

TABLE 58  
*Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup>*  
(per head per day)

	October—December 1947		October 1947 to March 1948			January 1948
	Ship-building	Metal	Agriculture	Building	Mining	Urban Working class
Energy value Cal.	2,477	2,418	2,439	2,359	2,452	2,296
Total protein g.	83	79	79	78	82	75
Animal protein g.	35	33	34	34	34	33
Fat . . . g.	81	82	84	82	84	83
Carbohydrate g.	353	342	342	328	342	313
Calcium mg.	1,010	969	1,092	988	1,046	958
Iron . . . mg.	14.6	14.4	13.7	13.9	14.3	13.4
Vitamin A . i.u.	3,542	3,347	2,817	3,211	3,129	3,256
Vitamin B <sub>1</sub> <sup>2</sup> . mg.	1.41	1.38	1.34	1.33	1.39	1.25
Riboflavin . mg.	1.61	1.60	1.66	1.61	1.63	1.54
Nicotinic acid mg.	14.3	13.8	13.0	13.4	13.7	12.7
Vitamin C <sup>2</sup> . mg.	42	49	39	43	38	40
Vitamin D . i.u.	128	137	149	195	134	159

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

120. The energy and nutritive values of the urban working-class household diets were lower than in any of the other groups, except for those for fat and fat-soluble vitamins A and D and vitamin C. The higher consumption of bread and flour and potatoes was the main reason for the higher energy value, total protein, carbohydrate, calcium, iron, vitamin B<sub>1</sub> and nicotinic acid for all five industrial groups.

121. Although both miners and agricultural workers had an increased allowance of cheese (miners had an increased meat allowance), the average animal protein content of these households' diets was similar to that for the households in the building industry and just under that for households associated with ship-building. The agricultural samples consumed considerably less fish but more milk and bacon than the others. Of the five groups of industrial households, those in the metal and mining industries obtained the lowest percentage of protein from animal sources. The higher cheese consumption by both mining and agricultural households raised the calcium and riboflavin intake to a level higher than that for other groups.

122. The widest variation was found in the values for vitamin C, but because



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of the normal seasonal changes in fruit and vegetable consumption the values for this vitamin included in this Table were not strictly comparable with each other. The estimated intake of each group was, however, greater than the 20-30 mg. daily recommended by the British Medical Association Committee on Nutrition.

123. The energy requirements of agricultural workers vary not only with the type of agriculture but with the season of the year and the degree of mechanisation on the farm. The miner's work underground may also demand a very wide range of energy expenditure. Similarly, the requirements of those in the building, metal and shipbuilding industries vary widely within the industries. To make a fair assessment of the energy requirements of these specialised groups of households, it would therefore have been necessary to investigate the energy expenditure of each worker individually. Such an enquiry was beyond the scope of the present survey. The use of an arbitrary assessment, as has been done in other studies, could have yielded misleading results, and therefore no attempt has been made to assess the adequacy of the family diets by comparison with recommended allowances, as has been done in other sections of this report.

124. It is, however, possible to compare the sources of the energy value of these diets with certain recommendations of the British Medical Association Committee on Nutrition. The Committee recommended that the diets should provide not less protein than an amount representing 11 per cent of the energy requirement. For expectant and nursing mothers and for children the corresponding allowance should be increased to 14 per cent, while for those on exceptionally heavy work about 12 per cent was considered reasonable. On this basis it can be shown that if the energy value was sufficient then the average total protein content of the diet of each of these groups appeared to be adequate. (See Table 59.)

125. The British Medical Association Committee on Nutrition also recommended that the proportion from fat should provide at least 25 per cent, and for heavy workers reach about 35 per cent (see paragraph 35). The diets of individuals are not available, but it will be seen that for the families of heavy workers the proportions of calories from fat were all about 30 per cent, and that for each group the percentage was lower than that for the urban working-class household diet. Thus it is probable that the additional energy required for heavy work was derived from carbohydrate rather than from fat.

TABLE 59  
*Proportion of Energy Value derived from Protein, Fat and Carbohydrate  
Selected Industries*

	<i>October—December 1947</i>		<i>October 1947 to March 1948</i>			<i>January 1948</i>
	<i>Ship- building</i>	<i>Metal</i>	<i>Agriculture</i>	<i>Building</i>	<i>Mining</i>	<i>Urban Working class</i>
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Protein . . . . .	13.4	13.0	13.0	13.2	13.4	13.0
Fat . . . . .	29.5	30.5	31.0	31.2	30.8	32.5
Carbohydrate . . . . .	57.1	56.5	56.0	55.6	55.8	54.5

126. The Committee made recommendations on requirements of certain nutrients of the vitamin B complex which they have tentatively suggested as being directly linked to the energy requirement. The amounts of vitamin B<sub>1</sub>, riboflavin and nicotinic acid per 1,000 calories in the diet of each of these industrial groups exceeded the figures recommended by the Committee.

## VI

# Urban Working-Class Household Diets in 1949: the Effects of Family Composition

### CLASSIFICATION BY HOUSEHOLD COMPOSITION

127. Past analyses of National Food Survey data show that family composition was of primary importance in determining food consumption and expenditure, even under conditions of food control and consumer subsidies. A special investigation of family composition has therefore been made, utilizing for this purpose the Survey sample for the year 1949. The present chapter discusses the problems of classifying households and presents a fairly full classification of family types, which are then analysed to show the differences in their food expenditure and consumption levels. This classification serves both to describe the demographic structure of the urban working class in 1949 and to explain why a simplified classification is used in the regular National Food Survey analyses.

128. The problem of finding a comprehensive classification is complex. As may be seen from Table 60, the idea of a typical family is illusory. For example, the family of father and mother and three schoolchildren, which has sometimes been regarded as typical, is now rare and comprised only 0·7 per cent of the total households in the urban working-class sample of 1949. Neither the total number of persons in the household nor the number of children provides by itself an adequate basis of comparison ; both must be taken into account, and there is no direct relation between numbers of adults and numbers of children. It is also important to include the effect of adolescents and of children of different ages. While it would clearly be impracticable to distinguish all possible combinations, all the more important differences can be brought out by limiting the classification to the twenty-nine groups described below.

#### **Distribution of Main Types of Household**

129. Households dependent mainly on the old age pension were treated separately. The remainder were divided into five groups according to the number of adults (see Table 60), and each group was sub-divided into households with adults only and those with a "family" of younger members, giving ten main types. Of the households with families, those containing a single adult, or two adults of the same sex, comprised only 5·6 per cent of the total sample, and were not sub-divided further. Those containing one man and one woman,

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or more than two adults, were further classified into those with children, adolescents, and children and adolescents together, increasing the number of types to sixteen.

**130.** 57 per cent of the total sample were households (other than those of old age pensioners) containing one man and one woman. 70 per cent of this group contained children, 13 per cent including adolescents as well : 8 per cent contained adolescents but no child and the remaining 22 per cent contained neither. This group contained nearly three-quarters of all the children in the sample. Among households with other combinations of adults, more than half contained no children, and 40 per cent consisted of adults only. Their families tended to be older and to contain more adolescents than the households with one man and one woman. The average age of adults was also rather higher : as would be expected, the younger adults had younger families in all groups. Particulars of the adult age composition of the sample will be found in Appendix D.

**131.** The important group of households with one man, one woman and a family comprised 44 per cent of the total sample, and warranted more detailed analysis. Households containing children (the largest group) were classified by size of family, with a further sub-division according to whether or not they included a child under 5. Those containing children and adolescents were classified by size of family, and those containing adolescents without children (a small group) were divided according to whether the number of adolescents was one or more.

**132.** The resultant classification distinguished twenty-six types, covering 92 per cent of the sample. A summary is given in Table 60 and more detailed analyses in Tables 61 to 64. "Adults" were defined as persons aged 21 or more, except for a few cases where persons aged between 18 and 21 had set up homes of their own. "Adolescents" meant persons aged from 14 to 20 inclusive. Children were those under 14 years.

#### **Old Age Pensioner Households**

**133.** Households dependent entirely or mainly on old age pensions were classified separately, as their diets and household composition warranted separate treatment. Old age pensioner households were almost entirely adult, and comprised 8 per cent of the total. They were divided into three groups ; one adult only, one man and one woman only, and other combinations. Nearly half were single person households, mainly female, and most of the remainder contained a childless couple. Other combinations comprised only about an eighth of this group.

#### **Households with one Man, one Woman, and Family**

**134.** This important group is analysed in detail in Tables 66 and 67 and the distribution by type of family is summarised in Table 65. No one type predominated, but families of one or two accounted for 73 per cent of the group, and more than half of these included at least one child under 5. Families with children under 5 and no adolescents made up 54 per cent of the group, reflecting the high birth-rate of 1946 and 1947. Families with adolescents, with or without children, comprised only 26 per cent, since the proportion of adolescent males in the sample was reduced by conscription.

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TABLE 60  
*Proportion of Households of different Family Types in the  
 Urban Working-Class Sample 1949 (percentages)*

HOUSEHOLDS EXCLUDING OLD AGE PENSIONERS	
<i>With adults only</i>	
One adult of either sex . . . . .	3.2
Two adult males or two adult females . . . . .	2.0
One adult male and one adult female . . . . .	12.8
Three adults . . . . .	6.4
Four or more adults . . . . .	2.8
	27.2
<i>One adult male and one adult female</i>	
<i>With children only</i>	
1 child:	
Under 5 years . . . . .	8.8
5 years or over . . . . .	5.5
	14.3
2 children:	
One at least under 5 years . . . . .	8.7
Both 5 years or over . . . . .	2.6
	11.3
3 children:	
One at least under 5 years . . . . .	4.0
All 5 years or over . . . . .	0.7
	4.7
4 or more children:	
One at least under 5 years . . . . .	2.1
All 5 years or over . . . . .	0.1
	2.2
	32.5
<i>With children and adolescents</i>	
2 . . . . .	2.6
3 . . . . .	1.7
4 or more . . . . .	2.9
	7.2
<i>With adolescents only</i>	
1 . . . . .	3.3
2 or more . . . . .	1.0
	4.3
<i>Three adults</i>	
With children only . . . . .	5.7
With children and adolescents . . . . .	2.3
With adolescents only . . . . .	2.0
	10.0
<i>Four or more adults</i>	
With children only . . . . .	2.7
With children and adolescents . . . . .	1.6
With adolescents only . . . . .	1.0
	5.3
<i>One adult with family</i> . . . . .	3.3
<i>Two adult males or two adult females with family</i> . . . . .	2.3
OLD AGE PENSIONER HOUSEHOLDS . . . . .	7.9
	100.0

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TABLE 61  
Distribution of Urban Working-Class Household Sample by  
Family Composition 1949  
(households)

	Number of adults					
	1 adult	1 man and 1 woman	2 men or 2 women	3 adults	4 or more adults	Total
	per No. cent	per No. cent	per No. cent	per No. cent	per No. cent	per No. cent
EXCLUDING OLD AGE PENSIONER HOUSEHOLDS						
Adults only . . . . .	227 3.2	908 12.8	146 2.0	458 6.4	200 2.8	1,939 27.2
Adults and :						
Children only . . . . .	( <sup>1</sup> )	2,314 32.5	( <sup>1</sup> )	402 5.7	189 2.7	( <sup>1</sup> )
Children and adolescents . . . . .		516 7.2		165 2.3	116 1.6	
Adolescents only . . . . .		303 4.3		142 2.0	70 1.0	
Total with children and/or adolescents . . . . .	238 3.3	3,133 44.0	162 2.3	709 10.0	375 5.3	4,617 64.9
Total . . . . .	465 6.5	4,041 56.8	308 4.3	1,167 16.4	575 8.1	6,556 92.1
OLD AGE PENSIONER HOUSEHOLDS	269 3.8	222 3.1		72 1.0 ( <sup>1</sup> )		563 7.9
All households . . . . .	734 10.3	4,263 59.9		2,122 29.8		7,119 100.0

(<sup>1</sup>) No sub-division available.

TABLE 62  
Average Size of Urban Working-Class Households 1949  
(persons per household)

	Number of adults					
	1 adult	1 man and 1 woman	2 men or 2 women	3 adults	4 or more adults	Total
EXCLUDING OLD AGE PENSIONER HOUSEHOLDS						
Adults only . . . . .	1.00	2.00	2.00	3.00	4.27	2.36
Adults and :						
Children only . . . . .	( <sup>1</sup> )	3.88	( <sup>1</sup> )	4.70	5.78	( <sup>1</sup> )
Adolescents only . . . . .		3.26		4.27	5.53	
Adolescents and children . . . . .		5.47		6.52	7.60	
Total with children or adolescents or with both . . . . .	3.17	4.10	4.75	5.04	6.30	4.72
Total . . . . .	2.11	3.61	3.44	4.24	5.60	3.78
Old Age Pensioner Households . . . . .	1.00	2.00		2.95( <sup>1</sup> )		1.64
Total sample . . . . .						3.62

(<sup>1</sup>) No sub-division available.

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TABLE 63  
*Composition of all Urban Working-Class Households with Children and/or Adolescents 1949 (persons per household)*

EXCLUDING OLD AGE PENSIONER HOUSEHOLDS	Number of adults					
	1 adult	1 man and 1 woman	2 men or 2 women	3 adults	4 or more adults	Total
Children 0-4 years . . . . .	0.60	0.80	0.35	0.63	0.66	0.74
Children 5-13 years . . . . .	0.89	0.94	0.83	0.81	0.68	0.90
Adolescents 14-20 years . . . . .	0.68	0.36	1.57	0.60	0.68	0.47
Total . . . . .	2.17	2.10	2.75	2.04	2.02	2.11
Adults . . . . .	1.00	2.00	2.00	3.00	4.28	2.61
Average size of household . . . . .	3.17	4.10	4.75	5.04	6.30	4.72

TABLE 64  
*Age Composition of Selected Urban Working-Class Households with Children and/or Adolescents 1949 (persons per household)*

	Households with 1 man and 1 woman	Households with 3 adults	Households with 4 or more adults
<i>Households with children only:</i>			
Under 1 year . . . . .	0.18	0.15	0.22
Aged 1-4 years . . . . .	0.78	0.71	0.67
Aged 5-13 years . . . . .	0.92	0.84	0.62
Total children . . . . .	1.88	1.70	1.51
Average size of household . . . . .	3.88	4.70	5.78
<i>Households with children and adolescents:</i>			
Under 1 year . . . . .	0.07	0.12	0.16
Aged 1-4 years . . . . .	0.51	0.50	0.53
Aged 5-13 years . . . . .	1.61	1.43	1.19
Aged 14-17 years . . . . .	1.00	0.98	0.82
Aged 18-20 years . . . . .	0.28	0.49	0.63
Total children and adolescents . . . . .	3.47	3.52	3.33
Average size of household . . . . .	5.47	6.52	7.60
<i>Households with adolescents only:</i>			
Aged 14-17 years . . . . .	0.74	0.70	0.63
Aged 18-20 years . . . . .	0.52	0.57	0.59
Total adolescents . . . . .	1.26	1.27	1.22
Average size of household . . . . .	3.26	4.27	5.53

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TABLE 65

Distribution of Households comprising one Man and one Woman with Families according to Type of Family 1949  
(percentage of total)

Number in family	Children only		Children and adolescents together	Adolescents only	Total
	Including at least 1 child under 5 years	All aged 5-13 years inclusive			
One man and one woman with:					
1 other . . . . .	20	12	—	7	39
2 others . . . . .	20	6	6	2	34
3 others . . . . .	9	2	4	...	15
4 or more others . . . . .	5	...	7	...	12
Total . . . . .	54	20	17	9	100

... less than 0.5.

TABLE 66

Distribution of Urban Working-Class Households containing one Man and one Woman with no other Adults (excluding Old Age Pensioner households) (households)

	Number of non-adults				Total					
	1		2		3		4 or more			
	No.	per cent	No.	per cent	No.	per cent	No.	per cent		
Households with children only:										
at least 1 under 5 years . . . . .	624	8.8	618	8.7	286	4.0	149	2.1	1,677	23.6
none under 5 years . . . . .	391	5.5	187	2.6	52	0.7	7	0.1	637	8.9
Total . . . . .	1,015	14.3	805	11.3	338	4.7	156	2.2	2,314	32.5
Households with children and adolescents . . . . .	—	—	186	2.6	120	1.7	210	2.9	516	7.2
Total households with children and/or adolescents . . . . .	1,015	14.3	991	13.9	458	6.4	366	5.1	2,830	39.7
Households with adolescents only . . . . .	235	3.3	No. 68		Per cent 1.0				303	4.3
Total households with children and/or adolescents . . . . .	1,250	17.6	1,883		26.4				3,133	44.0
Households with adults only . . . . .	—	—	—		—				908	12.8
Total of above . . . . .	—	—	—		—				4,041	56.8
Total sample . . . . .	—	—	—		—				7,119	100.0

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TABLE 67

Age Composition of Urban Working-Class Households containing one Man and one Woman with Children and/or Adolescents 1949  
(persons per household)

	Number of non-adults			
	1	2	3	4 or more
<i>Households with children</i>				
<i>At least one under 5 years:</i>				
Under 1 year . . . . .	0.22	0.24	0.25	0.32
Aged 1-4 years . . . . .	0.78	1.14	1.34	1.58
Aged 5-13 years . . . . .	—	0.62	1.41	2.66
<i>Total</i> . . . . .	<i>1.00</i>	<i>2.00</i>	<i>3.00</i>	<i>4.56</i>
<i>Average size of household</i> . . . . .	<i>3.00</i>	<i>4.00</i>	<i>5.00</i>	<i>6.56</i>
<i>Households with children (all aged 5-13)</i>				
<i>Average size of household</i> . . . . .	<i>1.00</i>	<i>2.00</i>	<i>3.00</i>	<i>4.00</i>
<i>Households with children and adolescents:</i>				
Children under 1 year . . . . .	—	0.02	0.09	0.12
Children aged 1-4 years . . . . .	—	0.20	0.47	0.81
Children aged 5-13 years . . . . .	—	0.78	1.44	2.43
Adolescents aged 14-17 years . . . . .	—	0.73	0.85	1.34
Adolescents aged 18-20 years . . . . .	—	0.27	0.15	0.35
<i>Total</i> . . . . .	—	<i>2.00</i>	<i>3.00</i>	<i>5.05</i>
<i>Average size of household</i> . . . . .	—	<i>4.00</i>	<i>5.00</i>	<i>7.05</i>
<i>Households with adolescents but no children:</i>				
Adolescents aged 14-17 years . . . . .	0.60	1.19	—	—
Adolescents aged 18-20 years . . . . .	0.40	0.96	—	—
<i>Total</i> . . . . .	<i>1.00</i>	<i>2.15</i>	—	—
<i>Average size of household</i> . . . . .	<i>3.00</i>	<i>4.15</i>	—	—

FOOD CONSUMPTION AND EXPENDITURE BY  
DIFFERENT TYPES OF HOUSEHOLD

135. Levels of food expenditure per head were compared for sixteen types of household, according to a classification based on the number of adults per household, but distinguishing the households consisting entirely of adults from those with children or adolescents, and sub-dividing certain types according to the age-distribution of their non-adult members. Old age pensioner households were not included in this tabulation. In addition comparisons of expenditure were made for households containing one man and one woman and varying numbers of non-adults, and a detailed analysis of consumption and expenditure for individual foods was made for households containing varying numbers of children.

136. The results of the sixteen-type comparison are given in Table 68. Among the household types distinguished in this grouping, food expenditure per head ranged from a minimum of 12s. 6d. in families containing two adults of different



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sex together with children and adolescents, to a maximum of 17s. 3d. in households of the same adult composition but without children or adolescents. The average expenditure of wholly adult households was in each case much higher than that of households with the same number of adults but with children or adolescents in addition. A vertical reading of the table shows that in those cases in which the age-distribution of the non-adult members of the household is distinguished, the households containing adolescents but no children had an expenditure per head considerably higher than that of households with children and nearer to that of the wholly adult households.

137. Among the wholly adult households there was a considerable variation in expenditure according to the number of adults, the lowest level (14s. 4d.) being recorded for those consisting of two adults of the same sex. Both in this group and that of single-adult households the proportion of meals outside the home (which was not analysed) may have been relatively high. In these two groups households consisting of one or two women were much more frequent than those of one or two men, and no doubt their incomes were smaller.

138. The variation of average expenditure according to number of adults was very small in the households including non-adult members. This is partly because the increase in the proportion of adults as the number of adults per household rises would tend to minimise the variation in average expenditure per head — even if the number and age-distribution of the non-adult members of the household remained constant between the groups. In fact, as Table 63 shows, the number of children per household tended to fall, and that of adolescents to rise, as the number of adults increased, so that this comparison gives a less reliable indication of the effect of additional adults on expenditure than that derived from the wholly adult households.

139. The households containing one man and one woman with various numbers and age-distributions of non-adult members are analysed in greater detail in Table 69. This Table shows that the minimum expenditure of 12s. 6d. per head given in Table 68, for households containing one man and one woman together with children and adolescents, is itself an average concealing a variation from 14s. 6d. in households where the number of children and adolescents was two, down to 11s. 4d. in those where it was four or more. With constant size of household the expenditure varied according to the age-distribution of the younger members. When, among the households with four or more non-adults, we compare those containing both children and adolescents with those with children only and with at least one child under five, the average expenditure falls to 10s. 2d. per head. The difference between this figure and that of 17s. 3d. for households of one man and one woman with no other members is the extreme range of variation shown in the Table.

140. Table 69 confirms the inference already drawn from Table 68 regarding the influence of the age of non-adult members of the household on expenditure per head, and shows in addition that expenditure is distinctly lower when the household contains at least one child under five than when all are over that age. Of all households not consisting solely of adults the highest expenditure was that of the households with one adolescent and no children, who spent 16s. 6d. per head, or more than any of the wholly adult types shown in Table 68 with

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the exception of that consisting of households of one man and one woman. Nevertheless, the range of variation along the rows of Table 69 is greater than that down the columns; in other words, variation in the size of family has a greater influence on expenditure per head among these two-adult households than the variations in age composition which are distinguished in the table. The greatest difference in expenditure associated with a difference in age composition is that of 2s. 6d. between the households with one child under five and no other children or adolescents and those with one adolescent and no children. This difference amounts to 17 per cent of the average expenditure for all households with one non-adult member. By contrast, the expenditure of households without adolescents but with one child under five fell by 1s. 4d. when the number of children rose from one to two, by a further 1s. 1d. when it rose from two to three, and by 1s. 5d. when it rose from three to four or more. The total difference of 3s. 10d. amounts to over 30 per cent of the average expenditure for all two-adult households of this type. Very similar variations with increasing size are shown by the other age-composition types distinguished in the Table.

TABLE 68  
*Food Expenditure by Urban Working-Class Households (excluding Old Age Pensioner households) with varying numbers of adults 1949 (per head per week)*

	Number of adults											
	1 adult		2 men or 2 women		1 man and 1 woman		3 adults		4 or more		Average	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Households with adults only . . . . .	16	3	14	4	17	3	15	10	15	1	16	2
Households with adults and Children only . . . . .					12	11	12	10	12	11		
Children and adolescents . . . . .	( <sup>1</sup> )		( <sup>1</sup> )		12	6	12	7	12	8	( <sup>1</sup> )	
Adolescents only . . . . .					16	0	15	4	14	10		
All households with children and/or adolescents . . . . .	13	0	13	5	13	1	13	2	13	2	13	1
All households . . . . .	13	11	13	8	13	7	13	11	13	8	13	8
Urban working-class average . . . . .											13	7

(<sup>1</sup>) No sub-division available.

141. The expenditure of old age pensioner households is compared in Table 70 with that of other households consisting wholly of adults. As old age pensioner households contain very few children or adolescents, such a comparison is justified; and for households with one adult only, or one man and one woman only, the comparison is exact. The average for the entire old age pensioner group was 12s. 0d.; for other wholly adult households it was 16s. 2d., or 35 per cent higher. Old age pensioners living alone spent 12s. 6d., compared with 16s. 3d. for other types of single adult households. The difference was even

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greater for old age pensioner couples, who spent only 11s. 11d., compared with 17s. 3d. for other households of a similar composition.

TABLE 69

*Food Expenditure by Households containing one male and one female adult with no other adults (excluding Old Age Pensioner households) (per head per week)*

Households	Number of non-adults				Average
	1	2	3	4 or more	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Children only . . . . .	14 7	12 11	11 8	10 3	12 11
At least 1 under 5 years . . .	14 0	12 8	11 7	10 2	12 6
None under 5 years . . . . .	15 6	13 6	12 5	11 5	14 5
Children and adolescents . . .	—	14 6	12 10	11 4	12 6
All households with children (with or without adolescents).	14 7	13 2	12 0	10 11	12 9
Adolescents only . . . . .	16 6		12 10		16 0
All households with non-adult members . . . . .	14 11		12 4		13 1
Adults only . . . . .					17 3
All above types of household .					13 7
Urban working-class average .					13 7

TABLE 70

*Food Expenditure of Old Age Pensioner Households compared with other Households with adults only (per head per week)*

	1 adult only	1 man and 1 woman only	Other combinations	Average
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Old age pensioner households	12 6	11 11	11 10	12 0
Other households with adults only . . . . .	16 3	17 3	15 5	16 2

**Expenditure and Consumption in Households with one Male and one Female Adult and Family**

142. Detailed analysis of food expenditure and consumption has been confined to households (other than those of old age pensioners) containing one man and one woman with varying numbers of children, or with one child and one adolescent. These households represented 48 per cent of the total sample and included 54 per cent of all the households with families. They contained most of the children in the sample.

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TABLE 71  
Domestic Food Consumption and Expenditure by Urban Working-Class  
Households with one male and one female adult  
(per head per week)

	Number of children					1 child 1 adolescent
	0	1	2	3	4 or more	
CONSUMPTION	<i>oz. except where otherwise stated</i>					
Milk pt. or eq. pt.	4.9	5.3	5.3	5.1	4.6	4.6
Cheese . . . . .	2.6	2.1	2.0	1.8	1.8	2.1
Meat, rationed <sup>1</sup> . . . . .	17.0	14.8	13.8	13.0	12.2	15.3
Meat, unrationed	11.7	8.5	7.0	5.8	5.2	8.7
Fish . . . . .	13.6	8.2	6.3	5.5	4.4	8.0
Eggs <sup>2</sup> . . . . . No.	3.5	3.3	3.2	2.8	2.4	3.0
Fats . . . . .	11.8	11.0	10.5	10.1	9.7	11.0
Sugar and preserves <sup>3</sup> . . . . .	18.9	17.6	17.3	16.6	15.5	18.3
Potatoes <sup>4</sup> . . . . .	73.8	69.9	65.9	65.4	64.4	68.5
Fresh green vegetables <sup>5</sup> . . . . .	21.6	17.0	13.3	11.2	8.2	14.4
Other vegetables	21.3	18.6	15.5	14.1	12.3	18.0
Fruit . . . . .	29.6	26.9	23.0	19.0	13.3	24.5
Bread <sup>6</sup> . . . . .	64.4	57.2	52.1	53.8	59.4	65.0
Flour . . . . .	8.5	6.8	6.5	6.0	5.7	8.1
Other cereals . . . . .	23.5	19.3	17.5	16.3	12.1	18.9
Tea . . . . .	2.6	1.9	1.7	1.6	1.5	2.1
EXPENDITURE	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
Milk . . . . .	24.3	21.1	18.7	16.5	13.5	20.6
Cheese . . . . .	2.6	2.0	1.8	1.6	1.6	1.9
Meat, rationed <sup>1</sup> . . . . .	22.2	20.2	19.1	18.6	17.3	21.0
Meat, unrationed	13.2	9.8	8.2	6.6	5.6	10.8
Fish . . . . .	15.9	10.1	7.8	6.8	5.3	9.5
Eggs <sup>2</sup> . . . . .	8.2	8.2	8.0	7.5	6.6	7.4
Fats . . . . .	8.8	8.4	8.2	8.0	7.6	8.5
Sugar and preserves <sup>3</sup> . . . . .	8.9	8.3	8.5	7.7	7.9	9.2
Potatoes <sup>4</sup> . . . . .	9.7	9.6	8.7	8.8	8.9	9.5
Fresh green vegetables <sup>5</sup> . . . . .	8.2	5.9	4.5	3.4	2.4	5.1
Other vegetables	7.9	7.5	6.1	5.2	4.6	6.7
Fruit . . . . .	20.1	17.8	14.5	11.5	7.9	15.6
Bread <sup>6</sup> . . . . .	12.4	10.6	9.5	10.1	11.1	12.0
Flour . . . . .	2.0	1.7	1.5	1.3	1.4	2.1
Other cereals . . . . .	24.4	20.0	17.6	16.0	12.0	19.5
Tea . . . . .	6.2	4.7	4.3	4.2	3.7	5.5
Other foods . . . . .	12.3	9.3	7.5	6.4	5.3	9.3
Total expenditure	207.4 (17s. 3d.)	175.1 (14s. 7d.)	154.6 (12s. 11d.)	140.2 (11s. 8d.)	122.7 (9s. 9d.)	174.1 (14s. 6d.)

<sup>1</sup>Includes bacon and canned corned beef.

<sup>2</sup>Includes dried egg.

<sup>3</sup>Includes syrup and treacle.

<sup>4</sup>Includes chips and crisps.

<sup>5</sup>Includes leafy salads and fresh peas and beans.

<sup>6</sup>Includes rolls, sandwiches, muffins and crumpets.

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TABLE 72

*Domestic Food Consumption by Households with one male and one female adult as percentages of the average for all Urban Working-Class Households<sup>1</sup>*

	Number of children					1 child and 1 adolescent
	0	1	2	3	4 or more	
Milk . . . . .	102	110	110	106	96	96
Cheese . . . . .	118	95	91	82	82	95
Meat, rationed . . . . .	116	101	94	88	82	104
Meat, unrationed . . . . .	146	106	88	73	65	109
Fish . . . . .	162	98	75	66	52	95
Eggs . . . . .	117	110	107	93	80	100
Fats . . . . .	110	103	98	94	91	103
Sugar and preserves . . . . .	110	105	101	97	91	107
Potatoes . . . . .	107	101	96	95	94	99
Fresh green vegetables . . . . .	145	114	89	75	55	97
Other vegetables . . . . .	132	116	96	88	76	112
Fruit . . . . .	132	120	103	85	59	109
Bread . . . . .	106	94	86	89	98	107
Flour . . . . .	123	99	94	87	83	117
Other cereals . . . . .	135	111	101	94	70	109
Tea . . . . .	130	95	85	80	75	105

<sup>1</sup>Based on Table 71.

143. The households of childless couples are not rigorously comparable with those with children, in that the former contain a much higher proportion of elderly people and have a lower average income. Later analyses have shown that, when comparison is made with a sample of adult households matched in age and income with those with families, the differences in food consumption and expenditure are even greater than those shown here. It should therefore be remembered that in Tables 71 to 73 and the accompanying chart, the effect of children is somewhat under-estimated\*. A more detailed analysis is given in Appendix D.

144. The proportion of meals eaten outside the home was estimated for these groups. It was found to be about 3 per cent for childless households, rising with the number of children to 5 per cent for households with four or more children because of school meals†, and to 6 per cent for those with one child and one adolescent.

**Distribution of Expenditure**

145. Table 73 shows the percentages of expenditure by different types of household attributable to each of the selected foods. In spite of absolute differences

\*See Annual Report for 1952, paragraphs 77 and 78, where this question is studied in detail.

†See Annual Report for 1952, Appendices B and C.

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TABLE 73  
*Domestic Expenditure on Selected Foods as Percentages of  
Total Food Expenditure*

	<i>Households containing one male and one female adult with:</i>					<i>1 child and 1 adolescent</i>
	<i>Number of children</i>					
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4 or more</i>	
All milk . . . . .	11·7	12·1	12·1	11·8	11·0	11·8
Cheese . . . . .	1·3	1·1	1·2	1·1	1·3	1·1
Meat, rationed <sup>1</sup> . . . . .	10·7	11·5	12·4	13·3	14·1	12·1
Meat, unrationed . . . . .	6·4	5·6	5·3	4·7	4·6	6·1
Fish . . . . .	7·7	5·7	5·0	4·9	4·3	5·5
Eggs <sup>2</sup> . . . . .	3·9	4·7	5·2	5·3	5·4	4·2
<i>Total</i> . . . . .	<i>41·7</i>	<i>40·7</i>	<i>41·2</i>	<i>41·1</i>	<i>40·7</i>	<i>40·8</i>
Fats . . . . .	4·2	4·8	5·3	5·7	6·2	4·9
Sugar and preserves <sup>3</sup> . . . . .	4·3	4·8	5·5	5·5	6·4	5·3
<i>Total</i> . . . . .	<i>8·5</i>	<i>9·6</i>	<i>10·8</i>	<i>11·2</i>	<i>12·6</i>	<i>10·2</i>
Potatoes <sup>4</sup> . . . . .	4·7	5·5	5·7	6·3	7·3	5·5
Fresh green vegetables <sup>5</sup> . . . . .	3·9	3·4	2·9	2·4	2·0	2·9
Other vegetables . . . . .	3·8	4·3	3·9	3·7	3·7	3·8
Fruit . . . . .	9·7	10·2	9·4	8·2	6·4	9·0
<i>Total</i> . . . . .	<i>22·1</i>	<i>23·4</i>	<i>21·9</i>	<i>20·6</i>	<i>19·4</i>	<i>21·2</i>
Bread <sup>6</sup> . . . . .	6·0	6·1	6·1	7·2	9·0	6·9
Flour . . . . .	1·0	1·0	1·0	0·9	1·1	1·2
Other cereals . . . . .	11·7	11·4	11·4	11·4	9·8	11·2
Tea . . . . .	3·0	2·7	2·8	3·0	3·1	3·2
Other foods . . . . .	6·0	5·1	4·8	4·6	4·3	5·3
<i>Total</i> . . . . .	<i>27·7</i>	<i>26·3</i>	<i>26·1</i>	<i>27·1</i>	<i>27·3</i>	<i>27·8</i>
<i>Grand Total</i> . . . . .	<i>100·0</i>	<i>100·0</i>	<i>100·0</i>	<i>100·0</i>	<i>100·0</i>	<i>100·0</i>

<sup>1</sup>Includes bacon and canned corned beef.

<sup>2</sup>Includes dried egg.

<sup>3</sup>Includes syrup and treacle.

<sup>4</sup>Includes chips and crisps.

<sup>5</sup>Includes leafy salads and fresh peas and beans.

<sup>6</sup>Includes rolls, sandwiches, muffins and crumpets.

in expenditure between families of different size, the proportions devoted to each group of foods were remarkably constant. All types of household spent about 41 per cent of the total on the animal protein foods (milk, cheese, eggs, meat and fish). For vegetables and fruit the proportion ranged from 19 per cent for the largest families to 23 per cent for those with one child (12 per cent to 18 per cent, however, if potatoes are excluded). There were differences for individual foods: wholly adult households spent a higher proportion on unrationed meat, fish, and fresh green vegetables, and the large families on rationed meat, potatoes, fats, bread and sugar. As would be expected, the staple rationed foods accounted for a higher proportion of expenditure among

those who spent least. Consumption quantities include produce from gardens and similar sources, as well as purchased foods.

146. The effect of the welfare scheme is reflected in the average cost of milk, which varied from about 3d. per pint in families with four or more children to 3½d. in families with two children, and 5d. in households with adults only. For a number of other foods there is some evidence that housewives with the larger families paid less per unit, presumably by purchasing the cheaper varieties or cuts. Instances are cheese, unrationed meats, fresh green vegetables, fruit, and cereal products other than bread and flour. Some foods showed the reverse tendency. The greater unit cost of eggs for the larger family can be explained by the smaller quantities of eggs which they obtained free of cost. Rationed meat and bacon cost more per unit for households with a number of children, with the exception of the largest households. Similarly, fish was cheapest in the households with no children, and dearest in families with one, two, or three children.

#### **Effect of the Adolescent on Consumption**

147. The comparison between households with one child, and those with two children or one child and one adolescent, indicates the varying effects of a child and of an adolescent on consumption levels. The effect of the addition of an adolescent was substantially to increase the consumption per head of bread and flour, and of tea, with increased entitlement, and to increase slightly the consumption of meat, both rationed and unrationed, and of sugar and preserves; but substantial decreases were recorded for milk, eggs, fresh green vegetables and fruit.

148. The addition of one child resulted in a decreased consumption per head not only of fresh green vegetables and fruit, but also of other vegetables and of fish, potatoes, all cereals and, with smaller rations, meat and tea. On the other hand, these households maintained the same milk and almost the same egg consumption per head.

#### **Consumption**

149. The trends in consumption with increasing numbers of children can be seen from the chart. The results are also summarised in Table 72, which shows consumption per head by each family type as a percentage of the average for all households. These figures, and the corresponding ones for expenditure, cannot be quantitatively interpreted without taking into account the requirements of children as compared with those for adults. The chart, therefore, shows the relative requirements of different types of family for calories, protein, calcium and vitamin C. In general, as indicated by the line for calories, a smaller consumption per head is to be expected in households with children. The lines for protein and vitamin C are, however, almost horizontal, while that for calcium rises with the addition of children to the family. In contrast, certain foods containing these nutrients showed a steep downward gradient.

150. In the chart, the main foods have been grouped into three categories. Section I shows the animal protein foods, cheese, milk, eggs, meat and fish. For all except milk, the downward trend is very marked and contrasts sharply with the requirement trends for both calcium and protein. The difference in fish consumption was greater than that for any other food, ranging from 162

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per cent of the average for childless households to 52 per cent for those with four or more children, the major part of the fall taking place between households with no child and those with one ; the difference is thus primarily between households with children and those without. It was most marked for fresh (including dried and smoked) fish. The fall in consumption of meat was only in part due to the lower entitlement of children under 5, most of whom were in small families. In the families of four or more children, who consumed least meat, children under 5 constituted a smaller proportion of the family (see Table 67). The trend was especially steep (from 146 to 65 per cent) for un-rationed meat ; differences were particularly large for liver, kidney and other offal. Consumption of eggs showed a trend similar to that for meat. Milk consumption per head rose to a maximum in households with one and two children, but fell in households with more, though the contribution from welfare and school milk continued to rise. Those with four or more children consumed per head slightly less milk than the average for all households, in spite of the fact that the average cost declined from 5.0d. to 2.9d. per pint as the number of children increased, as shown below.

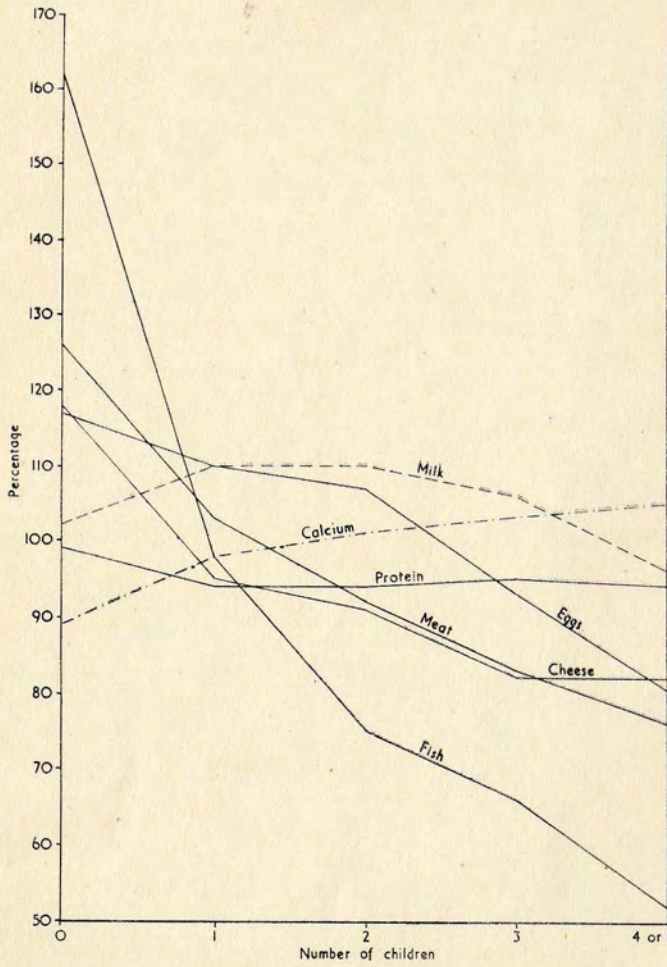
Number of children	Consumption per person per week			Average cost per pint
	Full price	Welfare Scheme and School	Total	
	<i>pt.</i>	<i>pt.</i>	<i>pt.</i>	<i>d.</i>
0 . . . . .	4.5	0.1	4.6	5.0
1 . . . . .	3.3	1.5	4.8	4.0
2 . . . . .	2.8	2.0	4.8	3.5
3 . . . . .	2.4	2.2	4.6	3.3
4 or more . .	1.8	2.3	4.1	2.9

151. Section II shows cereals, fats and sugar. There was a downward trend for most of these foods, but differences were comparatively small. For bread the trend was reversed ; in households with more than two children consumption per head rose as the size of family increased. This is no doubt because "bread and spread" is a cheap source of energy, which requires no cooking. The more expensive cereal foods, such as cakes, buns and scones, showed a decrease in consumption per head as the number of children increased. The line for calorie requirements is included for comparison with those for all foods in the section ; it runs roughly parallel with those for sugar and preserves, fats and flour.

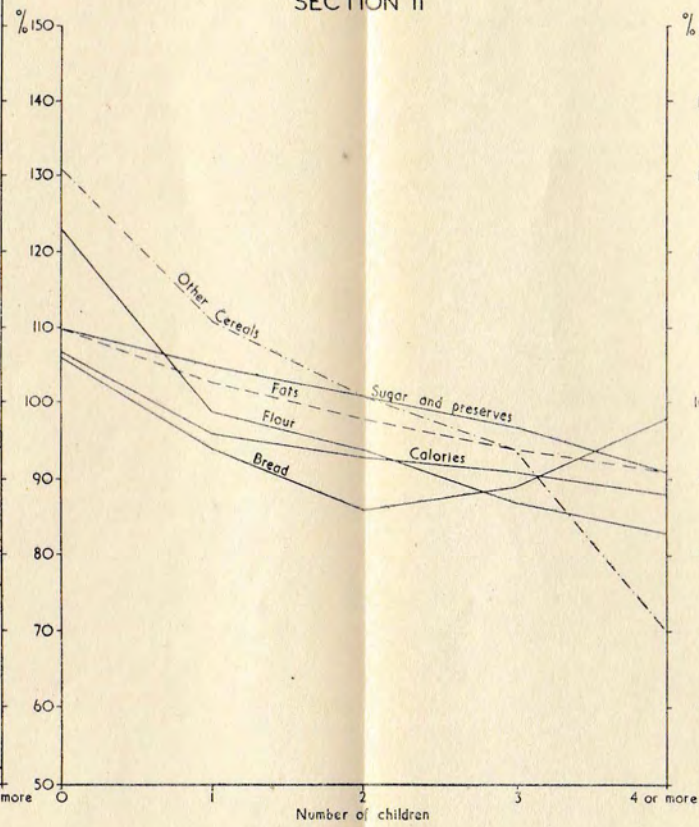
152. Section III showing fruit and vegetables displays a different pattern. Consumption of potatoes varied little between families, but for other vegetables the variation was considerable. The gradient was particularly steep for fresh green vegetables, and was almost as marked for fruit. Households with one child consumed more than twice as much fresh greens per head as households with four or more children, and twice as much fruit. The difference was greatest for citrus fruit and tomatoes, which were relatively expensive. The lines for calories and vitamin C requirements follow closely that for potatoes and are in marked contrast to those for fresh green vegetables, fruit, and other vegetables.



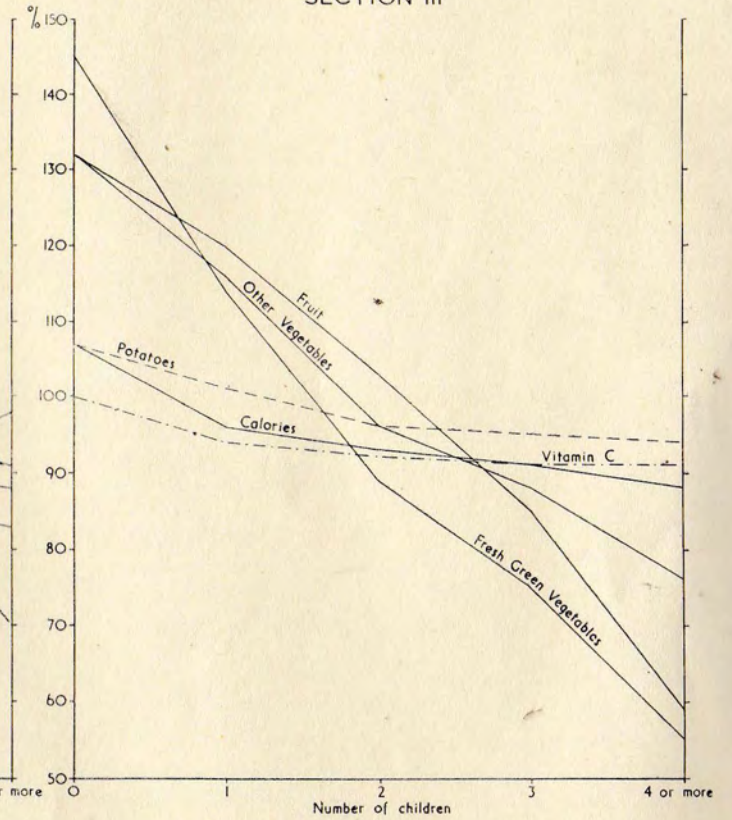
SECTION I



SECTION II



SECTION III



Effects of children on food consumption and nutrient intake

**ENERGY VALUE AND NUTRIENT CONTENT OF THE HOUSEHOLD DIET OF DIFFERENT TYPES OF HOUSEHOLD**

153. The energy value and nutrient content of the diets of households of one man and one woman with varying numbers of children and with one child and one adolescent are shown in Table 74. The addition of each child was associated with a reduction in the intake per head of calories and of all nutrients except vitamin A, of which households with one child had more than childless households, and households with two children about the same, and vitamin D, of which households with one or two children had more than childless households, and households with three children only slightly less. It was pointed out in paragraph 143 that adults in childless households have a higher mean age and lower average income than adults in households with children; this would tend to reduce average nutrient intakes in households without children. For many nutrients, children have smaller requirements than adults, and it is to be expected that the average intake of these should be smaller in households with children than in childless households. The child's calcium requirement is, however, higher than the adult's. The reduction in the calcium intake per head with the addition of children therefore reflects a poorer diet in the households with children. The proportion of total protein derived from animal sources, a factor which may be of nutritional importance, was approximately the same for households with one or two children or no children, and was least in households with four or more children.

TABLE 74

*Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup> by Households of Different Composition 1949 (per head per day)*

	Households with one male and one female adult with :					
	Number of children					1 child and 1 adolescent
	0	1	2	3	4 or more	
Energy value . . . Cal.	2,764	2,494	2,325	2,243	2,140	2,535
Total protein . . . g.	89	78	71	68	65	79
Animal protein . . . g.	42	37	34	31	28	35
Fat . . . . . g.	106	96	90	85	79	94
Carbohydrate . . . g.	364	330	307	302	285	340
Calcium . . . . . mg.	1,145	1,092	1,038	996	940	1,049
Iron . . . . . mg.	16.2	14.1	12.7	12.2	11.4	14.4
Vitamin A . . . . . i.u.	3,866	4,015	3,833	3,252	2,984	3,386
Vitamin B <sub>1</sub> <sup>2</sup> . . . . . mg.	1.48	1.32	1.22	1.18	1.15	1.36
Riboflavin . . . . . mg.	1.92	1.76	1.64	1.54	1.43	1.67
Nicotinic acid . . . mg.	15.5	13.0	11.7	11.0	10.6	13.5
Vitamin C <sup>2</sup> . . . . . mg.	60	57	49	44	41	51
Vitamin D . . . . . i.u.	182	219	212	177	156	153

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowances for cooking losses.

154. Table 75 shows the proportions of the energy value of the diets derived from protein, fat and carbohydrate. These figures reveal a tendency for the proportion from carbohydrate to rise with the addition of children and for that from protein to fall. In discussing the protein allowance, the British Medical Association Committee on Nutrition has suggested that the proportion of

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the energy value of the diet derived from protein usually lies between 10 and 14 per cent of the total, and that the higher proportion is sufficient for pregnant and nursing women, infants, children and adolescents.

TABLE 75  
*Proportions of Energy Value derived from Protein, Fat and Carbohydrate*

	<i>Households with one male and one female adult with:</i>					
	<i>Number of children</i>					<i>1 child and 1 adolescent</i>
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4 or more</i>	
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Protein . . . . .	12.9	12.5	12.3	12.2	12.1	12.5
Fat . . . . .	34.5	34.6	35.0	34.2	33.1	33.2
Carbohydrate . . . . .	52.6	52.9	52.7	53.6	54.8	54.3

155. The adequacy of the diets of the various family types has been estimated in the usual way, with the results shown in Table 76. The most noticeable trends in the table are the fall in the percentages for protein and calcium with increasing numbers of children to levels of 95 and 91 per cent respectively for the families with 4 or more children. Other noteworthy features are the fact that the percentages for vitamin A were higher for all households with children than for childless households, and that in the case of several other nutrients the percentages for households with one child slightly exceeded those for childless households. Part of the explanation of this, as previously pointed out, may lie in the difference in the age of adults in childless households and those with children, particularly those with one child.

TABLE 76  
*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Allowances based on the British Medical Association's recommendations: Urban Working-Class Households 1949*

	<i>Households with one male and one female adult with:</i>					
	<i>Number of children</i>					<i>1 child and 1 adolescent</i>
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4 or more</i>	
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Energy value . . . . .	104	105	102	100	98	96
Protein . . . . .	121	112	102	97	95	95
Calcium . . . . .	131	114	105	99	91	101
Iron . . . . .	126	122	116	113	108	111
Vitamin A . . . . .	145	172	178	159	156	149
Vitamin B <sub>1</sub> . . . . .	141	142	134	132	132	129
Riboflavin . . . . .	120	122	118	113	108	104
Nicotinic acid . . . . .	148	140	129	123	122	128
Vitamin C . . . . .	275	277	245	221	206	214

## VII

# Regional Variations in the Diets of Urban Working-Class Households 1949

156. No systematic study exists of the main regional differences in household diets for the whole of Great Britain. The following analysis, which is limited to urban working-class households, is an attempt to provide a broad comparative picture for the year 1949. It summarizes the results of the National Food Survey for the twelve months and covers a minimum of nearly 1,000 households in each of the Regions selected, with the exception of Scotland and the South West (700-800 households). The results are in good agreement with those found during the first half of 1943, when an analysis by towns was made.

157. In this type of analysis, where differences are small for many items, it may be difficult to eliminate factors which are not strictly relevant to the comparison in question. The degree of urbanization of a region affects the level of household expenditure, since there is a greater dependence upon home supplies in rural areas; but this effect has been minimized by using a sample limited to the urban working class. The size and composition of the household also varied from one part of the country to another, and in order to ascertain the importance of this factor in determining the level of regional diets the results for a few selected types of family have been considered. Three types of household, including one wholly adult type, were selected for these further analyses.

### Definition of Region

158. Regions were built up from the Administrative Divisions of the Ministry of Food by grouping them in the following way :

<i>Region</i>	<i>Regional Divisions of Ministry of Food covered</i>
London . . . . .	London
South and East . . . . .	Southern, Eastern and South Eastern
South West (including South Wales) . . . . .	South Wales and South Western
Midland . . . . .	Midland and North Midland
North West . . . . .	North Wales and North Western
North East . . . . .	East and West Ridings and Northern
Scotland . . . . .	Scotland

A list of the towns surveyed in each of these Regions in 1949, and a description of the method of selection, have been given in Appendix A to the First Report of the National Food Survey Committee. The Scottish Highlands and Islands were not represented in the sample and the sample in Wales was too small for separate analysis.

159. The distribution of households and persons in these Regions is compared in Table 77 with the regional populations given in the Registrar General's Estimates of Civilian Population 1949.

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TABLE 77  
*Household Composition of the Urban Working-Class by Region 1949*

Region	Urban Working-Class Sample				Population of Region as percentage of total population of Great Britain
	No. of house- holds	Per cent	No. of persons	Per cent	
London . . . . .	1,258	17.7	4,420	17.2	17.3
South and East . . . . .	1,059	14.9	3,826	14.9	16.6
South West (including South Wales) . . . . .	793	11.1	2,699	10.5	10.2
Midland . . . . .	1,136	16.0	4,291	16.7	16.0
North West . . . . .	963	13.5	3,567	13.8	14.5
North East . . . . .	1,200	16.8	4,165	16.2	14.8
Scotland . . . . .	710	10.0	2,769	10.7	10.6
All Regions . . . . .	7,119	100.0	25,737	100.0	100.0

160. Although a broad measure of social standardization was achieved by the grouping described above, households differed regionally in size and in family composition. It will be seen from Table 78 that, for example, the proportion of children was low in the South West Region, and high in Scotland.

TABLE 78  
*Average Number of Persons per Household by Region*

Region	Children under 14 years	Adolescents aged 14 years and under 21	Adults	Total
London . . . . .	1.04	0.26	2.20	3.50
South and East . . . . .	1.08	0.31	2.22	3.61
South West (including S. Wales)	0.85	0.30	2.25	3.40
Midland . . . . .	1.09	0.32	2.37	3.78
North West . . . . .	1.15	0.32	2.23	3.70
North East . . . . .	0.97	0.26	2.24	3.47
Scotland . . . . .	1.32	0.36	2.22	3.90
All Regions . . . . .	1.06	0.30	2.26	3.62

**Summary of Regional Characteristics**

*London*

161. As in the 1943 enquiry, London recorded a high consumption level for milk, and, in common with other Southern Regions, for vegetables (except potatoes) and fruit. This Region had the highest consumption in the country of all fruit (although the Midland Region consumed more tomatoes) and of sugar, though not of preserves. More fish, apart from cooked fish and fish products, and more milk were consumed in London. Consumption of cereals and of unrationed meat, on the other hand, were below the national average, and particularly low levels were recorded for bread and for biscuits, cakes, buns and scones as a group. The consumption of offals, liver and other miscellaneous meats was slightly lower than elsewhere.

162. Expenditure in London reflected those consumption levels. Since the consumption of chips, which are a relatively expensive form of potatoes, was less than the average, potato expenditure was substantially lower than elsewhere, apart from the South and East Region and Scotland. The same characteristics emerged from the analysis of the results of the survey by towns made in 1943.

*South and East Region*

163. The South and East Region shared a number of the general characteristics of London, but the consumption of milk, fish and fruit was smaller and the consumption of vegetables, cheese, eggs and cereals greater. Consumption of fresh vegetables, other than potatoes, in this Region was the highest in the country; the South West Region recorded the next highest level. Compared with this Region, the South and East consumed more sprouts and leafy salads, about the same quantity of cabbage and legumes, less cauliflower and less potatoes, but more roots and miscellaneous fresh vegetables.

164. Bread consumption in the South and East Region, as in other parts of the South, was below the national average, but that of flour was above and second only to the very high level recorded in the North East Region where there is a tradition of home-baking. Consumption of biscuits, cakes, buns and scones as a group was also above the average.

165. The South and East Region spent more on cheese, with a correspondingly higher consumption, but recorded low expenditure for eggs, unrationed meats, potatoes and bread. Consumption of vegetables reached a higher level, at 18 per cent above the average, than vegetable expenditure which was only 9 per cent above; but for fruit, with consumption 14 per cent above the average, expenditure was only slightly lower. One reason for these disparities was the lower level of prices for most vegetables, and for soft and stone fruits, in this Region. Although the level of expenditure on eggs was 7 per cent lower per head than the national average, consumption was 7 per cent higher.

*South West Region (including South Wales)*

166. This Region shared with other parts of the South consumption levels above the average for cheese, vegetables other than potatoes, and beverages. With the South and East Region, and with the Midland Region, it recorded a high level for eggs and, with the Midland Region alone, a high potato and low fish consumption. For milk, meat (both rationed and unrationed), fruit and bread, the consumption and expenditure levels in this Region were about equal to the national average.

167. Other characteristics of the South West Region included a relatively high consumption of both potatoes and chips and a consumption of other vegetables second only to that in the South and East Region. Vegetables of the cauliflower type were relatively cheap, and their consumption high. More was spent per head on all vegetables in this Region than in any other. The level of consumption of biscuits and like products was higher than in other southern Regions, and was exceeded only by the North East Region and Scotland. This Region also recorded the lowest fish consumption in the South, with prices slightly higher than elsewhere. Nevertheless, consumption was higher than in Scotland.

168. The domestic consumer in the South West Region showed a marked preference for the roasting varieties of meat, at the expense of stewing meats, and a correspondingly low consumption of the kind of vegetables, chiefly roots, used in stews. Compared with a national average of 9.1 oz. for roasting beef, mutton and lamb, and 2.0 oz. for stewing beef, mutton and lamb, the South West Region consumed 10.3 oz. and 0.8 oz. Prices of roasting beef, for example, as computed by the Survey, were the lowest in the country, except for the South and East Region where consumption was much nearer the national average. But it may have been a practice in the South West to roast meat even of the kind normally sold as stewing meat. This would have had the result of reducing the average price for "roasting" meat in that area.

*Midland Region*

169. Apart from recording the highest consumption level for cheese, and a low consumption and expenditure for cereals other than bread, the Midland Region was nearer to the national averages for the main food groups than any other. It consumed slightly more than the average quantity of milk, eggs, rationed and unrationed meat, potatoes and other vegetables, fruit and bread, and 11 per cent more cheese, but slightly less sugar and preserves, 9 per cent less fish, and 10 per cent less cereals other than bread.

170. The highest tomato consumption in the whole country was recorded in the Midland Region, but consumption of other fruits, except that of apples and pears which was low, was near the average. Consumption of potatoes, including chips, was also about average, but the highest level for the whole country was found in this Region for sprouts and cauliflower, although for other types of fresh green vegetables consumption was lower than average. The Region also recorded the lowest consumption of roots and miscellaneous vegetables. Only London consumed less biscuits and similar foods, and only the North East Region less fresh and processed fish.

*North West Region*

171. The North West shared with other northern Regions consumption levels below average for milk, cheese, eggs, potatoes, other vegetables, fruit, sugar and preserves. In particular it recorded, with Scotland, the lowest consumption of all for vegetables other than potatoes, and the next to lowest for fruit.

172. There were, nevertheless, marked differences between the North West and the North East Regions. Milk consumption was much nearer the average in the North West, and potato consumption was similarly near the average, as compared with a level in the North East Region of 10 per cent below the average. In both Regions, a large demand for chips had the effect of substantially raising the total expenditure on all potatoes, with the result that the North West Region recorded the highest total potato expenditure in the country, 13 per cent above the average. Further, fish consumption, although near the national average in the North East Region, was some 10 per cent lower in the North West. Flour consumption, which was highest in the North East Region, was lowest in the North West, if Scotland is excepted. It is characteristic of the North West Region that only for bread was the level of consumption above the national average; for cheese, fish, vegetables other than potatoes, fruit, and cereals other than bread, consumption was 10 per cent or more below the average.

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### *North East Region*

173. In addition to sharing the general characteristics of the North mentioned above, the North East Region recorded a particularly low consumption of milk, with a corresponding expenditure, and the lowest fresh fish consumption in the country. On the other hand, the consumption of cooked fish (primarily fried fish) was twice as high as in any other Region. Moreover, although potato consumption was 10 per cent less than the average, expenditure on potatoes was 5 per cent above because chips accounted for 5·8 ounces per head per week, 60 per cent above the national average. The North East Region was, thus, the area of maximum fried fish and chip consumption, as it was in 1943 when a survey by towns was made.

174. Flour consumption in the North East Region was 50 per cent higher than the national average. In 1943 it was 120 per cent higher. This decrease appears to be in line with the decline in home-baking in this area which was mentioned in paragraphs 103 to 107 of the First Report. The figure for biscuits and similar foods was also 50 per cent above the average ; in this, there was a similarity with the South and East Region. Consumption of bread was 6 per cent lower, and of oatmeal 33 per cent lower than the average. The lowest consumption of preserves in the country also occurred in the North East. Consumption of miscellaneous meats (including, particularly, offals other than liver, and meat products), was above the average.

### *Scotland*

175. In Scotland, consumption levels were the lowest in the whole country for eggs, rationed meat, fish, vegetables other than potatoes, fruit, fats and beverages. Higher prices were partly the cause ; for example, rationed meat consumption was below the average and yet expenditure was above, with the cost of the ration per ounce in Scotland amounting to 1·48d. as compared with an average for all regions of 1·29d. A preference for certain cuts of meat also contributed. The earlier analysis by towns, carried out on the Survey data for the first two quarters of 1943, provides general confirmation of what was found in 1949. As in the later period, Scotland was found to have the lowest consumption of rationed meat, but the highest of unrationed meat. A very low Scottish consumption of fruit was found also in 1943.

176. The records suggest that it is customary in Scotland to stew types of meat which would be roasted elsewhere in Great Britain. The consumption of roasting beef was only 1·8 oz. per head per week, as compared with an average for the whole country of 4·7 oz., but the consumption of meat described as stewing beef was as high as 4·6 oz. compared with a national average of 1·6 oz. In England and Wales more roasting mutton and lamb was consumed than stewing mutton and lamb, but the consumption of roasting cuts in Scotland was 3·0 oz. as against the national average of 4·4 oz. and, for stewing meat, was 0·7 oz. compared with the national level of 0·4 oz. This preference for stewing meat can be linked with the characteristic differences for other foods. In Scotland, the consumption of fresh green vegetables was 56 per cent below the national average, and of fresh peas and beans was negligible. On the other hand, the weekly consumption per head of carrots was 33 per cent above the national average, and of other root vegetables and miscellaneous vegetables 13 per cent above the national average. Purchases of bones amounted to 1·6 oz.



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compared with the national average of 0.8 oz. These differences are probably accounted for by the traditional preference for soups and stews.

177. Although Scotland was the third highest Region in the country in the consumption of fresh and processed fish\* (and actually the highest for cheaper varieties of white fish) total fish consumption was the lowest because of the small consumption of cooked and canned fish. In 1943, also, it had the lowest consumption of cooked and canned fish, but total fish consumption was about 12 per cent above the average for all regions. For many types of fish, particularly the cheaper kinds of white fish, prices were much higher in Scotland, with the result that, despite the lower consumption, expenditure on fish in Scotland was about equal to the average for all regions.

178. Scotland recorded the highest consumption level for bread and the lowest for flour. That Scotland spent considerably more than any other Region on bread is explained partly by this high consumption and partly by the practice of buying large quantities in the more expensive form of rolls. The consumption of cakes, buns and scones was 11.3 oz., or 12 per cent above the national average. Scotland also recorded the highest consumption of biscuits and similar foods, of preserves and of oatmeal and oat products, but the lowest consumption of other breakfast cereals. For sugar and preserves as a group, Scotland shared the lead with London in both 1943 and 1949. Expenditure was high on tea, but by far the lowest on other beverages.

**Level of Total Expenditure and Value of Consumption : Regional Variations in Working-class Diet**

179. Measured by weekly expenditure per head, the level of working-class household diets was highest in the South West Region, with an average of 14s. 1d., and lowest in the South and East, with an average of 13s. 3d. Taking into account larder stock withdrawals, and food obtained otherwise than by purchase, the highest level was again in the South West Region, where 15s. 1d. was recorded. The lowest, on this basis, was in the North West Region, with an average of 14s. 0d. (Table 79). Variations were small; for expenditure, they lay between +3 and -3 per cent of the national average and, for value of consumption, between +3 and -4 per cent. Table 100 shows that the regional variations in the food expenditure of the households of selected family types were also small, so that there was probably only a small household composition bias in the records for all households.

TABLE 79  
*Expenditure Levels of Regional Diets 1949*  
(per head per week)

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
Expenditure . . . . d.	164.1	159.3	169.0	164.3	161.8	164.7	163.0	163.9
Value of consumption . . d.	177.5	177.8	181.5	179.9	168.3	174.4	169.4	176.1
<i>As percentages of all Regions :</i>								
Expenditure . . . . .	100	97	103	100	99	100	99	100
Value of consumption . . . .	101	101	103	102	96	99	96	100

\*Excludes canned, cooked and bottled fish.

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180. Of interest is the wide variation in the value of free food obtained in the different Regions. It is unlikely that this can be wholly explained by the varying extent of the "rural fringes" in some of the urban areas surveyed. It is probably a further aspect of regional consumption habits in regard to fresh vegetables.

TABLE 80  
*Value of Free Foods in Different Regions*  
(pence per head per week)

<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
2.9	5.1	4.6	3.9	0.6	1.9	1.0	2.9

TABLE 81  
*Regional Expenditure on Particular Foods as Percentages of Total Domestic Food Expenditure*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
Milk . . . . .	13	12	12	12	11	10	11	12
Cheese . . . . .	1	1	1	1	1	1	1	1
Meat								
Rationed, carcass . . . . .	9	9	9	9	9	9	9	9
Bacon . . . . .	3	3	3	3	3	3	3	3
Sausages . . . . .	2	2	2	3	2	2	4	3
Other . . . . .	5	5	5	5	6	6	5	5
Total . . . . .	19	19	19	20	20	20	21	20
Fish								
Fresh and processed . . . . .	5	4	3	4	4	3	5	4
Other <sup>1</sup> . . . . .	2	2	2	2	2	4	1	2
Total . . . . .	7	6	5	6	6	7	6	6
Eggs <sup>2</sup> . . . . .	5	5	5	5	5	5	5	5
Fats . . . . .	5	5	5	5	5	5	5	5
Sugar and preserves . . . . .	5	5	5	5	5	5	6	5
Vegetables								
Potatoes <sup>3</sup> . . . . .	5	5	6	6	7	6	5	6
Fresh green <sup>4</sup> . . . . .	4	4	4	3	2	2	1	3
Other . . . . .	4	4	3	4	4	4	4	4
Total . . . . .	13	13	13	13	13	12	10	13
Fruit								
Fresh . . . . .	9	7	7	7	7	8	6	7
Other . . . . .	1	2	2	2	1	1	1	1
Total . . . . .	10	9	9	9	8	9	7	8
Bread . . . . .	6	6	7	7	8	7	9	7
Other cereals . . . . .	10	12	12	11	12	13	13	12
Total . . . . .	16	18	19	18	20	20	22	19
Other foods . . . . .	6	7	7	6	6	6	6	6
	100	100	100	100	100	100	100	100

<sup>1</sup>Canned, cooked and bottled.  
<sup>2</sup>Shell and dried.

<sup>3</sup>Includes chips and crisps.  
<sup>4</sup>Includes fresh peas and beans.

### **Regional Differences in the Pattern of Expenditure**

181. Table 81 sets out the main regional differences in the distribution of household expenditure on selected foods. It will be seen that the percentages of expenditure represented by milk, fresh green vegetables and fruit decreased with the more northerly position of the Region, and that the proportion represented by meat and by cereals increased.

### **Regional Differences in the Consumption of Selected Foods : General**

182. Table 84 lists the average consumption of selected foods in each Region with the corresponding expenditure. The pattern that emerges can be seen to advantage in Tables 82 and 83 which classify the foods in each Region according to whether the consumption or expenditure level is more than 5 per cent above or below the national average. The picture presented by these Tables is not substantially altered by reference to differences in family composition of the samples\*.

183. Table 84 shows that the number of instances of consumption lower than the average is small in the South and large in the North. The northern Regions consumed less fruit, vegetables other than potatoes, cheese and eggs, but more bread and cereals. Consumption of fish was greatest in the eastern Regions of England.

184. Widest regional variations were recorded for *fruit*, the consumption of which was 26 per cent higher than the national average in London and 27 per cent lower in Scotland ; for *vegetables*, with a consumption of 22 per cent higher in the South and East, 24 per cent lower in the North West and 24 per cent lower in Scotland ; for *cereals*, with a consumption 23 per cent higher in the North East and 12 per cent lower in the North West ; for *bread*, 11 per cent higher in Scotland and 12 per cent lower in London ; for *unrationed meat*, 11 per cent higher in Scotland ; and for *cheese*, 11 per cent higher in the Midland Region, 13 per cent lower in the North West and 12 per cent lower in the North East. These variations are discussed in greater detail below†.

185. Broadly, expenditure follows a pattern similar to that for consumption, but there are a number of differences between Tables 82 and 83 ; more expenditure than consumption items are shown below the national average in the South and fewer in the North, which points towards a slightly more costly diet in the North. Of special note are the low expenditure levels for eggs, potatoes and unrationed meat in the South and East, and the high levels for potatoes in the North West, for fish in the North East, and for bread and cereals in Scotland. These are in marked contrast to the consumption levels recorded in the different Regions for these foods.

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\*See paragraph 157.

†Paragraphs 186-198.

TABLE 82

*Household Food Consumption — Regional differences expressed as percentage deviations from national average*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>
More than 5 per cent above the national average	Fruit +26 Vegetables +13 Fish +12 Milk +7	Vegetables +22 Fruit +14 Cheese +8 Eggs +7 Fish +6	Vegetables +16 Eggs +8 Potatoes +8 Cheese +6	Cheese +11 Bread +9 Eggs +8	Bread +8	Cereals +23	Unrationed meat +11 Bread +11 Sugar and preserves +6
Between 95 and 105 per cent of the national average	Cheese Eggs All meat Potatoes Fats Sugar and preserves Beverages	Milk All Meat Potatoes Fats Cereals Sugar and preserves Beverages	Milk All meat Fruit Fats Bread Cereals Sugar and preserves Beverages	Milk All meat Potatoes Vegetables Fruit Fats Sugar and preserves Beverages	Milk Eggs All meat Potatoes Fats Sugar and preserves Beverages	Eggs Meat Fish Fats Sugar and preserves Beverages	Milk Cheese Potatoes Cereals
More than 5 per cent below the national average	Cereals -8 Bread -12	Bread -6	Fish -9	Fish -9 Cereals -10	Fish -10 Cereals -12 Cheese -13 Fruit -16 Vegetables -14	Bread -6 Milk -10 Potatoes -10 Fruit -11 Cheese -12 Vegetables -13	Fats -6 Eggs -7 Rationed meat -8 Beverages -11 Fish -12 Vegetables -24 Fruit -27

Note: "Vegetables" do not include potatoes, which are shown separately.  
"Cereals" do not include bread, which is shown separately.

TABLE 83

*Household Food Expenditure — Regional differences expressed as percentage deviations from national average*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>
More than 5 per cent above the national average	Vegetables +17 Fruit +15 Fish +11 Milk +9 Cheese +7	Cheese +16 Vegetables +8	Potatoes +9 Vegetables +8 Eggs +8 Cereals +8 Cheese +7 Beverages +6	Cheese +14 Vegetables +6 Unrationed meat +6	Potatoes +13 Bread +9	Fish +14 Cereals +12	Bread +30 Sugar and preserves +15 Cereals +11 Unrationed meat +9
92 Between 95 and 105 per cent of the national average	Eggs Rationed meat Fats Sugar and preserves Beverages	Milk Rationed meat Fish Fruit Fats Cereals Sugar and preserves Beverages	Milk All meat Fruit Fats Bread Sugar and preserves	Milk Eggs Rationed meat Potatoes Fruit Fats Bread Beverages	Milk Eggs All meat Fats Cereals Sugar and preserves Beverages	Eggs All meat Potatoes Fruit Fats Bread Beverages Sugar and preserves	Eggs Rationed meat Fish
More than 5 per cent below the national average	Unrationed meat -7 Cereals -12 Potatoes -13 Bread -15	Eggs -7 Potatoes -9 Unrationed meat -10 Bread -11	Fish -10	Cereals -6 Fish -7 Sugar and preserves -7	Fruit -7 Fish -8 Vegetables -10 Cheese -17	Vegetables -8 Milk -11 Cheese -17	Milk -6 Fats -7 Potatoes -10 Cheese -15 Fruit -16 Vegetables -30

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TABLE 84

Domestic Food Consumption and Expenditure by Regions  
Urban Working-Class Households  
(per head per week)

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
(unless otherwise stated)								
<b>CONSUMPTION</b>								
Milk . . . . . pt.	5.1	4.8	4.7	4.8	4.6	4.3	4.8	4.7
Cheese . . . . .	2.2	2.3	2.3	2.4	1.9	1.9	2.0	2.2
Meat								
rationed <sup>1</sup> . . . . .	13.9	13.7	14.3	14.4	14.0	14.4	12.9	14.0
unrationed . . . . .	11.3	11.3	12.0	12.2	11.9	12.0	13.4	12.0
Fish . . . . .	10.0	8.8	7.6	7.6	7.6	8.6	7.3	8.4
Eggs . . . . . No.	2.7	2.9	3.0	3.0	2.6	2.7	2.5	2.7
Fats	11.1	10.8	10.8	10.7	10.4	10.6	10.1	10.7
Sugar and preserves . . . . .	18.1	17.5	16.9	16.7	16.3	16.4	18.1	17.1
Potatoes <sup>2</sup> . . . . .	67.8	69.3	74.4	72.0	68.5	62.0	69.4	68.9
All other vegetables . . . . .	35.2	38.0	36.0	32.4	23.7	27.2	23.7	31.1
Fruit <sup>3</sup> . . . . .	28.3	25.5	22.4	22.8	18.8	19.9	16.4	22.4
Bread <sup>4</sup> . . . . .	53.9	57.7	61.1	66.7	66.2	57.3	68.0	61.1
Other cereals <sup>5</sup> . . . . .	22.3	24.8	25.4	21.8	21.3	29.8	24.6	24.2
Beverages . . . . .	2.6	2.6	2.6	2.5	2.5	2.5	2.3	2.5
<b>EXPENDITURE</b>								
Milk . . . . .	21.0	19.7	20.0	19.9	18.7	17.1	18.1	19.3
Cheese . . . . .	2.1	2.3	2.1	2.2	1.6	1.6	1.7	2.0
Meat								
rationed <sup>1</sup> . . . . .	18.4	18.2	19.6	19.2	19.8	19.6	19.8	19.2
unrationed . . . . .	12.1	11.7	12.9	13.8	13.3	13.0	14.2	13.0
Fish . . . . .	11.2	9.6	9.1	9.4	9.3	11.5	10.1	10.1
Eggs . . . . .	6.8	6.6	7.6	7.1	7.4	7.3	7.0	7.1
Fats	8.2	8.4	8.6	8.2	8.2	8.4	7.7	8.3
Sugar and preserves . . . . .	8.2	8.2	8.0	7.6	8.3	8.1	9.5	8.2
Potatoes <sup>2</sup> . . . . .	8.2	8.5	10.2	9.9	10.6	9.9	8.4	9.4
All other vegetables . . . . .	13.4	12.3	12.3	12.1	10.2	10.5	8.0	11.3
Fruit <sup>3</sup> . . . . .	16.6	13.8	14.2	14.8	13.5	14.4	12.2	14.4
Bread <sup>4</sup> . . . . .	9.9	10.3	11.4	11.9	12.7	11.0	15.1	11.6
Other cereals <sup>5</sup> . . . . .	17.2	18.6	21.1	18.2	18.9	21.8	21.6	19.5
Beverages . . . . .	6.3	6.2	6.5	5.9	6.2	6.2	5.5	6.2
Other foods . . . . .	4.5	4.7	5.3	4.1	3.3	4.3	4.0	4.3
<i>Total expenditure . . . . .</i>	<i>164.1</i>	<i>159.1</i>	<i>168.9</i>	<i>164.3</i>	<i>163.0</i>	<i>164.7</i>	<i>162.9</i>	<i>163.9</i>

<sup>1</sup>Rationed carcass meat and bacon only.

<sup>2</sup>Includes chips and crisps.

<sup>3</sup>Includes fruit juices and fruit and nut products.

<sup>4</sup>Includes rolls, sandwiches, muffins and crumpets.

<sup>5</sup>Includes flour.

**Selected Foods : Regional Variations in Detail**

186. The widest range in regional consumption levels was recorded for fruit and for vegetables other than potatoes, and the narrowest range for sugar, preserves and fats. In Table 85, foods are listed in order of the magnitude of range in consumption levels, and corresponding ranges for expenditure are shown. Both consumption and expenditure show wide ranges for the more expensive unrationed foods ; it is also noteworthy that there were considerable

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expenditure ranges for bread, sugar and preserves, which were relatively expensive in Scotland, and for potatoes, because of the high consumption of chips in the North of England.

TABLE 85  
*Regional Ranges in Food Consumption and Expenditure 1949  
expressed as percentage of National Average*

	<i>Consumption</i>	<i>Expenditure</i>
Fruit . . . . .	53	31
Vegetables, other than potatoes . . . . .	45	41
Cereals, other than bread . . . . .	35	24
Fish . . . . .	32	24
Cheese . . . . .	23	35
Bread . . . . .	23	45
Eggs . . . . .	19	11
Potatoes . . . . .	18	27
Milk . . . . .	17	20
Unrationed meat . . . . .	17	19
Beverages . . . . .	12	16
Rationed meat . . . . .	11	8
Sugar and preserves . . . . .	11	43
Fats . . . . .	9	11

*Fruit and Vegetables*

187. The largest difference in regional consumption levels was recorded for fruit as a single group and for vegetables, excluding potatoes ; each showed a range of about 50 per cent of the national average. Tables 87 to 90 give details for different varieties of fruit and vegetables, and relate purchased quantities to expenditure to give an indication of relative price levels. It has to be borne in mind that comparisons between these price levels reflect variations in composition of the group of foods as well as in the price of particular varieties.

188. The more northerly the Region, the lower the fruit consumption per head shown by the Survey. Scotland consumed about half the quantity recorded for London. This trend applied to both fresh fruit and other types. Contributions of fresh fruit from gardens and similar sources were also lowest in the North and in Scotland.

TABLE 86  
*Fresh Fruit: Quantities obtained otherwise than by direct purchase  
(oz. per head per week)*

<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
1.25	1.88	1.31	0.98	0.25	0.75	0.48	1.00

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189. Regional variations in fruit consumption were wider than those for expenditure. For all varieties, prices were higher in the more northerly regions and this presumably affected consumption. Tomatoes, which are classified as fruit in the survey records, were 35 per cent more expensive, and apples and pears 40 per cent more expensive, in Scotland than in London. Stone and soft fruit were 20 per cent more expensive in the West and North East than in the South and East.

TABLE 87  
*Fruit: Consumption and Expenditure by Regions*  
(per head per week)

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
<b>I. FRESH FRUIT</b>								
<i>Tomatoes</i>								
Consumption . . . oz.	6.9	6.1	5.4	7.0	5.1	5.6	3.5	5.8
Expenditure . . . d.	5.2	4.8	4.9	6.3	4.8	5.4	3.9	5.2
Price per lb. . . . d.	13.8	14.5	15.7	15.5	16.0	16.3	18.7	15.4
<i>Citrus Fruits</i>								
Consumption . . . oz.	4.0	3.3	2.7	2.8	3.1	2.8	2.9	3.1
Expenditure . . . d.	1.9	1.8	1.4	1.4	1.6	1.4	1.4	1.6
Price per lb. . . . d.	8.4	8.4	8.5	8.3	8.6	8.6	8.6	8.5
<i>Apples and Pears</i>								
Consumption . . . oz.	8.6	7.0	6.4	5.0	5.0	5.2	4.5	6.0
Expenditure . . . d.	3.6	2.2	2.8	2.0	2.7	2.7	2.6	2.7
Price per lb. . . . d.	7.8	7.4	8.0	8.6	8.8	9.2	10.2	8.5
<i>Stone and Soft fruit</i>								
Consumption . . . oz.	2.9	2.7	2.0	2.1	1.3	1.6	0.8	2.0
Expenditure . . . d.	2.1	1.5	1.4	1.5	1.1	1.4	0.9	1.5
Price per lb.								
Stone . . . . d.	9.2	10.3	8.8	10.1	10.7	11.0	13.3	10.1
Soft . . . . d.	18.2	17.9	19.8	20.9	23.4	21.4	19.9	20.2
<i>Other fresh fruit</i>								
Consumption . . . oz.	2.7	2.7	2.8	2.6	2.2	2.4	2.6	2.6
Expenditure . . . d.	1.4	1.2	1.3	1.2	1.3	1.0	1.4	1.3
<b>2. OTHER FRUIT<sup>1</sup></b>								
Consumption . . . oz.	2.9	3.3	2.9	2.9	1.7	2.0	1.9	2.6
Expenditure . . . d.	1.9	1.9	1.8	1.8	1.5	1.9	1.6	1.8

<sup>1</sup>Includes canned and bottled fruit, dried fruit and nuts but excludes fruit juices and fruit and nut products.

190. The range in the consumption of vegetables other than potatoes was similar to that for fruit. Variations were particularly wide for fresh green vegetables, including legumes, consumption of which in each of the three southern Regions was four times as high as in Scotland and more than twice as high as in the North of England. A comparison of the levels of consumption and expenditure suggest that, although lower prices in the South and East and in the South West may have contributed towards the high level of consumption there, the North has been conditioned by its smaller supplies to a lower effective demand. In Scotland, for example, cabbage was cheaper than elsewhere, although other green vegetables were more expensive.



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TABLE 88  
*Fresh green vegetables and fresh legumes:  
Consumption and Expenditure by Regions  
(per head per week)*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
<b>CABBAGE TYPES</b>								
Consumption . . . oz.	11.1	11.5	11.3	6.9	3.6	4.8	3.4	7.6
Expenditure . . . d.	2.9	2.5	2.4	1.6	0.9	1.1	0.7	1.8
Price per lb. . . . d.	4.7	4.1	4.7	4.6	4.0	4.5	3.9	4.4
<b>BRUSSELS SPROUTS</b>								
Consumption . . . oz.	2.0	2.3	1.1	2.4	0.7	1.0	0.5	1.6
Expenditure . . . d.	0.8	0.8	0.4	0.9	0.4	0.5	0.2	0.6
Price per lb. . . . d.	7.0	7.0	8.4	7.6	8.0	8.2	9.0	7.5
<b>CAULIFLOWER, ETC.</b>								
Consumption . . . oz.	1.4	1.7	2.4	2.6	1.4	2.0	0.8	1.8
Expenditure . . . d.	0.6	0.6	0.9	1.0	0.6	0.9	0.4	0.7
Price per lb. . . . d.	7.4	7.2	6.6	7.4	7.3	8.3	9.1	7.5
<b>LEAFY SALADS</b>								
Consumption . . . oz.	1.2	1.2	0.9	1.0	1.1	0.9	0.5	1.0
Expenditure . . . d.	1.3	1.0	0.7	0.9	1.0	0.8	0.5	0.9
Price per lb. . . . d.	18.6	17.0	20.0	21.3	15.1	20.6	19.0	18.4
<b>FRESH PEAS AND BEANS</b>								
Consumption . . . oz.	3.8	4.5	4.5	4.1	0.8	1.4	0.1	2.8
Expenditure . . . d.	1.6	1.7	1.8	1.5	0.4	0.6	...	1.1
<b>TOTAL</b>								
Consumption . . . oz.	19.5	21.2	20.2	17.0	7.6	10.1	5.3	14.8
Expenditure . . . d.	7.2	6.6	6.2	5.9	3.3	3.9	1.8	5.1
<i>Total as percentage of national average</i>								
Consumption . . . . .	132	143	136	115	51	68	36	100
Expenditure . . . . .	141	129	122	116	65	76	35	100

191. The consumption of vegetables, other than fresh green vegetables and potatoes, showed a slight trend in the reverse direction. Table 89 shows consumption to have been larger in the North than in the South. Expenditure on roots was a little lower in the North and on canned and dried vegetables a little higher.

TABLE 89  
*Vegetables other than fresh green vegetables:  
Consumption and Expenditure by Regions  
(per head per week)*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North East</i>	<i>North West</i>	<i>Scotland</i>	<i>All Regions</i>
<b>ROOTS AND MISCELLANEOUS FRESH VEGETABLES<sup>1</sup></b>								
Consumption . . . oz.	11.6	12.3	11.2	10.4	10.5	12.2	13.6	11.6
Expenditure . . . d.	3.5	3.2	3.1	3.1	2.8	3.1	3.0	3.1
<b>CANNED AND DRIED VEGETABLES</b>								
Consumption . . . oz.	4.0	4.5	4.5	5.0	5.3	4.8	4.5	4.6
Expenditure . . . d.	2.5	2.6	2.9	3.1	2.9	3.3	3.0	3.0

<sup>1</sup>Excludes potatoes.

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192. Regional variations in potato consumption were small except for the low consumption in the North East Region (62 oz. per head per week) and the high consumption in the South West Region (74 oz.). The effect of these variations on total potato consumption is shown in Table 90. Potato expenditure presented a different picture because of the much higher price paid for chips and of the differences in variety of potatoes consumed in the various Regions. It may be noted that in the 1943 analysis (see paragraph 156), potato consumption was highest in the Midlands, which by 1949 had fallen to second place after the South West.

TABLE 90  
*Potatoes and Chips: Consumption and Expenditure  
expressed as percentage deviations from the national average*

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
<b>CONSUMPTION</b>								
Potatoes . . . . .	+ 1	+ 1	+ 7	+ 5	- 3	-14	+ 3	65.4 oz.
Chips and crisps . . . . .	-59	-13	+14	0	+42	+65	-43	3.5 oz.
Total . . . . .	- 2	+ 1	+ 8	+ 4	- 1	-10	+ 1	68.9 oz.
<b>EXPENDITURE</b>								
Potatoes . . . . .	+ 2	- 6	+ 8	+ 2	+ 5	-11	- 1	7.2d.
Chips and crisps . . . . .	-62	-19	+11	+15	+39	+ 60	-40	2.2d.
Total . . . . .	-13	- 9	+ 9	+ 5	+13	+ 5	-10	9.4d.

*Cereals*

193. The consumption of cereals, other than bread and flour, was found to vary regionally with a range of about one-third of the national average. For bread and flour, the range was about one-quarter. Generally, the regional pattern for cereal consumption (excluding that for bread and flour, which is set out in Table 91) is that of a slight tendency for the North, and particularly the North East and Scotland, to consume more of such foods as biscuits and scones, and for Scotland to consume more oatmeal.

194. The highest consumption of flour was found in the North East Region where, if London is excepted, bread consumption was also the lowest and consumption of biscuits and scones highest. Scotland recorded both the highest bread consumption and by far the lowest flour consumption. If the level of flour consumption is taken as an index of home baking, this practice continued to be far more frequent in the North East Region than anywhere else, and least frequent in Scotland.

TABLE 91  
*Bread and Flour: Consumption and Expenditure by Regions  
(per head per week)*

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
<b>BREAD<sup>1</sup></b>								
Consumption . . . . oz.	53.9	57.7	61.1	66.7	66.2	57.3	68.0	61.1
Expenditure . . . . d.	9.9	10.3	11.4	11.9	12.7	11.0	15.1	11.6
<b>FLOUR</b>								
Consumption . . . . oz.	6.6	7.7	7.4	6.2	5.0	10.5	3.6	6.9
Expenditure . . . . d.	1.6	1.8	1.9	1.5	1.3	2.4	0.9	1.6

<sup>1</sup>Includes rolls, breadcrumbs, currant and malt bread, muffins and crumpets.

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*Fish*

195. Of all the animal protein foods, fish showed the widest regional variation. When fresh and processed fish were separated from cooked and canned fish, as in Table 92, the regional variations were found to be even wider. Consumption of fresh and processed fish in London was 28 per cent above, and in the North East Region 24 per cent below the average, with corresponding variations in expenditure.

TABLE 92  
*Fish: Consumption and Expenditure by Regions*  
(per head per week)

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
<b>FRESH AND PROCESSED<sup>1</sup></b>								
Consumption . . . oz.	8.1	6.6	5.8	5.7	5.9	4.8	6.3	6.3
Expenditure . . . d.	7.4	5.6	5.4	5.5	5.9	4.6	8.2	6.1
Price per lb. . . d.								
Cheap white . . . . .	15.7	15.0	15.9	16.1	16.8	15.8	24.4	17.0
Expensive white . . . . .	23.3	21.5	23.4	24.6	21.3	28.8	34.0	23.9
Fresh fat . . . . .	8.8	9.2	10.6	9.0	11.9	8.4	10.1	9.2
Processed fat . . . . .	9.8	10.0	10.5	10.4	10.5	10.3	10.5	10.2
<b>COOKED<sup>2</sup></b>								
Consumption . . . oz.	1.3	1.6	1.3	1.3	1.1	3.0	0.8	1.5
Expenditure . . . d.	2.4	2.8	2.3	2.3	2.3	5.4	1.4	2.8
Price per lb. . . . d.	29.3	28.0	29.5	30.4	33.5	29.4	30.5	29.7
<b>CANNED</b>								
Consumption . . . oz.	0.5	0.5	0.4	0.5	0.4	0.4	0.2	0.4
Expenditure . . . d.	1.1	0.8	1.1	1.1	0.9	0.9	0.4	0.9
Price per lb. . . . d.	35.4	35.5	35.3	37.3	38.9	30.9	37.0	36.8
<b>FISH PRODUCTS</b>								
Consumption . . . oz.	0.1	0.2	0.1	0.2	0.1	0.5	0.1	0.2
Expenditure . . . d.	0.4	0.4	0.3	0.4	0.2	0.6	0.1	0.4

<sup>1</sup>Includes smoked salmon and haddock, kippers, bloaters, pickled and soured herrings and dried and salt cod.

<sup>2</sup>Mainly fried fish bought for domestic consumption.

*Milk, Cheese and Eggs*

196. The range in regional variations for cheese was 23 per cent of the national average, for eggs 19 per cent and for milk 17 per cent. The largest deviation

TABLE 93  
*Milk: Consumption and Expenditure by Regions*  
(per head per week)

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
<b>CONSUMPTION :</b>								
Liquid, retail . . . . pt.	3.6	3.4	3.4	3.3	3.0	2.8	3.4	3.3
Liquid, welfare . . . . pt.	1.1	1.0	0.9	1.1	1.2	1.1	1.1	1.1
Condensed, skimmed, sweetened . . . . eq. pt.	0.1	0.1	0.1	0.1	0.1	0.1	...	0.1
Condensed, whole . . . eq. pt.	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Dried, whole . . . . eq. pt.	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Total milk . . . . pt. or eq. pt.	5.1	4.8	4.7	4.8	4.6	4.3	4.8	4.7
<b>EXPENDITURE :</b>								
Liquid, retail . . . . d.	18.0	16.8	17.0	16.7	15.1	14.3	15.6	16.3
Liquid, welfare . . . . d.	1.5	1.4	1.2	1.4	1.7	1.4	1.4	1.4
Condensed, skimmed, sweetened . . . . d.	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
Condensed, whole . . . d.	0.9	0.9	1.1	1.2	1.0	0.8	0.5	0.9
Dried, whole . . . . d.	0.3	0.3	0.4	0.4	0.7	0.4	0.3	0.4
Total milk . . . . d.	21.0	19.7	20.0	19.9	18.7	17.1	18.0	19.3

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for milk (Table 93) was in the North West Region, where consumption was 10 per cent, and expenditure 11 per cent, less than the average. In London, consumption was 7 per cent and expenditure 9 per cent higher than the average.

*Meat*

197. The range in consumption for rationed meat was only 10 per cent and for unrationed meat 17 per cent of the national average. A number of important differences were recorded for particular types of meat, as will be seen from

TABLE 94  
*Meat: Consumption and Expenditure by Regions*  
(per head per week)

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
<b>I. RATIONED CARCASS MEAT AND BACON</b>								
<i>Beef, roasting, etc.</i>								
Consumption . . . oz.	4.6	4.8	5.2	5.4	4.7	5.7	1.8	4.7
Expenditure . . . d.	6.2	6.1	6.8	7.0	6.8	7.7	3.0	6.4
Price per lb. . . . d.	21.4	20.6	20.8	21.1	23.0	21.4	27.3	21.6
<i>Beef, stewing</i>								
Consumption . . . oz.	1.4	1.3	0.6	0.9	1.8	1.5	4.6	1.6
Expenditure . . . d.	1.5	1.5	0.7	1.0	2.1	1.8	6.5	2.0
Price per lb. . . . d.	17.2	17.7	19.2	17.6	19.2	18.9	22.3	19.5
<i>Mutton and lamb, roasting</i>								
Consumption . . . oz.	4.7	4.6	5.1	4.7	4.2	3.9	3.0	4.4
Expenditure . . . d.	5.7	5.7	6.8	6.0	5.6	5.1	4.4	5.6
Price per lb. . . . d.	19.8	19.9	21.0	20.1	21.2	20.7	23.9	20.7
<i>Mutton and lamb, stewing</i>								
Consumption . . . oz.	0.5	0.3	0.2	0.3	0.3	0.4	0.7	0.4
Expenditure . . . d.	0.3	0.2	0.1	0.2	0.3	0.3	0.9	0.3
Price per lb. . . . d.	10.1	10.0	11.8	10.8	13.9	12.1	20.2	13.1
<i>Veal and pork</i>								
Consumption . . . oz.	0.2	0.3	0.5	0.4	0.2	0.2	...	0.3
Expenditure . . . d.	0.3	0.4	0.7	0.5	0.3	0.2	0.1	0.4
<i>Bacon</i>								
Consumption . . . oz.	2.6	2.5	2.6	2.7	2.8	2.7	2.9	2.7
Expenditure . . . d.	4.3	4.4	4.5	4.5	4.8	4.5	5.0	4.6
Price per lb. . . . d.	28.1	28.5	28.4	28.3	27.4	28.0	28.1	28.1
<i>Total rationed carcass meat and bacon</i>								
Consumption . . . oz.	14.0	13.8	14.2	14.4	14.0	14.4	13.0	14.1
Expenditure . . . d.	18.3	18.3	19.6	19.2	19.9	19.6	19.9	19.3
<b>2. UNRATIONED MEATS</b>								
<i>Sausages</i>								
Consumption . . . oz.	4.4	4.5	3.7	4.5	3.0	3.7	5.5	4.2
Expenditure . . . d.	4.3	4.2	3.6	4.4	3.0	3.6	5.8	4.1
Price per lb. . . . d.	15.8	15.1	15.5	16.1	16.3	15.6	16.6	15.9
<i>Canned meats</i>								
Consumption . . . oz.	0.8	0.7	0.7	0.7	0.7	0.8	0.6	0.7
Expenditure . . . d.	1.6	1.3	1.6	1.6	1.4	1.8	1.4	1.6
Price per lb. . . . d.	34.6	36.4	37.8	38.7	34.7	39.5	35.7	37.0
<i>Miscellaneous meats</i>								
Consumption . . . oz.	5.5	5.5	7.0	6.5	7.6	7.0	6.7	6.5
Expenditure . . . d.	5.5	5.5	7.1	7.0	8.2	7.0	6.2	6.6
<i>Total unrationed meat<sup>1</sup></i>								
Consumption . . . oz.	11.4	11.4	12.0	12.2	11.9	12.0	13.4	12.0
Expenditure . . . d.	12.1	11.7	12.9	13.8	13.3	13.0	14.2	13.0

<sup>1</sup>Includes small quantities of canned corned beef.

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Table 94. Among unrationed meats, sausages displayed an interesting regional variation ; consumption and expenditure were lowest in the North West Region, and highest in Scotland, with the result that the consumption of all unrationed meat in Scotland was the highest for the whole country.

198. Table 95 shows that regional differences were relatively small for sugar, preserves and tea, but more pronounced for coffee, cocoa and cocoa-base drinks. Consumption of sugar was highest in London and lowest in Scotland and the Midlands. For preserves, syrup and treacle, Scotland had the highest consumption and expenditure ; consumption, but not expenditure, was lowest in the north of England. Expenditure on tea was lowest in the South and East and highest in the South West and in Scotland, which had very low expenditures for other beverages. Expenditure on coffee was highest in the North West, and on cocoa and cocoa-base drinks in the South of England, especially the South and East Region.

TABLE 95

*Sugar, Preserves and Beverages: Consumption and Expenditure by Regions (per head per week)*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
<b>SUGAR</b>								
Consumption . . . oz.	11.5	10.6	10.9	10.6	10.9	10.9	10.5	10.8
Expenditure . . . d.	3.4	3.4	3.6	3.3	3.6	3.4	3.3	3.4
<b>PRESERVES (INCLUDING SYRUP AND TREACLE)</b>								
Consumption . . . oz.	6.5	6.9	6.0	6.0	5.5	5.5	7.6	6.3
Expenditure . . . d.	4.8	4.9	4.4	4.3	4.7	4.8	6.2	4.8
<b>TEA</b>								
Expenditure . . . d.	4.9	4.6	5.1	4.7	4.8	5.0	5.1	4.9
<b>COFFEE<sup>1</sup></b>								
Expenditure . . . d.	0.6	0.5	0.5	0.4	0.8	0.5	0.1	0.5
<b>COCOA AND COCOA-BASE DRINKS</b>								
Expenditure . . . d.	0.8	1.1	0.9	0.8	0.6	0.7	0.3	0.8

<sup>1</sup>Beans, ground and concentrates.

**Energy Value and Nutrient Content of the Household Diets by Regions**

199. The energy value and nutrient content of domestic food consumption by households in different Regions are shown in Table 96. In spite of marked regional differences in food purchases, the nutritional values of the diets were broadly similar. Except for vitamins C and D where the variations were greatest, the average energy value and nutritive content of the diets in each region were within 6 per cent of the average for all Regions ; the values for the South and East, South West, Midlands and North West were closest, being within approximately 3 per cent of the average. Generally speaking, the nutrient content of the diets for South and East, South West, and the Midland Regions tended to be greater than the average, and those for North West, North East and Scotland lower. Because of the smaller fresh fruit and green vegetable consumption, the vitamin C values in the North West, North East and Scotland

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were lower than for the remainder of the country. Similarly the higher consumption of fat fish in London and the South East Region raised the vitamin D content considerably above that for other areas. In London, and to a lesser extent in the South West, the percentages of the total protein derived from animal sources was greater than elsewhere.

TABLE 96  
*Energy Value and Nutrient Content of Domestic Food Consumption<sup>1</sup> by Regions: Urban Working-Class Households 1949 (per head per day)*

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
Energy value . . . . Cal.	2,356	2,422	2,468	2,467	2,406	2,438	2,449	2,429
Total protein . . . . g.	74	76	76	78	75	76	76	76
Animal protein . . . . g.	36	34	35	35	33	33	33	34
Fat . . . . . g.	91	92	93	92	90	93	88	91
Carbohydrate . . . . g.	310	323	331	331	325	324	338	326
Calcium . . . . . mg.	1,032	1,044	1,040	1,054	1,005	983	1,060	1,032
Iron . . . . . mg.	13.1	13.8	14.1	14.1	13.4	13.6	13.5	13.6
Vitamin A . . . . . i.u.	3,548	3,476	3,301	3,332	3,491	3,193	3,326	3,381
Vitamin B <sub>1</sub> <sup>2</sup> . . . . mg.	1.24	1.30	1.33	1.35	1.28	1.27	1.31	1.30
Riboflavin . . . . mg.	1.69	1.68	1.68	1.69	1.59	1.57	1.61	1.64
Nicotinic acid . . . mg.	12.6	12.8	13.0	13.0	12.4	12.8	12.3	12.7
Vitamin C <sup>2</sup> . . . . mg.	54	56	54	51	44	47	43	50
Vitamin D . . . . . i.u.	199	194	147	164	168	164	143	169

<sup>1</sup>Includes Welfare foods.

<sup>2</sup>With allowance for cooking losses.

200. The proportions of the total energy value derived from protein, fat and carbohydrate are shown in Table 97. The amount derived from protein varied only to a very small extent between these areas, but for carbohydrate the highest proportion was found in Scotland and the lowest in London. The main reasons for this were the low consumption of bread in the London area and the high consumption of cereals of all kinds in Scotland. In all areas the proportion from fat and protein exceeded the amounts suggested by the British Medical Association.

TABLE 97  
*Proportion of Energy Value derived from Protein, Fat and Carbohydrate by Regions: Urban Working-Class Households 1949*

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Protein . . . . .	12.6	12.5	12.3	12.7	12.5	12.5	12.4	12.5
Fat . . . . .	34.8	34.2	34.0	33.6	33.6	34.3	32.4	33.8
Carbohydrate . . . . .	52.6	53.3	53.7	53.7	53.9	53.2	55.2	53.7

201. The adequacy of the diets in the various Regions has been estimated according to the normal procedure and the results are shown in Table 98. The most marked feature of this Table is the uniformity of the percentages for the various parts of the country.

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TABLE 98

Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Allowances based on the British Medical Association's Recommendations: Urban Working-Class Households 1949

	London	South and East	South West	Midland	North West	North East	Scotland	All Regions
	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent
Energy value . . . . .	99	97	97	99	99	99	99	98
Protein . . . . .	104	101	101	104	102	103	101	102
Calcium . . . . .	109	106	106	107	102	101	106	105
Iron . . . . .	111	112	113	115	111	112	110	112
Vitamin A . . . . .	155	147	137	141	151	136	144	145
Vitamin B <sub>1</sub> . . . . .	132	131	133	136	133	130	133	135
Riboflavin . . . . .	117	111	109	111	108	105	107	112
Nicotinic acid . . . . .	134	129	130	131	129	131	125	132
Vitamin C . . . . .	236	235	230	214	176	185	168	207

Regional Variations in Diets of Households of one Male and one Female Adult with no Child, one Child and two Children

202. Households of one male and one female adult with no child or with one or two children formed 38 per cent of all urban working-class households in 1949, the proportion varying from 41 per cent in London to 34 per cent in the North West Region. Those without children accounted for 17 per cent of all households in the South West, and 10 per cent in the North West and Scotland, compared with the national average of 13 per cent. Households with one child were more evenly distributed, but those with two children formed 9 per cent in the South West compared with 13 per cent in London. The number of such households of all types was fairly small in the Scottish sample, and of those with two children, was small in the South West Region. Results given by these sub-groups are, in consequence, less representative (Table 99).

TABLE 99

Households of Different Composition as a Proportion of all Households Surveyed in each Region in Survey 1949

	All households <sup>1</sup>	Households containing one male and one female adult with: <sup>2</sup>						Total	
		No other		1 child		2 children			
		No.	Percentage of all households	No.	Percentage of all households	No.	Percentage of all households	No.	Percentage of all households
London . . . . .	1,259	156	12.4	201	16.0	163	12.9	520	41.3
South and East . . . . .	1,059	137	12.9	160	15.1	128	12.1	425	40.1
South West (including South Wales) . . . . .	793	132	16.6	104	13.1	74	9.3	310	39.1
Midland . . . . .	1,136	134	11.8	175	15.4	118	10.4	427	37.6
North West . . . . .	963	99	10.3	128	13.3	99	10.3	326	33.9
North East . . . . .	1,200	176	14.7	155	12.9	139	11.6	470	39.2
Scotland . . . . .	709	74	10.4	92	13.0	84	11.8	250	35.2
Total . . . . .	7,119	908	12.8	1,015	14.3	805	11.3	2,728	38.3

<sup>1</sup>Includes old age pensioner households.

<sup>2</sup>Excludes old age pensioner households.

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203. Generally, the variations in the diets of the selected family types show the same trends as those for all households ; the divergence was not sufficient substantially to affect the pattern of regional differences found for all households. This is seen first in the comparison of total household food expenditure in Table 100. The results for households with two children in the South West and for all selected households in Scotland are subject to larger sampling errors than the others. The main divergences from the trends suggested by the results for all households seem to be a relatively low expenditure by wholly adult households in London, the South and East, the North East and the North West, and a relatively high expenditure by the same type of household in the South West. These differences are probably associated with variations in the proportion of meals eaten away from home.

TABLE 100

*Regional Differences in Household Food Expenditure per head, as percentages of the National Average*

	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	<i>All Regions</i>
All households . . . . .	100	97	103	100	99	100	99	100
Households with one male and one female adult and no child . . . . .	96	96	108	99	95	97	101	100
1 child . . . . .	100	98	102	101	102	101	97	100
2 children . . . . .	98	98	100	100	98	99	102	100

204. A similar comparison for consumption is made in Table 101, which lists those foods with a variation of 5 per cent or more from the national average as recorded by all households. In the London Region, the pattern for the selected households is similar to that for all households, although the selected households appear to have eaten more fish and cereals other than bread. In the South East, households with no children may have eaten less fish, compared with other regions, but probably this introduced little bias into the results for all households in the Region. Similarly, the results are consistent with the general average in the South West Region where, for example, a low cheese consumption by wholly adult households was probably offset by the high levels recorded for other types of selected households. In other Regions also, the average for the selected households may not have been much out of trend compared with the average for all households, although in some instances greatly divergent levels were recorded for particular types of household. But the significance of these wider divergencies cannot be pressed, for example, so far as Scotland is concerned.



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TABLE 101

*Regional Variations in Household Food Consumption by Households of one male and one female adult and no child, 1 child or 2 children as percentage differences from the National Average for each Family Type*

	All households	Households containing one male and one female adult with:		
		Number of children		
		0	1	2
<b>LONDON</b>				
Fruit . . . . .	+26	+24	+25	+23
Other vegetables <sup>1</sup> . .	+13	+11	+12	+14
Fish . . . . .	+12	+17	+23	+19
Sugar and preserves .	+ 5	+ 9	+ 6	+ 6
Other cereals <sup>2</sup> . . .	- 8	-12	-10	- 8
Bread . . . . .	-12	-12	-11	-12
<b>SOUTH EAST</b>				
Other vegetables <sup>1</sup> . .	+18	+20	+20	+24
Fruit . . . . .	+14	+10	+10	+22
Cheese . . . . .	+ 8	+ 7	+12	+ 6
Eggs . . . . .	+ 7	+ 8	+ 6	+ 3
Fish . . . . .	+ 6	0	+ 9	+13
Beverages . . . . .	+ 4	+ 7	+ 7	+10
Bread . . . . .	- 6	- 6	- 5	- 2
Other meat . . . . .	- 5	-12	- 9	-11
<b>SOUTH WEST</b>				
Other vegetables <sup>1</sup> . .	+12	+16	+14	+15
Eggs . . . . .	+ 8	+11	+10	+ 5
Potatoes . . . . .	+ 8	+13	+ 5	- 4
Cheese . . . . .	+ 6	- 3	+11	+12
Other cereals <sup>2</sup> . . .	+ 5	+ 8	- 5	- 1
Other meat <sup>3</sup> . . . . .	0	+ 4	- 6	-10
Fish . . . . .	- 9	- 3	-17	-20
<b>MIDLAND</b>				
Cheese . . . . .	+11	+21	+ 8	+ 6
Bread . . . . .	+ 9	+13	+11	+10
Eggs . . . . .	+ 8	+ 6	+11	+ 3
Potatoes . . . . .	+ 4	+ 3	+ 7	+ 7
Fish . . . . .	- 9	- 5	- 8	- 6
Other cereals <sup>2</sup> . . .	-10	-10	- 1	- 2
<b>NORTH WEST</b>				
Bread . . . . .	+ 8	+ 2	+ 8	+ 9
Eggs . . . . .	- 5	-11	- 6	- 7
Sugar and preserves .	- 5	- 7	0	- 4
Fish . . . . .	-10	-12	- 5	- 4
Other cereals <sup>2</sup> . . .	-12	-10	- 5	-10
Cheese . . . . .	-13	-18	-15	- 9
Fruit . . . . .	-16	-24	- 6	- 8
Other vegetables . . .	-26	-22	-18	-21

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TABLE 101 (continued)

	All households	Households containing one male and one female adult with:		
		Number of children		
		0	1	2
<b>NORTH EAST</b>				
Other cereals <sup>2</sup> . . .	+23	+18	+21	+12
Fish . . . . .	+ 3	- 7	+ 7	+ 8
Unrationed meat . . .	0	- 7	- 1	+ 9
Bread . . . . .	- 6	- 8	-10	- 8
Milk . . . . .	-10	-10	-14	- 8
Potatoes . . . . .	-10	-12	- 7	-14
Fruit . . . . .	-11	- 2	+ 2	- 6
Cheese . . . . .	-12	-13	-14	-10
Other vegetables <sup>1</sup> . .	-16	-11	- 9	-11
<b>SCOTLAND</b>				
Unrationed meats . .	+11	+14	+16	+11
Bread . . . . .	+11	+ 3	+ 4	+ 5
Sugar and preserves .	+ 6	+ 9	+ 1	- 6
Cheese . . . . .	- 5	+ 3	- 8	- 6
Fats . . . . .	- 6	0	- 7	- 7
Eggs . . . . .	- 7	+ 4	-16	0
Rationed meat . . .	- 8	- 4	- 5	- 3
Beverages . . . . .	-11	- 7	-12	-14
Fish . . . . .	-12	+ 9	- 9	- 9
Other vegetables . .	-26	-20	-22	-23
Fruit . . . . .	-27	-14	-34	-35

<sup>1</sup>Excludes potatoes.

<sup>2</sup>Excludes bread and flour.

<sup>3</sup>Excludes rationed meat.

**Regional Variations in Energy Value and Nutrient Content of Diets of Households of one Male and one Female Adult, with no Child, one Child and two Children**

205. An attempt has been made to see whether the difference in family composition in the different regions had any effect on the slight regional difference in energy value and nutrient content of diets (see Table 97). Table 102 gives the results of an analysis of the percentage of requirements met in households containing two adults with no children, one child, and two children. It will be seen that the trends already noted for the whole country occurred for each region studied. For example, decreases were found in the percentages for protein and calcium with the addition of each child; and relatively high vitamin A percentages for households containing one child (for London the figure rose further for two children, and for Scotland it fell) were also noted.

206. In many parts of the country, households with only one child showed a relatively favourable position for several nutrients. As explained in Chapter VI, part of this difference between childless households and those with one child no doubt arose from a difference in the age of adults in these two types of household.

*Studies in Urban Household Diets 1944-49*

TABLE 102

*Comparison of Energy Value and Nutrient Content of Domestic Food Consumption with Allowances based on the British Medical Association's recommendations by Region and Household Composition: Urban Working-Class Households 1949 (percentages)*

<i>Households of one male and one female adult and</i>	<i>London</i>	<i>South and East</i>	<i>South West</i>	<i>Midland</i>	<i>North West</i>	<i>North East</i>	<i>Scotland</i>	
Energy value	no other	105	101	107	104	97	101	102
	one child	105	103	102	108	107	107	104
	two children	102	102	101	104	102	100	99
Protein	no other	122	116	123	124	113	115	120
	one child	112	109	106	117	114	112	111
	two children	103	101	102	105	99	102	102
Calcium	no other	133	132	135	134	116	123	135
	one child	115	115	113	118	114	112	113
	two children	108	107	107	107	103	99	104
Iron	no other	121	122	132	129	119	121	125
	one child	119	121	119	128	124	121	118
	two children	116	117	116	119	115	116	110
Vitamin A	no other	146	146	127	142	152	139	160
	one child	167	174	175	172	176	173	168
	two children	205	173	175	173	176	174	153
Vitamin B <sub>1</sub>	no other	139	137	147	147	131	133	136
	one child	142	140	138	150	144	140	139
	two children	134	135	134	140	134	130	132
Riboflavin	no other	126	118	121	122	106	112	117
	one child	117	121	120	126	121	119	114
	two children	126	117	119	119	117	113	112
Nicotinic acid	no other	150	140	152	149	139	143	139
	one child	143	139	137	144	140	141	135
	two children	132	129	126	130	127	131	123
Vitamin C	no other	293	283	296	273	234	282	226
	one child	299	290	297	276	254	298	218
	two children	260	270	300	218	234	247	182

## APPENDIX A

# The Diets of Urban Middle-Class and Working-Class Households 1944 to 1947

1. The following tables, which are supplementary to Chapter II, give detailed information on the domestic food consumption of urban middle-class and working-class households in 1944-47, their expenditure on vegetables and fruit, and the contribution of different foods to the energy value and nutrient content of their diets.

2. A summary of the results found by Crawford and Broadley in 1936-37\*, may be found useful for purposes of comparison. Their Social Class B, has been taken to represent the middle class : Classes C and D, weighted as 4:1, have been regarded as constituting the working class. The pre-war figures relate to purchases only.

### Milk

3. The class differences found by Crawford and Broadley in 1936-37 were considerably greater than those recorded in 1944-47, the middle class consuming 4.4 pints, or slightly more than the 1944 figure, while the working class consumed only 2.4 pints. The pre-war figures do not include school milk, but this would not add more than 0.1 pint per head per week. The middle class also obtained more cream, consumption of which was negligible in the working class. Condensed milk, on the other hand, was mainly consumed by the working class (0.4 equivalent pt.).

### Cheese

4. The pre-war class difference in consumption was less for cheese than for other foods, because the popular varieties of cheese were relatively cheap. Working-class consumption in 1944-47 was about the same as before the war : middle-class consumption was a little lower.

### Eggs

5. The class difference in 1936-37 was considerable, the middle-class group purchasing 5.5 eggs as against 3.6 for the working class. The actual difference in consumption was probably larger still, as self-supplied eggs were not included (dried eggs had, of course, not been introduced).

### Meat

6. In 1936-37, consumption of fresh meat was 19.2 oz. for the working-class sample compared with 14.2 oz. in 1944, the average for the middle class being 25.3 oz. and 14.8 oz. respectively. The pre-war consumption of bacon and ham was 4.3 oz. for the working class and 6.1 oz. for the middle class.

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\*See paragraph 46 et seq. and paragraph 61.

### **Fish**

7. The Crawford and Broadley records did not include data on quantities of canned fish, so that their total figures are not quite comparable with those in Table I below. For fresh, dried and fried fish, they recorded 5·8 oz. for the working class and 9·9 oz. for the middle class. The corresponding amounts for 1944 were 6·5 oz. and 7·3 oz., and for 1947, 8·8 oz. and 12·4 oz. so that, even when fish became more plentiful, class differences were less than before the war. Expenditure records indicate that the same applied to canned fish.

### **Potatoes**

8. Potatoes were one of the few foods for which class differences were less before the war. The pre-war figures did not include chips but, even allowing for this, class differences were small. The average pre-war purchases of fresh potatoes were 67·1 oz. for the middle class and 61·6 oz. for the working class. The working class appreciably increased their potato consumption during the war, while the middle class decreased theirs (their pre-war wastage may have been greater). The lower pre-war consumption of the working class may have been due to their serving fewer cooked meals and more of the "bread and spread" type which were cheaper sources of calories, for analyses have shown that the consumption of potatoes tended to be related to the consumption of fresh meat.

### **Vegetables other than Potatoes**

9. Pre-war consumption figures are not available, but the expenditure of the middle class was about 35 per cent above that of the working class.

### **Fruit**

10. No consumption figures are available for 1936-37, but expenditure was more than two and a half times as high for the middle class as for the working class. In the pre-war period, oranges and apples were most popular in the upper group and bananas in the lower. The middle class still consumed considerably more citrus fruit and apples from 1944 to 1947; during this period bananas were not generally available.

### **Cereals**

11. The pre-war pattern of class difference was similar to that found in 1944-47, Class D consuming most bread. All classes consumed more bread, and less flour in the later period, indicating a general decline in home baking, probably largely due to the shortage of sugar, fats and eggs. Before the war the middle class consumed 49·6 oz. of bread and 15·5 oz. of flour, and the working class 56·4 oz. of bread and 13·4 oz. of flour. More brown bread was consumed before the war than in 1944-47, accounting for 8·4 oz. of middle-class and 3·1 oz. of working-class consumption. No consumption figures for other cereal products are available for the pre-war period, but expenditure by the upper group was nearly double that of the lower.

### **Fats**

12. Fat consumption showed wide class differences in the pre-war period. Consumption of all fats taken together was then recorded as 14·7 oz. for the

## *Appendix A*

upper group and 11·8 oz. for the lower group ; but the difference was greatest for butter, of which the upper group consumed 10·3 oz. and the lower only 6·7 oz. Nearly twice as much margarine, on the other hand, was bought by the lower group. All classes consumed more margarine and less butter in the later period ; rationing had cut the butter consumption of the middle class by nearly four-fifths in 1944, and by two-thirds in 1947.

### **Sugar and Preserves**

13. Class differences in sugar consumption were relatively small in 1936-37, but all classes consumed much more than in the later period, with 16·5 oz. for the lower group and 17·2 oz. for the upper. The pre-war records for preserves did not include those made at home, so that they probably underestimated middle-class consumption more than that of the working class ; there was apparently only a slight increase in consumption above the pre-war levels.

### **Beverages**

14. The average consumption of tea in the pre-war period was about 3·4 oz. with small class differences. The pre-war consumption of coffee is not known, but expenditure shows it to have been largely a middle and upper-class beverage, as indeed it has continued to be. The consumption of cocoa, which was lower in the middle class than in the working class before the war, revealed hardly any class difference between 1944 and 1947, but it was apparent that consumption in both classes was tending to decline.

Studies in Urban Household Diets 1944-49

TABLE 1

Domestic Food Consumption of Middle-Class and Working-Class Households  
1944 to 1947

(oz. per head per week except where otherwise stated)

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.- Sept.)	1944	1945	1946	1947 (Jan.- Sept.)
<b>MILK</b>								
Liquid, retail . . . . . pt.	3.57	3.76	3.64	3.57	2.87	2.93	2.86	2.88
Welfare, cheap . . . . . pt.	0.51	0.66	0.72	0.83	0.83	0.91	0.90	0.90
Welfare, free . . . . . pt.	—	—	—	—	0.04	0.01	—	0.01
School . . . . . pt.	0.16	0.11	0.13	0.11	0.23	0.26	0.19	0.17
Total liquid milk . . . . . pt.	4.24	4.53	4.49	4.51	3.97	4.11	3.95	3.96
Condensed milk . . . . . equiv. pt.	0.09	0.09	0.16	0.27	0.11	0.10	0.14	0.24
Dried milk—whole . . . . . equiv. pt.	0.04	0.03	0.06	0.10	0.05	0.04	0.06	0.09
Dried milk—skim . . . . . equiv. pt.	0.51	0.41	0.34	0.18	0.28	0.18	0.16	0.08
Total milk . . . . . pt. or equiv. pt.	4.88	5.06	5.05	5.06	4.41	4.43	4.31	4.37
As percentage of working-class . . . . .	111	114	117	116	—	—	—	—
<b>CHEESE</b>								
As percentage of working-class . . . . .	2.67	2.62	2.65	2.52	2.61	2.49	2.54	2.26
As percentage of working-class . . . . .	102	105	104	112	—	—	—	—
<b>MEAT</b>								
<b>Rationed:</b>								
Beef and veal, roasting, etc. . . . .	4.94	4.63	5.30	4.75	5.08	4.54	5.58	5.06
Beef and veal, stewing . . . . .	1.92	1.71	1.94	1.70	1.87	1.80	1.94	1.60
Mutton and lamb . . . . .	6.00	6.74	6.35	6.55	5.32	6.08	5.80	6.11
Pork . . . . .	1.95	1.26	0.60	0.13	1.91	1.40	0.38	0.15
Bacon and ham, uncooked . . . . .	4.72	3.60	3.32	2.23	4.55	3.54	3.22	2.20
Canned corned beef . . . . .	0.01	0.61	1.24	2.12	...	0.69	1.33	2.18
Total rationed meat . . . . .	19.54	18.55	18.75	17.48	18.73	18.05	18.25	17.30
<b>Unrationed:</b>								
Liver . . . . .	0.85	0.49	0.46	0.53	0.73	0.38	0.39	0.42
Kidney . . . . .	0.14	0.12	0.11	0.11	0.08	0.06	0.07	0.16
Other offal . . . . .	1.21	0.87	0.76	0.65	1.15	0.98	0.87	0.59
Rabbit, poultry, game, etc. . . . .	1.76	1.54	1.38	1.33	1.07	0.96	0.82	0.58
Cooked meat . . . . .	0.67	0.42	0.30	0.30	0.76	0.42	0.40	0.40
Canned meat . . . . .	1.36	1.46	0.84	1.57	1.52	1.51	0.96	1.55
Canned prepared meals . . . . .	0.14	0.09	0.60	0.28	0.14	0.13	0.69	0.38
Sausages, uncooked . . . . .	3.77	3.42	3.78	3.57	4.11	3.87	4.18	4.12
Total unrationed meat . . . . .	9.90	8.41	8.23	8.34	9.56	8.31	8.38	8.20
Total meat . . . . .	29.44	26.96	26.98	25.82	28.29	26.36	26.63	25.50
As percentage of working-class . . . . .	104	102	101	101	—	—	—	—
<b>FISH</b>								
White, fresh, cheap <sup>1</sup> . . . . .	4.08	4.50	5.16	5.26	3.29	3.72	4.23	3.63
expensive <sup>2</sup> . . . . .	0.87	2.99	2.33	2.69	0.31	1.06	0.95	0.72
smoked, dried, etc. . . . .	0.42	0.60	1.48	1.46	0.41	0.51	0.95	1.00
Fat, fresh and smoked . . . . .	1.57	2.06	2.31	2.50	1.24	1.42	1.90	1.73
Fried . . . . .	0.40	0.40	0.42	0.45	1.22	1.51	1.59	1.71
Canned . . . . .	1.40	1.32	1.05	1.02	1.15	0.99	0.93	0.75
Total fish . . . . .	8.74	11.87	12.75	13.38	7.62	9.21	10.55	9.54
As percentage of working-class . . . . .	115	129	121	140	—	—	—	—
<b>EGGS</b>								
Shell . . . . . No.	1.21	1.70	1.77	1.93	0.94	1.27	1.41	1.60
Dried . . . . . equiv. No.	2.62	2.49	1.44	1.16	1.99	1.74	1.09	0.70
Total eggs . . . . . No. or equiv. No.	3.83	4.19	3.21	3.09	2.93	3.01	2.50	2.30
As percentage of working-class . . . . .	131	139	128	134	—	—	—	—
<b>FATS</b>								
Butter . . . . .	2.22	2.36	3.08	3.34	2.05	2.16	2.83	2.94
Margarine . . . . .	4.36	4.47	3.57	3.27	4.29	4.19	3.46	3.31
Rationed lard and cooking fat . . . . .	2.08	1.70	1.27	1.10	1.98	1.51	1.17	1.00
Suet and dripping . . . . .	1.10	0.95	1.01	0.93	0.88	0.77	0.77	0.64
Total fats . . . . .	9.76	9.48	8.93	8.64	9.20	8.63	8.23	7.89
As percentage of working-class . . . . .	106	110	108	110	—	—	—	—

Appendix A

TABLE 1 (continued)

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.- Sept.)	1944	1945	1946	1947 (Jan.- Sept.)
<b>SUGAR AND PRESERVES</b>								
Sugar . . . . .	8.69	9.28	9.54	9.91	9.05	9.13	9.55	10.15
Rationed preserves . . . . .	6.94	6.25	6.25	6.36	4.80	4.16	4.08	4.04
Other preserves . . . . .	1.84	2.00	1.81	1.75	1.25	1.32	1.34	1.47
<i>Total sugar and preserves</i> . . . . .	<i>17.47</i>	<i>17.53</i>	<i>17.60</i>	<i>18.02</i>	<i>15.10</i>	<i>14.61</i>	<i>14.97</i>	<i>15.66</i>
As percentage of working-class . . . . .	116	120	118	115	—	—	—	—
<b>POTATOES</b>								
Chips and crisps . . . . .	0.59	0.52	0.67	0.76	2.36	2.77	3.29	3.57
Old potatoes . . . . .	44.29	43.23	49.52	45.16	52.63	49.26	58.92	54.38
New potatoes . . . . .	13.68	13.59	9.80	9.59	16.35	16.47	11.60	12.83
<i>Total potatoes</i> . . . . .	<i>58.56</i>	<i>57.34</i>	<i>59.99</i>	<i>55.51</i>	<i>71.34</i>	<i>68.50</i>	<i>73.81</i>	<i>70.78</i>
As percentage of working-class . . . . .	82	84	81	78	—	—	—	—
<b>FRESH GREEN VEGETABLES</b>								
Cabbage, etc. . . . .	8.57	8.38	7.94	5.71	9.50	8.62	8.83	5.91
Brussels sprouts . . . . .	2.80	2.99	2.54	0.98	2.30	2.14	2.16	0.80
Cauliflower . . . . .	3.52	3.00	3.87	2.23	2.16	2.14	2.42	1.03
Lettuce and endive . . . . .	2.13	2.27	1.88	2.11	1.33	1.35	1.10	1.28
Fresh peas and beans . . . . .	4.86	5.05	3.81	4.26	3.94	3.85	2.77	3.33
Other fresh green vegetables . . . . .	1.40	1.19	0.82	0.66	0.78	0.42	0.36	0.30
<i>Total fresh green vegetables</i> . . . . .	<i>23.28</i>	<i>22.88</i>	<i>20.86</i>	<i>15.95</i>	<i>20.01</i>	<i>18.52</i>	<i>17.64</i>	<i>12.65</i>
<b>OTHER VEGETABLES</b>								
Carrots . . . . .	4.33	5.09	4.72	4.16	3.84	3.93	3.64	3.09
Turnips and swedes . . . . .	2.36	2.26	2.80	3.01	2.74	2.60	2.63	2.59
Other roots . . . . .	2.96	2.88	2.52	2.63	2.43	2.06	1.86	1.62
Canned peas and beans . . . . .	1.52	1.72	1.97	2.70	1.79	2.72	2.89	3.39
Dried pulses . . . . .	0.69	0.57	0.63	0.64	1.05	1.00	0.99	1.13
Other canned vegetables . . . . .	0.09	0.18	0.30	0.74	0.06	0.13	0.20	0.34
Onions and shallots . . . . .	2.65	3.04	2.35	3.73	2.37	2.60	2.30	3.92
Miscellaneous . . . . .	4.24	4.24	3.61	2.89	3.02	2.76	2.42	2.04
<i>Total vegetables other than potatoes</i> . . . . .	<i>42.12</i>	<i>42.86</i>	<i>39.76</i>	<i>36.45</i>	<i>37.31</i>	<i>36.32</i>	<i>34.57</i>	<i>30.77</i>
As percentage of working-class . . . . .	113	118	115	118	—	—	—	—
<b>FRUIT</b>								
Fresh tomatoes . . . . .	3.61	3.51	3.80	5.87	2.44	2.63	2.89	4.94
Canned tomatoes . . . . .	0.19	0.22	0.26	0.31	0.05	0.05	0.11	0.28
<i>Total tomatoes</i> . . . . .	<i>3.80</i>	<i>3.73</i>	<i>4.06</i>	<i>6.18</i>	<i>2.49</i>	<i>2.68</i>	<i>3.00</i>	<i>5.22</i>
Citrus fruits . . . . .	1.53	4.05	3.32	7.57	1.19	2.64	2.28	4.22
Apples . . . . .	7.33	8.75	7.08	7.14	4.75	5.21	4.14	4.09
Other fresh fruit (including rhubarb) . . . . .	5.39	6.16	6.84	10.04	3.29	3.35	4.25	5.82
Bottled and canned fruit . . . . .	2.04	2.13	1.93	2.74	0.66	0.55	0.77	1.17
Dried fruit . . . . .	2.26	2.32	2.08	2.34	1.60	1.51	1.24	1.21
<i>Total fruit and tomatoes</i> . . . . .	<i>22.35</i>	<i>27.14</i>	<i>25.31</i>	<i>36.01</i>	<i>13.98</i>	<i>15.94</i>	<i>15.68</i>	<i>21.73</i>
As percentage of working-class . . . . .	160	170	161	166	—	—	—	—
<b>BREAD AND FLOUR</b>								
National and other, plain flour . . . . .	2.30	2.14	1.97	2.12	1.73	1.53	1.81	1.35
National and other, self-raising . . . . .	6.68	6.12	5.37	5.02	5.34	4.72	4.32	4.07
<i>Total flour</i> . . . . .	<i>8.98</i>	<i>8.26</i>	<i>7.34</i>	<i>7.14</i>	<i>7.07</i>	<i>6.25</i>	<i>6.13</i>	<i>5.42</i>
National bread . . . . .	44.74	42.16	39.41	41.84	55.21	55.84	54.13	58.02
Brown bread . . . . .	4.10	5.74	6.56	2.70	2.01	2.46	2.52	1.70
Rolls, etc. <sup>3</sup> . . . . .	2.47	2.76	5.44	4.05	2.71	3.43	3.27	2.75
<i>Total bread</i> . . . . .	<i>51.31</i>	<i>50.66</i>	<i>49.41</i>	<i>48.59</i>	<i>59.93</i>	<i>61.73</i>	<i>59.92</i>	<i>62.47</i>
<i>Total bread and flour as flour equivalent</i> . . . . .	<i>48.45</i>	<i>47.23</i>	<i>45.35</i>	<i>44.52</i>	<i>53.17</i>	<i>53.73</i>	<i>52.22</i>	<i>53.47</i>
As percentage of working-class . . . . .	91	88	87	83	—	—	—	—



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TABLE 1 (continued)

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.- Sept.)	1944	1945	1946	1947 (Jan.- Sept.)
<b>OTHER CEREALS</b>								
Biscuits (including crispbread) . . . . .	2.53	3.25	3.30	2.83	2.00	2.87	2.57	2.15
Buns and scones . . . . .	5.57	5.85	5.72	5.36	5.14	5.86	4.85	4.63
Cakes . . . . .	5.09	5.78	6.36	5.92	4.41	4.50	4.68	4.73
<i>Total cakes and biscuits</i> . . . . .	<i>13.19</i>	<i>14.88</i>	<i>15.38</i>	<i>14.11</i>	<i>11.55</i>	<i>13.23</i>	<i>12.10</i>	<i>11.51</i>
Oatmeal and oat products (unrationed) . . . . .	0.66	0.53	0.42	0.41	0.38	0.23	0.19	0.13
Oatmeal and oat products on points . . . . .	1.30	1.38	1.61	1.78	1.07	1.05	1.09	1.11
<i>Total oat products</i> . . . . .	<i>1.96</i>	<i>1.91</i>	<i>2.03</i>	<i>2.19</i>	<i>1.45</i>	<i>1.28</i>	<i>1.28</i>	<i>1.24</i>
Whole rice, sago and tapioca . . . . .	0.91	0.46	0.05	0.04	1.12	0.49	0.02	0.01
Breakfast cereals other than oats . . . . .	1.15	1.16	1.24	1.46	0.89	0.94	0.98	1.06
Cornflour, custard powder, etc. . . . .	0.82	0.86	1.06	1.01	0.78	0.76	0.90	0.93
Other farinaceous foods . . . . .	0.64	1.03	1.52	1.78	0.50	0.76	1.14	1.19
<i>Total cereals other than bread and flour</i> . . . . .	<i>18.67</i>	<i>20.30</i>	<i>21.28</i>	<i>20.59</i>	<i>16.29</i>	<i>17.46</i>	<i>16.42</i>	<i>15.94</i>
As percentage of working-class . . . . .	115	116	130	129	—	—	—	—
<b>BEVERAGES</b>								
Tea . . . . .	2.00	2.10	2.33	2.23	1.89	2.01	2.28	2.21
Coffee (beans or powder only) . . . . .	0.63	0.59	0.52	0.56	0.17	0.16	0.14	0.14
Cocoa and cocoa drinks . . . . .	0.61	0.56	0.50	0.47	0.64	0.53	0.48	0.46

<sup>1</sup>Cod, haddock, skate, whiting, bream, ling, etc.

<sup>2</sup>Plaice, halibut, sole, turbot, etc.

<sup>3</sup>Rolls, muffins, crumpets, fancy bread, etc.

Appendix A

TABLE 2

Domestic Expenditure on Vegetables and Fruit by Urban Middle-Class and Working-Class Households in 1944 to 1947

(pence per head per week)

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.- Sept.)	1944	1945	1946	1947 (Jan.- Sept.)
<b>POTATOES</b>								
Chips . . . . .	0.30	0.32	0.41	0.52	1.21	1.58	1.84	2.24
Old potatoes . . . . .	2.50	2.42	3.04	2.95	3.27	3.27	3.93	3.79
New potatoes . . . . .	1.22	1.18	1.05	1.13	1.52	1.64	1.36	1.58
<i>Total potatoes</i> . . . . .	<i>4.02</i>	<i>3.92</i>	<i>4.50</i>	<i>4.60</i>	<i>6.00</i>	<i>6.49</i>	<i>7.13</i>	<i>7.61</i>
<b>ROOT VEGETABLES</b>								
Carrots . . . . .	0.52	0.69	0.68	0.83	0.47	0.54	0.49	0.53
Turnips and swedes . . . . .	0.25	0.30	0.34	0.48	0.32	0.32	0.35	0.40
Other root vegetables . . . . .	0.54	0.58	0.57	0.63	0.45	0.39	0.40	0.39
<i>Total root vegetables</i> . . . . .	<i>1.31</i>	<i>1.57</i>	<i>1.59</i>	<i>1.94</i>	<i>1.24</i>	<i>1.25</i>	<i>1.24</i>	<i>1.32</i>
<b>FRESH GREEN VEGETABLES</b>								
Cabbage, etc. . . . .	1.38	1.56	1.59	2.26	1.74	1.72	1.82	2.18
Brussels sprouts . . . . .	0.78	0.89	0.96	0.56	0.71	0.70	0.77	0.42
Cauliflower . . . . .	1.12	1.03	1.42	1.57	0.70	0.72	0.86	0.68
Lettuce and endive . . . . .	1.41	1.92	1.49	1.92	0.94	1.07	0.87	1.07
Fresh peas and beans . . . . .	1.60	1.94	1.24	1.61	1.32	1.32	0.91	1.25
Other fresh green vegetables . . . . .	0.80	0.72	0.64	0.58	0.46	0.34	0.30	0.28
<i>Total fresh green vegetables</i> . . . . .	<i>7.09</i>	<i>8.06</i>	<i>7.34</i>	<i>8.50</i>	<i>5.87</i>	<i>5.87</i>	<i>5.53</i>	<i>5.88</i>
<b>OTHER VEGETABLES</b>								
Canned peas and beans . . . . .	0.57	0.65	0.29	1.18	0.75	1.14	1.26	1.64
Dried pulses . . . . .	0.26	0.21	0.31	0.36	0.55	0.56	0.57	0.67
Other canned vegetables . . . . .	0.04	0.16	0.17	0.38	0.03	0.07	0.11	0.21
Onions and shallots . . . . .	0.47	0.63	0.47	0.82	0.50	0.60	0.49	0.90
Miscellaneous . . . . .	1.56	1.62	1.83	1.76	1.19	1.14	1.08	1.12
<i>Total vegetables</i> . . . . .	<i>15.32</i>	<i>16.82</i>	<i>16.50</i>	<i>19.54</i>	<i>16.13</i>	<i>17.12</i>	<i>17.41</i>	<i>19.35</i>
<b>FRUIT</b>								
Fresh tomatoes . . . . .	2.22	2.27	3.16	5.53	1.88	1.96	2.58	4.51
Canned tomatoes . . . . .	—	—	0.02	0.09	—	—	0.03	0.13
<i>Total tomatoes</i> . . . . .	<i>2.22</i>	<i>2.27</i>	<i>3.18</i>	<i>5.62</i>	<i>1.88</i>	<i>1.96</i>	<i>2.61</i>	<i>4.64</i>
Citrus fruits . . . . .	0.79	1.66	1.54	3.57	0.60	1.17	1.04	2.00
Apples . . . . .	2.40	3.02	2.65	2.40	1.95	2.26	1.83	1.70
Other fresh fruit (including rhubarb) . . . . .	2.03	2.79	3.88	7.40	1.35	1.51	2.31	3.59
Bottled and canned fruit . . . . .	0.10	0.01	0.23	0.45	0.10	0.01	0.20	0.45
Dried fruit . . . . .	1.34	1.17	1.23	1.76	0.91	0.87	0.77	0.90
<i>Total fruit</i> . . . . .	<i>8.88</i>	<i>10.92</i>	<i>12.71</i>	<i>21.20</i>	<i>6.79</i>	<i>7.78</i>	<i>8.76</i>	<i>13.28</i>

Studies in Urban Household Diets 1944-49

TABLE 3

Percentage Contributions of Different Foods to Energy Value and Nutrient Content of Urban Middle-Class and Working-Class Diets 1944 to 1947 excluding Welfare Orange Juice and Vitamin Welfare Foods

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.-Sept.)	1944	1945	1946	1947 (Jan.-Sept.)
<b>ENERGY VALUE</b>								
All cereals . . . . .	38.0	38.5	38.6	38.4	39.4	40.8	40.0	40.7
(Bread and flour) . . . . .	(27.0)	(26.4)	(25.6)	(25.8)	(29.8)	(30.4)	(29.9)	(31.0)
All meat . . . . .	13.8	12.5	11.7	11.2	13.6	12.5	11.7	11.1
(Rationed meat) . . . . .	(10.3)	(9.4)	(8.8)	(8.1)	(10.0)	(9.3)	(8.6)	(8.0)
Fats . . . . .	13.2	12.7	12.2	11.9	12.3	11.8	11.4	10.8
All vegetables and fruit . . . . .	9.3	9.5	9.7	10.0	10.6	10.7	11.4	11.5
(Potatoes (including chips)) . . . . .	(6.0)	(5.9)	(6.2)	(5.9)	(7.8)	(7.7)	(8.5)	(8.4)
Milk . . . . .	10.0	10.5	10.8	11.1	9.3	9.5	9.6	9.8
Sugar and preserves . . . . .	9.4	9.5	9.9	10.3	8.5	8.3	8.8	9.2
Other foods . . . . .	6.3	6.8	7.1	7.1	6.1	6.4	7.1	6.9
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cal. <sup>1</sup>	2,403	2,402	2,336	2,306	2,387	2,375	2,307	2,308
<b>PROTEIN, ANIMAL</b>								
Meat . . . . .	21.7	18.2	19.2	19.5	19.2	18.4	19.2	19.5
Milk . . . . .	17.6	18.2	16.7	18.2	16.4	15.8	15.4	15.6
Cheese, fish and eggs . . . . .	13.4	15.6	15.3	15.6	12.3	11.8	12.8	11.7
Total . . . . . g.	52.7	52.0	51.2	53.3	47.9	46.0	47.4	46.8
<b>VEGETABLE PROTEIN</b>								
Bread and flour . . . . .	28.4	28.5	27.0	27.2	31.5	32.9	31.1	32.1
Other cereals . . . . .	8.1	9.1	10.2	9.1	6.9	7.9	7.4	8.1
Potatoes . . . . .	9.4	9.1	9.0	7.8	11.0	10.6	10.3	10.4
Other foods . . . . .	1.4	1.3	2.6	2.6	2.7	2.6	3.8	2.6
Total . . . . .	47.3	48.1	48.8	46.7	52.1	54.0	52.6	53.2
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total protein . . . . . g.	74	77	78	77	73	76	78	77
<b>FAT</b>								
Fats . . . . .	35.7	34.7	34.8	34.1	35.1	33.7	33.7	34.2
Meat . . . . .	31.6	28.6	26.1	26.1	29.8	28.2	25.6	28.0
Milk, cheese and eggs . . . . .	19.4	20.4	21.7	22.7	19.2	19.6	19.8	20.7
Other foods . . . . .	13.3	16.3	17.4	17.1	15.9	18.5	20.9	17.1
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
g.	98	98	92	88	94	92	86	82
<b>CALCIUM</b>								
Milk . . . . .	50.0	52.2	49.7	46.4	49.3	49.1	46.0	42.4
Bread and flour . . . . .	16.2	15.6	19.8	24.6	19.9	20.0	23.3	30.5
Cheese . . . . .	9.1	9.0	8.8	7.8	9.8	9.3	9.1	7.4
Vegetables . . . . .	7.9	8.2	7.1	6.1	8.6	8.3	7.9	6.4
Other foods . . . . .	16.8	15.0	14.6	15.1	12.4	13.3	13.7	13.3
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	948	945	988	1,054	868	875	912	996
<b>IRON</b>								
Bread and flour . . . . .	28.8	26.3	30.8	27.7	32.6	29.9	34.0	31.5
Other cereals . . . . .	14.4	12.8	12.3	12.5	11.1	10.2	9.7	9.8
Rationed meat (including bacon) . . . . .	12.2	14.3	15.8	17.4	12.6	15.0	15.3	17.5
Other meat . . . . .	9.4	6.8	7.5	9.0	7.4	6.3	6.9	9.1
Vegetables . . . . .	16.5	17.3	15.1	14.6	19.3	19.7	17.4	16.8
Other foods . . . . .	18.7	22.5	18.5	18.8	17.0	18.9	16.7	15.3
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	13.9	13.3	14.6	14.4	13.5	12.7	14.4	14.3

Appendix A

TABLE 3 (continued)

	Middle class				Working class			
	1944	1945	1946	1947 (Jan.- Sept.)	1944	1945	1946	1947 (Jan.- Sept.)
<b>VITAMIN A</b>								
Root vegetables . . . . .	24.1	28.7	27.0	23.4	24.9	27.5	25.2	22.0
Other vegetables . . . . .	9.6	9.2	8.6	8.9	8.2	7.4	7.4	7.0
Fats . . . . .	19.6	20.8	22.7	22.3	21.4	23.7	25.4	25.5
Milk . . . . .	11.3	12.0	12.5	12.2	11.9	13.3	13.0	13.2
Unrationed meat . . . . .	19.4	12.1	12.6	14.8	19.0	11.8	13.0	14.0
Other foods . . . . .	16.0	17.2	16.6	18.4	14.6	16.3	16.0	18.3
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
i.u.	3,634	3,590	3,490	3,680	3,173	2,908	2,926	2,929
<b>VITAMIN B<sub>1</sub><sup>2</sup></b>								
Bread and flour . . . . .	35.4	32.6	40.7	37.2	37.7	35.4	40.0	41.6
Other cereals . . . . .	7.0	6.3	5.3	7.6	5.5	5.4	5.8	5.2
Potatoes . . . . .	15.2	16.7	19.3	15.2	17.9	19.1	20.0	19.4
Other vegetables . . . . .	7.0	7.6	6.7	6.9	6.2	6.8	6.5	6.5
Meat . . . . .	19.0	18.0	12.7	12.4	18.5	17.0	12.3	11.7
Milk . . . . .	11.4	12.5	10.7	12.4	9.9	10.9	10.3	10.4
Other foods . . . . .	5.0	6.3	4.6	8.3	4.3	5.4	5.1	5.2
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	1.34	1.22	1.28	1.23	1.38	1.25	1.32	1.31
<b>RIBOFLAVIN</b>								
Milk . . . . .	33.7	34.6	36.9	37.2	33.0	36.1	33.3	34.2
Meat . . . . .	18.7	17.6	15.3	14.3	17.6	15.8	15.1	14.0
Bread and flour . . . . .	12.8	8.3	13.1	13.7	14.8	10.1	15.8	17.1
Vegetables . . . . .	14.4	12.6	12.0	11.4	14.8	15.8	14.6	14.0
Other foods . . . . .	20.4	26.9	22.7	23.4	19.8	22.2	21.2	20.7
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	1.87	1.82	1.76	1.75	1.76	1.58	1.65	1.64
<b>NICOTINIC ACID</b>								
Rationed meat . . . . .	23.6	23.1	21.6	20.9	23.0	22.7	20.0	20.9
Unrationed meat . . . . .	14.3	11.9	9.7	10.8	11.5	9.9	7.6	10.1
Bread and flour . . . . .	25.0	23.9	30.6	25.6	26.6	26.5	33.1	28.7
Vegetables . . . . .	20.7	21.6	19.4	20.2	23.8	24.2	21.4	23.3
Other foods . . . . .	16.4	19.5	18.7	22.5	15.1	16.7	17.9	17.0
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	14.0	13.4	14.4	12.9	13.9	13.2	14.5	12.9
<b>VITAMIN C<sup>2</sup></b>								
Potatoes . . . . .	35.8	31.9	34.1	26.0	45.0	41.9	43.2	38.6
Green vegetables . . . . .	21.4	19.2	18.2	10.0	20.0	18.6	18.2	11.4
Other vegetables . . . . .	9.5	8.5	6.9	8.0	10.0	9.3	9.1	9.1
Fruit . . . . .	23.8	31.9	29.5	46.0	15.0	20.9	20.4	31.8
Other foods (excluding welfare orange juice) . . . . .	9.5	8.5	11.3	10.0	10.0	9.3	9.1	9.1
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
mg.	42	47	44	50	40	43	44	44
<b>VITAMIN D</b>								
Fish . . . . .	48.8	51.1	53.5	54.8	45.3	45.5	51.1	47.2
Margarine . . . . .	28.4	32.0	29.3	27.1	32.0	38.4	32.8	34.4
Eggs . . . . .	13.0	10.1	8.3	8.4	12.3	9.1	7.3	8.0
Other foods (excluding vitamin welfare foods) . . . . .	9.8	6.8	8.9	9.7	10.4	7.0	8.8	10.4
All foods . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
i.u.	123	178	157	155	106	143	137	125

<sup>1</sup>Totals for Calories and all nutrients are per head per day.

<sup>2</sup>Includes allowances for cooking losses.

APPENDIX B

# Domestic Food Consumption in Social Groups 1944 and Oct. 1936 to Mar. 1937

(oz. per head per week except where otherwise stated)

	National Food Survey 1944			Crawford and Broadley 1936-37
	Special sample of poorer households (Chapter III)	Other urban working-class households	Urban middle-class households	Class D
<b>MILK</b>				
Liquid full price . . . . . pt.	2.29	2.90	3.57	1.57
Welfare scheme:				
Cheap . . . . . pt.	1.24	0.81	0.51	—
Free . . . . . pt.	0.09	0.04	—	—
School . . . . . pt.	0.29	0.23	0.16	n.a.
Total liquid milk . . . . . pt.	3.91	3.98	4.24	1.57 <sup>1</sup>
Condensed . . . . . eq. pt.	0.18	0.11	0.09	0.57
Dried . . . . . eq. pt.	0.15	0.34	0.55	n.a.
Total processed milk . . . . . eq. pt.	0.33	0.45	0.64	n.a.
<b>CHEESE</b> . . . . .	2.4	2.6	2.7	2.1
<b>MEAT</b>				
Rationed meat				
Beef and veal, roasting, etc. . . . .	4.9	5.1	4.9	} 10.4
Stewing . . . . .	3.2	1.8	1.9	
Mutton and lamb . . . . .	4.2	5.4	6.0	} 5.2
Pork . . . . .	1.4	1.9	1.9	} 1.3
Total . . . . .	13.7	14.2	14.7	16.9
Bacon and ham . . . . .	4.2	4.6	4.7	3.9
Unrationed meat				
Liver . . . . .	0.5	0.7	0.8	} 6.4
Kidney . . . . .	...	0.1	0.1	
Other offal . . . . .	0.8	1.2	1.2	
Rabbit, poultry, game, etc. . . . .	1.2	1.1	1.8	
Cooked meat . . . . .	0.7	0.8	0.7	} 3.2
Canned and prepared meat . . . . .	1.7	1.6	1.5	
Sausages . . . . .	4.6	4.1	3.8	3.2
Total . . . . .	9.5	9.6	9.9	9.6
Total meat . . . . .	27.4	28.4	29.3	30.4
<b>FISH</b>				
White, fresh cheap . . . . .	2.4	3.2	4.1	} 4.8
White, fresh expensive . . . . .	0.2	0.4	0.9	
White, fresh smoked, etc. . . . .	0.5	0.4	0.4	
Fat . . . . .	1.2	0.6	1.6	
Fried . . . . .	2.1	1.9	0.4	} n.a.
Canned . . . . .	0.8	1.1	1.4	
Total . . . . .	7.2	7.6	8.8	n.a.

<sup>1</sup>Excludes school milk (probably not more than 0.1 pt.).

Appendix B

	National Food Survey 1944			Crawford and Broadley 1936-37
	Special sample of poorer households (Chapter III)	Other urban working-class households	Urban middle-class households	Class D
<b>EGGS</b>				
Shell . . . . . No.	0.74	0.95	1.21	2.6
Dried . . . . . eq. No.	1.68	2.00	2.62	—
Total . . . . .	2.42	2.95	3.83	2.6
<b>FATS</b>				
Butter . . . . .	1.98	2.05	2.22	4.5
Margarine . . . . .	4.26	4.29	4.36	3.7
Cooking fat and lard . . . . .	1.86	1.99	2.08	} 2.0
Suet and dripping . . . . .	0.71	0.89	1.10	
Total . . . . .	8.81	9.22	9.76	10.2
<b>SUGAR AND PRESERVES</b>				
Sugar . . . . .	9.1	9.1	8.7	15.2
Rationed preserves . . . . .	3.9	4.8	6.9	} 4.1
Other preserves . . . . .	1.0	1.3	1.9	
Total . . . . .	14.0	15.2	17.5	19.3
<b>POTATOES</b>				
Old . . . . .	53.6	52.6	44.3	n.a.
New . . . . .	19.7	16.2	13.7	n.a.
Total . . . . .	73.3	68.8	58.0	61.6
Chips and crisps . . . . .	4.7	2.2	0.6	n.a.
Total potatoes . . . . .	78.0	71.0	58.6	n.a.
FRESH GREEN VEGETABLES . . . . .	14.6	22.0	23.3	n.a.
OTHER VEGETABLES . . . . .	15.1	15.5	18.8	n.a.
<b>FRUIT AND TOMATOES</b>				
Tomatoes <sup>1</sup> . . . . .	1.6	2.5	3.8	n.a.
Citrus fruit . . . . .	1.0	1.2	1.5	n.a.
Other fresh fruit and rhubarb . . . . .	3.4	8.3	12.7	n.a.
Bottled and canned fruit . . . . .	0.2	0.7	2.0	n.a.
Dried fruit . . . . .	1.1	1.6	2.3	n.a.
Total . . . . .	7.3	14.3	22.3	n.a.
<b>BREAD</b>				
. . . . .	68.5 <sup>2</sup>	59.5 <sup>2</sup>	51.3 <sup>2</sup>	62.4
FLOUR . . . . .	5.4	7.2	9.0	13.3
Total (as flour equivalent) . . . . .	58.1	53.0	48.5	61.3
<b>OTHER CEREALS</b>				
Cakes, biscuits, scones, etc. . . . .	10.8	11.6	13.2	n.a.
Oatmeal and oat products . . . . .	1.5	1.4	2.0	n.a.
Other cereal products . . . . .	3.1	3.3	3.5	n.a.
Total . . . . .	15.4	16.3	18.7	n.a.
<b>BEVERAGES</b>				
Tea . . . . .	1.7	1.9	2.0	3.4
Coffee (beans or powder only) . . . . .	0.1	0.2	0.6	n.a.
Cocoa and cocoa drinks only . . . . .	0.5 <sup>3</sup>	0.6 <sup>3</sup>	0.6 <sup>3</sup>	0.6

<sup>1</sup>Includes canned.

<sup>2</sup>Includes rolls, muffins, crumpets.

<sup>3</sup>Includes patent drinks.

APPENDIX C

Household Diets of Manual and  
Non-Manual Workers in the  
Urban Working Class 1949

TABLE 1  
*Domestic Food Consumption by the Urban Working Class in Occupational  
Groups 1949*  
(oz. per head per week except where otherwise stated)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
<b>LIQUID MILK</b>				
Full price . . . . . pt.	2.6	3.0	3.4	3.3
Welfare and school . . . . . pt.	1.7	1.7	1.6	1.1
All liquid milk . . . . . pt.	4.3	4.7	5.0	4.4
<b>CONDENSED AND DRIED MILK</b> eq. pt.				
	0.5	0.4	0.4	0.4
<b>CHEESE</b> . . . . .				
	2.1	2.0	2.1	2.2
<b>MEAT</b>				
Fresh rationed meat . . . . .	11.2	10.7	10.9	11.4
Canned corned beef . . . . .	0.6	0.6	0.6	0.6
Offal, rabbit, poultry and game . . . . .	2.3	2.2	2.7	2.7
Cooked and canned meat . . . . .	1.0	1.1	1.1	1.1
Sausages . . . . .	4.3	4.0	4.1	4.2
Bacon . . . . .	2.6	2.6	2.6	2.7
All meat . . . . .	22.0	21.2	22.0	22.7
<b>FISH</b>				
Fresh, dried and smoked . . . . .	5.0	5.3	6.9	6.3
Fried . . . . .	1.6	1.4	1.2	1.7
Canned . . . . .	0.3	0.4	0.5	0.4
All fish . . . . .	6.9	7.1	8.6	8.4
<b>EGGS</b>				
Shell . . . . . No.	2.6	2.9	3.0	2.8
Dried . . . . . eq. No.	0.2	0.2	0.3	0.2
All eggs . . . . .	2.8	3.1	3.3	3.0
<b>FATS</b>				
Butter . . . . .	3.3	3.5	3.8	3.5
Margarine . . . . .	4.2	4.2	4.1	4.2
Other fats . . . . .	3.0	3.0	3.0	3.0
All fats . . . . .	10.5	10.7	10.9	10.7
<b>SUGAR</b> . . . . .				
	10.9	11.1	11.0	10.8
<b>PRESERVES</b> <sup>1</sup> . . . . .				
	5.8	6.1	6.3	6.3
All sugar and preserves . . . . .	16.7	17.2	17.3	17.1
<b>POTATOES</b>				
Old and new . . . . .	68.7	64.3	59.2	65.4
Chips and crisps . . . . .	4.7	3.4	2.1	3.5
All potatoes . . . . .	73.4	67.7	61.3	68.9

Appendix C

TABLE 1 (continued)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
<b>FRESH GREEN VEGETABLES</b>				
Fresh peas and beans . . . . .	1.4	2.8	3.6	2.8
Other fresh green vegetables <sup>2</sup> . . . . .	11.0	11.9	12.6	12.1
Carrots . . . . .	3.0	3.0	3.3	2.8
Other fresh vegetables . . . . .	9.5	8.4	8.6	8.7
Canned and dried vegetables . . . . .	5.1	4.7	4.1	4.6
<i>All vegetables (other than potatoes)</i> . . . . .	<i>30.0</i>	<i>30.8</i>	<i>32.2</i>	<i>31.0</i>
<b>FRUIT</b>				
Tomatoes . . . . .	4.2	5.2	6.1	5.8
Citrus fruit . . . . .	2.8	3.4	4.2	3.1
Apples and pears . . . . .	4.5	5.9	7.9	6.0
Other fresh fruit <sup>3</sup> . . . . .	3.7	4.8	5.4	4.5
<i>All fresh fruit</i> . . . . .	<i>15.2</i>	<i>19.3</i>	<i>23.6</i>	<i>19.4</i>
Canned and bottled fruit and tomatoes <sup>4</sup> . . . . .	1.9	2.2	2.8	1.8
Dried fruit and nuts . . . . .	1.0	1.2	1.6	1.2
<i>All fruit</i> . . . . .	<i>18.1</i>	<i>22.7</i>	<i>28.0</i>	<i>22.4</i>
<b>BREAD AND FLOUR</b>				
Bread <sup>5</sup> . . . . .	63.1	56.7	49.9	61.1
Flour . . . . .	7.1	6.6	6.8	6.9
<b>OTHER CEREALS</b>				
Biscuits . . . . .	2.9	3.2	3.4	2.9
Fruit bread, buns and cakes . . . . .	8.3	8.4	8.0	9.2
Oatmeal and oat products . . . . .	1.1	1.2	1.3	1.2
Breakfast cereals . . . . .	1.3	1.6	1.7	1.5
Other cereal foods <sup>6</sup> . . . . .	3.5	3.7	4.0	2.6
<i>All other cereal products</i> . . . . .	<i>17.1</i>	<i>18.1</i>	<i>18.4</i>	<i>17.4</i>
<b>BEVERAGES</b>				
Tea . . . . .	1.9	1.8	1.9	2.0
Coffee (beans or powder only) . . . . .	0.1	0.1	0.2	0.1
Cocoa and cocoa drinks . . . . .	0.4	0.4	0.4	0.4

<sup>1</sup>Includes syrup and treacle.

<sup>2</sup>Includes leafy salads.

<sup>3</sup>Includes rhubarb.

<sup>4</sup>Includes fruit juice.

<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets.

<sup>6</sup>Includes rice, sago, tapioca, cornflour, ready-made puddings.



Studies in Urban Household Diets 1944-49

TABLE 2

Domestic Food Expenditure by the Urban Working Class in Occupational Groups 1949

(pence per head per week)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
<b>LIQUID MILK</b>				
Full price . . . . .	12.9	14.8	16.9	16.3
Welfare scheme . . . . .	2.3	2.4	2.3	1.4
<i>All liquid milk</i> . . . . .	<i>15.2</i>	<i>17.2</i>	<i>19.2</i>	<i>17.7</i>
<b>CONDENSED AND DRIED MILK . . .</b>				
	1.7	1.7	1.8	1.6
<b>CHEESE . . . . .</b>				
	1.8	1.8	2.0	2.0
<b>MEAT</b>				
Fresh rationed meat . . . . .	14.5	14.0	14.2	14.7
Canned corned beef . . . . .	0.8	0.7	0.6	0.7
Offal, rabbit and game . . . . .	2.3	2.3	3.1	2.8
Cooked and canned meat . . . . .	2.0	2.1	2.0	2.4
Sausages . . . . .	4.2	4.0	4.0	4.1
Bacon . . . . .	4.3	4.5	4.6	4.6
<i>All meat</i> . . . . .	<i>28.1</i>	<i>27.6</i>	<i>28.5</i>	<i>29.3</i>
<b>FISH</b>				
Fresh, dried and smoked . . . . .	4.8	5.3	6.9	6.1
Fried . . . . .	3.1	2.5	2.1	2.8
Canned . . . . .	0.7	0.9	1.2	0.9
<i>All fish</i> . . . . .	<i>8.6</i>	<i>8.7</i>	<i>10.2</i>	<i>9.8</i>
<b>EGGS</b>				
Shell . . . . .	7.1	7.1	7.4	7.1
Dried . . . . .	0.5	0.6	0.7	0.4
<i>All eggs</i> . . . . .	<i>7.6</i>	<i>7.7</i>	<i>8.1</i>	<i>7.5</i>
<b>FATS</b>				
Butter . . . . .	3.5	3.6	3.7	3.7
Margarine . . . . .	2.4	2.4	2.4	2.4
Other fats . . . . .	2.1	2.2	2.3	2.2
<i>All fats</i> . . . . .	<i>8.0</i>	<i>8.2</i>	<i>8.4</i>	<i>8.3</i>
<b>SUGAR . . . . .</b>				
	3.4	3.5	3.5	3.4
<b>PRESERVES<sup>1</sup> . . . . .</b>				
	4.6	4.9	4.4	4.8
<i>All sugar and preserves</i> . . . . .	<i>8.0</i>	<i>8.4</i>	<i>7.9</i>	<i>8.2</i>
<b>POTATOES</b>				
Old and new . . . . .	7.3	7.2	6.3	7.2
Chips and crisps . . . . .	2.9	2.1	1.3	2.2
<i>All potatoes</i> . . . . .	<i>10.2</i>	<i>9.3</i>	<i>7.6</i>	<i>9.4</i>

## Appendix C

TABLE 2 (continued)

	Single-earner households			All households
	Heavy manual	Light manual	Non-manual	
<b>FRESH GREEN VEGETABLES</b>				
Fresh peas and beans . . . . .	0.4	1.1	1.4	1.1
Other fresh green vegetables <sup>2</sup> . . . . .	3.2	3.9	4.5	4.1
<b>OTHER VEGETABLES</b>				
Carrots . . . . .	0.6	0.7	0.7	0.6
Other fresh vegetables . . . . .	2.4	2.3	2.5	2.5
Canned and dried vegetables . . . . .	3.4	3.2	2.6	3.0
<i>All vegetables (other than potatoes)</i> . . . . .	<i>10.0</i>	<i>11.2</i>	<i>11.7</i>	<i>11.3</i>
<b>FRUIT</b>				
Tomatoes . . . . .	4.0	4.7	5.4	5.2
Citrus fruit . . . . .	1.4	1.6	2.1	1.6
Apples and pears . . . . .	2.3	2.7	3.7	2.7
Other fresh fruit <sup>3</sup> . . . . .	2.4	3.0	3.6	2.7
<i>All fresh fruit</i> . . . . .	<i>10.1</i>	<i>12.0</i>	<i>14.8</i>	<i>12.2</i>
Canned and bottled fruit and tomatoes <sup>4</sup> . . . . .	1.3	1.5	1.5	1.1
Dried fruit and nuts . . . . .	0.7	1.0	1.3	1.0
<i>All fruit</i> . . . . .	<i>12.1</i>	<i>14.5</i>	<i>17.6</i>	<i>14.3</i>
<b>BREAD AND FLOUR</b>				
Bread <sup>5</sup> . . . . .	11.6	10.5	9.4	11.6
Flour . . . . .	1.6	1.5	1.6	1.6
<i>Total</i> . . . . .	<i>13.2</i>	<i>12.0</i>	<i>11.0</i>	<i>13.2</i>
<b>OTHER CEREALS</b>				
Biscuits . . . . .	3.7	4.0	4.2	3.6
Fruit bread, buns and cakes . . . . .	9.3	9.3	8.6	10.6
Oatmeal and oat products . . . . .	0.5	0.6	0.7	0.6
Breakfast cereals . . . . .	1.2	1.4	1.4	1.3
Other cereal foods <sup>6</sup> . . . . .	2.7	3.0	3.3	1.8
<i>All other cereal products</i> . . . . .	<i>17.4</i>	<i>18.3</i>	<i>18.2</i>	<i>17.9</i>
<b>BEVERAGES</b>				
Tea . . . . .	4.4	4.6	4.8	4.9
Coffee (beans or powder only) . . . . .	0.4	0.4	0.7	0.5
Cocoa and cocoa drinks . . . . .	0.6	0.8	0.9	0.8
<i>Total</i> . . . . .	<i>5.4</i>	<i>5.8</i>	<i>6.4</i>	<i>6.2</i>
Other foods . . . . .	6.8	6.9	7.6	7.2
<i>Total food expenditure</i> . . . . .	<i>154.2</i> <i>(12s. 10d.)</i>	<i>159.3</i> <i>(13s. 3d.)</i>	<i>166.2</i> <i>(13s. 10d.)</i>	<i>163.9</i> <i>(13s. 8d.)</i>

<sup>1</sup>Includes syrup and treacle.<sup>2</sup>Includes leafy salads.<sup>3</sup>Includes rhubarb.<sup>4</sup>Includes fruit juices.<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets.<sup>6</sup>Includes rice, sago, tapioca, cornflour, ready-made puddings.

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TABLE 3

Domestic Food Consumption by Selected Types of Household  
in Occupational Groups 1949

(oz. per head per week except where otherwise stated)

	One male and one female adult with								
	no children			2 children			4 or more children		
	Heavy manual	Light manual	Non- manual	Heavy manual	Light manual	Non- manual	Heavy manual	Light manual	Non- manual
<b>LIQUID MILK</b>									
Full price . . . pt.	4.0	4.4	4.7	2.5	2.7	3.0	1.6	1.9	2.0
Welfare and school . . . pt.	0.2	0.3	0.3	2.0	2.1	2.2	2.2	2.4	2.5
Other milk . . . eq. pt.	0.2	0.2	0.3	0.5	0.5	0.4	0.6	0.5	0.1
All milk . . . . .	4.4	4.9	5.3	5.0	5.3	5.6	4.4	4.8	4.6
<b>CHEESE . . . . .</b>									
	2.8	2.5	2.7	2.3	1.9	1.9	1.8	1.8	1.6
<b>MEAT</b>									
Rationed meat:									
Fresh . . . . .	13.5	13.0	12.9	11.1	10.5	10.4	9.4	9.1	9.1
Canned corned beef . . .	1.1	0.8	0.8	0.6	0.5	0.4	0.4	0.6	0.4
Bacon . . . . .	2.3	2.8	2.8	2.7	2.7	2.4	2.7	2.5	3.0
Total . . . . .	16.9	16.6	16.5	14.4	13.7	13.2	12.5	12.2	12.5
Other meat . . . . .	12.7	11.4	11.6	6.9	6.9	6.9	4.9	5.6	6.4
All meat . . . . .	29.6	28.0	28.1	21.3	20.6	20.1	17.4	17.8	18.9
<b>FISH</b>									
Fresh and processed . . .	12.2	10.4	10.4	3.7	4.8	5.6	2.7	2.9	8.1
Prepared . . . . .	2.7	2.9	1.8	2.0	1.6	1.5	1.7	1.0	0.6
Total . . . . .	14.9	13.3	12.2	5.7	6.4	7.1	4.4	3.9	8.7
<b>EGGS</b>									
Shell . . . . . No.	3.1	3.5	3.2	2.7	2.9	2.8	2.0	2.2	2.5
Dried . . . . . eq. No.	0.2	0.2	0.2	0.3	0.3	0.4	0.1	0.2	—
All eggs . . . . .	3.3	3.7	3.4	3.0	3.2	3.2	2.1	2.4	2.5
<b>FATS</b>									
Butter . . . . .	3.8	3.7	4.0	3.4	3.5	3.8	3.2	3.1	3.6
Margarine . . . . .	4.4	4.5	4.8	4.3	4.2	3.9	3.9	4.3	4.2
Other fats . . . . .	3.8	3.6	3.7	3.0	2.9	2.8	2.3	2.4	2.4
All fats . . . . .	12.0	11.8	12.5	10.7	10.6	10.5	9.4	9.8	10.2
<b>SUGAR . . . . .</b>									
	10.7	11.7	12.0	10.9	11.4	10.8	10.8	10.0	10.0
<b>PRESERVES . . . . .</b>									
	6.5	7.1	8.2	6.3	5.7	6.2	5.5	5.4	4.2
Total . . . . .	17.2	18.8	20.2	17.2	17.1	17.0	16.3	15.4	14.2
<b>POTATOES<sup>1</sup> . . . . .</b>									
	85.2	75.5	67.2	74.2	66.8	61.0	66.0	64.9	49.0
<b>FRESH GREEN VEGETABLES</b>									
Peas and beans . . . . .	2.1	4.6	5.2	1.0	2.8	3.2	0.6	0.6	2.0
Other <sup>2</sup> . . . . .	18.2	18.7	15.2	9.0	10.8	12.0	6.8	8.2	5.6
<b>OTHER VEGETABLES</b>									
Root . . . . .	9.9	8.6	8.2	7.6	5.5	6.3	5.0	4.2	5.2
Other fresh . . . . .	9.7	8.4	8.2	5.2	4.6	4.8	4.3	3.5	3.2
Canned, etc. <sup>3</sup> . . . . .	5.3	5.5	5.6	5.5	4.6	3.6	4.0	4.0	2.8
All vegetables excluding potatoes . . . . .	45.2	45.8	42.4	28.3	28.3	29.9	20.7	20.5	18.8
<b>FRUIT</b>									
Tomatoes <sup>4</sup> . . . . .	6.2	7.6	8.5	3.9	5.5	6.0	2.1	3.1	5.3
Fresh fruit . . . . .	13.3	18.8	23.3	12.0	13.7	16.7	6.0	9.2	12.7
Other . . . . .	3.8	3.6	5.4	2.8	2.9	3.8	1.5	2.6	2.0
All fruit . . . . .	23.3	30.0	37.2	18.7	22.1	26.5	9.6	14.9	20.0

Appendix C

TABLE 3 (continued)

	One male and one female adult with								
	no children			2 children			4 or more children		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
<b>BREAD AND FLOUR</b>									
Bread <sup>1</sup> . . . . .	72.3	67.1	56.4	59.0	52.0	44.5	61.6	57.6	46.0
Flour . . . . .	10.2	8.9	8.0	6.4	6.6	6.5	5.0	5.9	9.3
<b>OTHER CEREALS</b> .	24.7	24.4	24.4	17.9	17.8	17.2	12.3	12.5	4.7
<b>BEVERAGES</b>									
Tea . . . . .	2.6	2.5	2.6	1.8	1.7	1.6	1.5	1.4	1.7
Coffee (beans or powder only) . . . . .	0.2	0.2	0.2	0.1	0.1	0.2	...	...	0.1
Cocoa and cocoa drinks	0.5	0.5	0.3	0.4	0.4	0.4	0.3	0.3	0.1

<sup>1</sup>Includes chips and crisps.

<sup>2</sup>Includes leafy salads.

<sup>3</sup>Includes bottled and dried.

<sup>4</sup>Includes canned tomatoes.

<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets.

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TABLE 4

Domestic Food Expenditure by Selected Types of Household  
in Occupational Groups 1949

(pence per head per week)

	One male and one female adult with								
	no children			2 children			4 or more children		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
<b>LIQUID MILK</b>									
Full price . . . . .	20.4	21.8	23.5	12.4	13.3	15.2	7.8	9.2	9.9
Welfare scheme . . . . .	0.2	0.4	0.4	2.9	3.1	3.1	2.7	3.0	3.3
Other milk . . . . .	1.7	1.4	1.9	1.7	1.8	1.6	2.2	1.7	0.6
All milk . . . . .	22.3	23.6	25.8	17.0	18.2	19.9	12.7	13.9	13.8
<b>CHEESE . . . . .</b>									
	2.1	2.4	3.2	2.0	1.6	1.7	1.7	1.5	0.9
<b>MEAT</b>									
Rationed meat:									
Fresh . . . . .	17.0	16.0	17.1	14.7	13.8	13.6	12.7	12.0	12.2
Canned corned beef . . . . .	1.3	0.9	0.8	0.8	0.6	0.5	0.5	0.7	0.6
Bacon . . . . .	4.0	4.6	5.0	4.8	4.5	4.6	4.2	4.3	4.5
Total . . . . .	22.3	21.5	22.9	20.3	18.9	18.7	17.4	17.0	17.3
Other meat . . . . .	14.5	13.3	14.0	7.5	7.9	8.5	5.8	5.8	6.9
All meat . . . . .	36.8	34.8	36.9	27.8	26.8	27.2	23.2	22.8	24.2
<b>FISH</b>									
Fresh and prepared . . . . .	12.0	10.7	10.3	3.3	4.7	5.6	2.7	2.8	3.7
Prepared . . . . .	5.4	5.8	3.9	3.8	3.1	3.0	3.3	2.0	1.5
All fish . . . . .	17.4	16.5	14.2	7.1	7.8	8.6	6.0	4.8	5.2
<b>EGGS</b>									
Shell . . . . .	8.4	8.2	7.8	7.8	7.1	7.4	6.0	5.8	6.7
Dried . . . . .	0.4	0.4	0.4	0.9	0.6	0.9	0.4	0.4	—
All eggs . . . . .	8.8	8.6	8.2	8.7	7.7	8.3	6.4	6.2	6.7
<b>FATS</b>									
Butter . . . . .	3.5	3.7	4.0	3.6	3.6	3.7	3.4	3.3	3.6
Margarine . . . . .	2.4	2.4	2.6	2.5	2.4	2.3	2.4	2.3	2.8
Other fats . . . . .	2.7	2.7	3.0	2.3	2.1	2.3	1.7	1.9	1.8
All fats . . . . .	8.6	8.8	9.6	8.4	8.1	8.3	7.5	7.5	8.2
<b>SUGAR . . . . .</b>									
	3.4	3.5	4.4	3.3	3.6	3.5	3.4	3.1	3.4
<b>PRESERVES . . . . .</b>									
	4.2	5.8	4.7	4.9	4.6	4.7	5.2	4.5	3.3
All sugar and preserves . . . . .	7.6	9.3	9.1	8.2	8.2	8.2	8.6	7.6	6.7
<b>POTATOES<sup>1</sup> . . . . .</b>									
	11.7	10.9	7.6	9.5	9.0	7.8	10.0	8.9	6.7
<b>FRESH GREEN VEGETABLES</b>									
Peas and beans . . . . .	0.5	2.4	2.7	0.3	1.0	1.0	0.2	0.2	0.9
Other <sup>2</sup> . . . . .	5.7	6.9	5.6	2.5	3.6	4.5	2.1	2.4	1.7
<b>OTHER VEGETABLES</b>									
Root . . . . .	1.9	1.6	2.0	1.3	1.1	1.2	0.9	0.8	1.0
Other fresh . . . . .	3.5	3.0	2.8	1.7	1.5	1.7	1.4	1.0	0.7
Canned, etc. <sup>3</sup> . . . . .	3.6	3.3	3.4	3.3	3.1	2.4	2.7	2.7	1.7
All vegetables excluding potatoes . . . . .	15.2	17.2	16.5	9.1	10.3	10.8	7.3	7.1	6.0
<b>FRUIT</b>									
Tomatoes <sup>4</sup> . . . . .	5.8	7.6	7.0	3.6	4.6	4.8	2.2	2.4	4.4
Fresh fruit . . . . .	7.7	9.9	13.6	6.6	6.9	8.7	3.0	4.3	6.2
Other . . . . .	2.2	3.2	4.4	2.0	2.5	2.6	0.9	1.6	2.0
All fruit . . . . .	15.7	20.7	25.0	12.2	14.0	16.1	6.1	8.3	12.6

Appendix C

TABLE 4 (continued)

	One male and one female adult with								
	no children			2 children			4 or more children		
	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual	Heavy manual	Light manual	Non-manual
<b>BREAD AND FLOUR</b>									
Bread <sup>5</sup> . . . . .	13.8	13.0	11.3	11.0	9.4	8.4	11.7	10.4	8.4
Flour . . . . .	1.9	2.1	2.3	1.5	1.5	1.4	1.3	1.4	1.8
<b>OTHER CEREALS . . . . .</b>									
<i>All cereals</i> . . . . .	25.4	25.2	26.7	18.7	18.1	16.4	12.3	12.6	4.9
	41.1	40.3	40.3	31.2	29.0	26.2	25.3	24.4	15.1
<b>BEVERAGES</b>									
Cocoa, etc. . . . .	1.0	1.2	1.1	0.4	0.7	0.9	0.6	0.6	...
Tea . . . . .	5.3	6.5	6.5	4.0	4.3	4.6	3.7	3.6	5.1
Coffee . . . . .	0.8	0.9	1.1	0.4	0.4	0.5	...	...	...
<i>All beverages</i> . . . . .	7.1	8.6	8.7	4.8	5.4	6.0	4.3	4.2	5.1
Other foods . . . . .	9.7	10.8	12.0	7.0	6.1	6.5	4.6	5.3	4.3
<i>Total Expenditure</i> . . . . .	203.7	212.5	217.1	153.0	152.2	155.6	123.7	122.5	155.5
	(17s. 0d.)	(17s. 9d.)	(18s. 1d.)	(12s. 9d.)	(12s. 8d.)	(13s. 0d.)	(10s. 4d.)	(10s. 3d.)	(9s. 8d.)

<sup>1</sup>Includes chips and crisps.

<sup>2</sup>Includes leafy salads.

<sup>3</sup>Includes bottled and dried.

<sup>4</sup>Includes canned tomatoes.

<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets.

## APPENDIX D

# Notes on the Selection of Heavy Workers' Samples

1. Occupation or industry, and type or place of work, are characteristics of employed persons and not of households. In order to study their influence on diet and food expenditure by means of survey data, they have to be made the basis of a classification of households. Difficulties are inevitably encountered in determining the principle on which households including several employed persons are to be treated in such a classification.

2. In selecting the occupational samples discussed in Chapter IV, these households were excluded altogether and the comparison restricted to households with only one employed member. This method has the disadvantage that it removes most of the households with adolescents and largely confines the samples to the households of younger married couples and of married couples without families.

3. The heavy workers' samples discussed in Chapter V were chosen according to the principle that a household was eligible for inclusion if it contained *any* member employed in one of the listed industries in a type of work classified as heavy. This criterion admits to the heavy workers' sample a number of households which would also have been qualified for inclusion in a light or non-heavy workers' sample if such a sample had been selected by similar methods at the same time. Moreover it results in a sample in which the proportion of households with more than one earner is bound to be greater than among the population from which the sample was drawn, even though the proportion of all workers engaged in heavy work is no greater among the households with several employed members than among those with only one. This over-representation of multiple-earner households arises because the probability that a particular household will be eligible for inclusion in the sample depends not only on the relative frequency of heavy workers but also on the number of earners the household contains. It would be avoided only if there were no households containing both heavy workers and workers of other kinds, which is obviously extremely improbable except among the households containing only one earner. It is to be expected, therefore, that the average number of earners per household will be considerably greater in a sample selected in this way than in the population from which the sample was drawn. The figures of average food expenditure and consumption will of course be affected by this abnormality in household composition, and any others which are associated with it, as well as by the influences strictly due to the presence of heavy workers.

4. Results of this kind are to be expected, and appear to have been realised, in the sub-samples of heavy workers' households drawn from the National Food Survey urban working-class samples of 1943 and 1944. In the industrial sample of 1947 and 1948, however, it seems likely that the process of selection was doubly biased. For the reasons already indicated, the households represented among the heavy workers in any one industry in a locality chosen for

#### *Appendix D*

survey would themselves tend to include a greater proportion of the multiple-earner households than of the single-earner households of the locality. The Survey was chosen within the industry by "snowballing", and it appears very probable that in this process the households with more than one worker would again have been given a greater chance of inclusion than those with only one. If so, the final sample represents a biased selection from an already biased population.

5. For these reasons, comparison between results obtained from samples selected in this way and those of random samples from the general population must obviously be made with caution. But different samples of heavy workers' households each selected in this way may nevertheless be fairly closely comparable with one another, since the degree of bias in favour of multiple-earner households may not differ very greatly from one sample to another. If the proportion of heavy workers to all workers in the population sampled is fairly small, the proportion of two-earner households containing one or more heavy workers is likely to be nearly double the proportion of one-earner households, whatever the exact proportion of heavy workers. Among households with three and more earners, the degree to which over-representation is likely may vary more widely, but since households with more than two earners are relatively infrequent the effect of this variation on the structure of the average household in the sample is comparatively unimportant. This conclusion seems to be borne out by the relatively small differences in household composition between the different industrial samples discussed in Chapter V, which are compared in Table 52 of the Report.



APPENDIX E

## Urban Working-Class Household Diets in 1949: The Effects of Family Composition

### ADULT AGE COMPOSITION OF URBAN WORKING-CLASS HOUSEHOLDS (EXCLUDING OLD AGE PENSIONER HOUSEHOLDS) 1949

1. Table 1 below shows the average ages of adults distinguished according to sex, in each of the types into which the 1949 sample considered in Chapter VI was divided, except that households with one man, one woman and adolescents are treated as one group and not divided into those with one adolescent and those with more than one. Thus the Table refers to twenty-five different types.
2. Households with adults only recorded an average age higher than those with families in addition. Among the wholly adult households, the average age fell with increasing numbers, as shown below :

*Ages of Persons in Wholly Adult Households*

<i>Number</i>	<i>Average age</i>	<i>Percentage of persons of pensionable age</i>
	<i>Years</i>	
1 . . . . .	60	63
2 men or 2 women . . . . .	52	44
1 man and 1 woman . . . . .	49	15
3 . . . . .	49	25
4 . . . . .	45	19

3. In households with younger members, the average age of the adult was substantially lower. In particular, in households with one man and one woman where the family consisted of children only, the average adult age lay between 30 and 40. In similar households with adolescents only, the range was between 42 and 50.

Appendix E

TABLE 1  
Average Adult<sup>1</sup> Ages in Urban Working-Class Households  
(excluding Old Age Pensioner households) 1949

Type of households	Total adults	Number of persons of pensionable age	Average age	
			Males	Females
<b>SINGLE ADULT</b>				
Alone . . . . .	224	142	64	60
With family . . . . .	238	12	30	41
<b>ONE MAN AND ONE WOMAN</b>				
Alone . . . . .	1,813	269	49	50
With 1 child under 5 years . . . . .	1,244	2	32	30
1 child 5 years or over . . . . .	782	10	40	38
2 children, at least 1 under 5 years . . . . .	1,236	1	34	31
2 children 5 years or over . . . . .	374	1	40	38
3 children, at least 1 under 5 years . . . . .	572	2	36	33
3 children 5 years or over . . . . .	104	—	39	37
4 children, at least 1 under 5 years . . . . .	298	—	36	33
4 children 5 years or over . . . . .	14	—	37	36
Adolescents only . . . . .	606	35	49	47
1 child, 1 adolescent . . . . .	372	—	44	42
3 children and adolescents (mixed) . . . . .	240	—	42	39
4 children and adolescents (mixed) . . . . .	420	—	43	40
<b>TWO MEN OR TWO WOMEN</b>				
Alone . . . . .	290	128	50	53
With family . . . . .	324	31	43	45
<b>THREE ADULTS</b>				
Alone . . . . .	1,374	339	48	50
With children . . . . .	1,205	190	42	43
Adolescents and children . . . . .	495	34	42	41
Adolescents . . . . .	426	38	43	46
<b>FOUR ADULTS</b>				
Alone . . . . .	859	160	43	46
With children . . . . .	807	106	42	40
Adolescents and children . . . . .	496	25	38	39
Adolescents . . . . .	302	25	41	42
<i>Total</i> . . . . .	<i>15,115</i>	<i>1,550</i>		

<sup>1</sup>21 years of age and over.

*Studies in Urban Household Diets 1944-49*

TABLE 2

*Domestic Food Consumption by Urban Working-Class Households with one man, one woman and varying numbers of children 1949 (oz. per head per week except where otherwise stated)*

	<i>Households containing one male and one female adult with</i>					
	<i>Number of children</i>					<i>1 child and 1 adolescent</i>
	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4 or more</i>	
<b>LIQUID MILK</b>						
Full price . . . . . pt.	4.5	3.3	2.8	2.4	1.8	3.7
Welfare scheme and school pt.	0.1	1.5	2.0	2.2	2.3	0.7
<i>All liquid milk</i> . . . . . pt.	<i>4.6</i>	<i>4.8</i>	<i>4.8</i>	<i>4.6</i>	<i>4.1</i>	<i>4.4</i>
<b>CONDENSED AND DRIED MILK</b> . . . . . eq. pt.	0.3	0.5	0.5	0.4	0.4	0.2
<b>CHEESE</b> . . . . .	2.6	2.1	2.0	1.8	1.8	2.1
<b>RATIONED MEAT</b>						
Fresh meat . . . . .	13.5	11.5	10.7	9.9	9.0	12.0
Canned corned beef . . . .	0.7	0.6	0.5	0.5	0.5	0.5
Bacon . . . . .	2.8	2.7	2.6	2.6	2.7	2.8
<i>All rationed meat</i> . . . . .	<i>17.0</i>	<i>14.8</i>	<i>13.8</i>	<i>13.0</i>	<i>12.2</i>	<i>15.3</i>
<b>OTHER MEAT</b>						
Offal . . . . .	2.5	1.2	0.9	0.8	0.8	1.5
Rabbit, poultry, game . . . .	2.4	1.6	1.1	0.7	0.6	1.8
Cooked and canned meat . . .	1.5	1.2	1.0	0.8	0.8	1.0
Sausages . . . . .	5.3	4.5	4.0	3.5	3.0	4.4
<i>All other meat</i> . . . . .	<i>11.7</i>	<i>8.5</i>	<i>7.0</i>	<i>5.8</i>	<i>5.2</i>	<i>8.7</i>
<b>FISH</b>						
Fresh, dried and smoked . . .	11.1	5.9	4.6	4.0	3.2	6.2
Fried . . . . .	1.9	1.8	1.3	1.2	0.9	1.4
Canned . . . . .	0.6	0.5	0.4	0.3	0.3	0.4
<i>All fish</i> . . . . .	<i>13.6</i>	<i>8.2</i>	<i>6.3</i>	<i>5.5</i>	<i>4.4</i>	<i>8.0</i>
<b>EGGS</b>						
Shell . . . . . No.	3.2	3.0	2.9	2.6	2.2	2.8
Dried . . . . . eq. No.	0.2	0.3	0.3	0.2	0.2	0.2
<i>All eggs</i> . . . . . No.	<i>3.5</i>	<i>3.3</i>	<i>3.2</i>	<i>2.8</i>	<i>2.4</i>	<i>3.0</i>
<b>FATS</b>						
Butter . . . . .	3.8	3.6	3.5	3.4	3.2	3.4
Margarine . . . . .	4.5	4.2	4.1	4.0	4.1	4.5
Other fats . . . . .	3.5	3.2	2.9	2.7	2.4	3.1
<i>All fats</i> . . . . .	<i>11.8</i>	<i>11.0</i>	<i>10.5</i>	<i>10.1</i>	<i>9.7</i>	<i>11.0</i>
<b>SUGAR AND PRESERVES</b>						
Sugar . . . . .	11.7	11.5	11.2	10.6	10.1	11.1
Preserves, syrup and treacle .	7.2	6.1	6.0	6.0	5.4	7.2
<i>All sugar and preserves</i> . . .	<i>18.9</i>	<i>17.6</i>	<i>17.2</i>	<i>16.6</i>	<i>15.5</i>	<i>18.3</i>

Appendix E

TABLE 2 (continued)

	Households containing one male and one female adult with					
	Number of children					1 child and 1 adolescent
	0	1	2	3	4 or more	
<b>POTATOES</b>						
Old and new . . . . .	70.6	66.5	63.0	61.7	60.2	65.3
Chips and crisps . . . . .	3.2	3.4	2.9	3.7	4.2	3.2
<i>All potatoes</i> . . . . .	73.8	69.9	65.9	65.4	64.4	68.5
<b>FRESH GREEN VEGETABLES<sup>1</sup></b>						
21.6	17.0	13.3	11.2	8.2	14.4	
<b>OTHER VEGETABLES</b>						
Carrots . . . . .	3.3	3.6	3.2	2.7	2.5	3.5
Other roots and onions . . . . .	10.7	8.0	6.6	6.3	5.5	8.6
Miscellaneous . . . . .	7.3	7.0	5.7	5.1	4.3	5.9
<i>All vegetables other than potatoes</i> . . . . .	42.9	35.6	28.8	25.3	20.5	32.4
<b>FRUIT</b>						
Tomatoes <sup>2</sup> . . . . .	7.5	6.7	5.5	4.2	3.0	6.8
Citrus fruit . . . . .	4.6	4.0	3.6	2.8	1.7	3.2
Apples and pears . . . . .	8.3	7.2	6.0	5.0	3.9	7.3
Other fresh fruit . . . . .	5.5	5.2	4.8	4.1	2.7	4.1
Canned and bottled fruit <sup>3</sup> . . . . .	2.3	2.4	1.8	1.6	1.2	1.9
Dried fruit and nuts <sup>4</sup> . . . . .	1.4	1.4	1.3	1.3	0.8	1.2
<i>All fruit</i> . . . . .	29.6	26.9	23.0	19.0	13.3	24.5
<b>BREAD AND FLOUR</b>						
Bread <sup>5</sup> . . . . .	64.4	57.2	52.1	53.8	59.4	65.0
Flour . . . . .	8.5	6.8	6.5	6.0	5.7	8.1
<i>Total flour equivalent</i> . . . . .	58.1	50.8	46.6	47.4	51.4	58.1
<b>OTHER CEREAL PRODUCTS</b>						
Biscuits . . . . .	3.6	3.4	3.1	3.0	2.2	3.1
Cakes, buns and scones <sup>6</sup> . . . . .	13.4	9.1	7.6	6.7	4.5	9.0
Oatmeal and oat products . . . . .	1.1	1.1	1.2	1.3	1.1	1.2
Breakfast cereals . . . . .	1.1	1.6	1.9	1.9	1.6	1.7
Other cereal foods . . . . .	4.3	4.1	3.7	3.4	2.7	3.9
<i>All other cereal products</i> . . . . .	23.5	19.3	17.5	16.3	12.1	18.9
<b>BEVERAGES</b>						
Tea . . . . .	2.6	1.9	1.7	1.6	1.5	2.1
Coffee (beans and powder only) . . . . .	0.3	0.2	0.2	0.1	...	0.2
Cocoa and cocoa drinks . . . . .	0.5	0.4	0.4	0.4	0.3	0.4

<sup>1</sup>Includes leafy salads.

<sup>2</sup>Includes canned tomatoes.

<sup>3</sup>Includes fruit juices.

<sup>4</sup>Includes fruit and nut products.

<sup>5</sup>Includes rolls, sandwiches, muffins and crumpets.

<sup>6</sup>Includes fruit bread.

*Studies in Urban Household Diets 1944-49*

TABLE 3  
*Domestic Food Expenditure by Urban Working-Class Households  
 with one man, one woman and varying numbers of children 1949  
 (pence per head per week)*

	Households containing one male and one female adult with					
	Number of children					1 child and 1 adolescent
	0	1	2	3	4 or more	
<b>LIQUID MILK</b>						
Full price . . . . .	22.4	16.8	14.2	12.2	9.1	18.4
Welfare scheme . . . . .	0.2	2.2	2.8	2.8	2.8	0.7
All liquid milk . . . . .	22.6	19.0	17.0	15.0	11.9	19.1
<b>CONDENSED AND DRIED MILK</b>						
All milk . . . . .	24.3	21.1	18.7	16.5	13.5	20.6
<b>CHEESE</b>						
	2.6	2.0	1.8	1.6	1.6	1.9
<b>MEAT</b>						
Rationed meat:						
Fresh meat . . . . .	16.7	14.9	13.9	13.2	12.2	15.6
Canned corned beef . . . . .	0.9	0.7	0.7	0.7	0.6	0.6
Bacon . . . . .	4.6	4.6	4.5	4.7	4.5	4.7
All rationed meat . . . . .	22.2	20.2	19.1	18.6	17.3	20.9
Other meat:						
Offal . . . . .	2.3	1.4	1.2	0.8	0.8	1.6
Rabbit, poultry, game . . . . .	2.6	1.6	1.2	0.9	0.5	2.3
Cooked and canned meat . . . . .	3.2	2.4	1.9	1.4	1.3	2.5
Sausages . . . . .	5.1	4.4	3.9	3.5	3.0	4.4
All other meat . . . . .	13.2	9.8	8.2	6.6	5.6	10.8
<b>FISH</b>						
Fresh, dried and smoked . . . . .	10.8	5.8	4.5	3.9	3.0	6.3
Fried . . . . .	3.7	3.2	2.4	2.3	1.7	2.4
Canned . . . . .	1.4	1.1	0.9	0.6	0.6	0.8
All fish . . . . .	15.9	10.1	7.8	6.8	5.3	9.5
<b>EGGS</b>						
Shell . . . . .	7.8	7.7	7.3	6.9	6.1	7.0
Dried . . . . .	0.4	0.5	0.7	0.6	0.5	0.4
All eggs . . . . .	8.2	8.2	8.0	7.5	6.6	7.4
<b>FATS</b>						
Butter . . . . .	3.8	3.7	3.7	3.6	3.4	3.7
Margarine . . . . .	2.4	2.4	2.4	2.3	2.4	2.4
Other fats . . . . .	2.6	2.3	2.1	2.1	1.8	2.4
All fats . . . . .	8.8	8.4	8.2	8.0	7.6	8.5
<b>SUGAR AND PRESERVES</b>						
Sugar . . . . .	3.6	3.6	3.6	3.3	3.2	3.5
Preserves, syrup and treacle . . . . .	5.4	4.7	4.9	4.4	4.7	5.7
Total . . . . .	9.0	8.3	8.5	7.7	7.9	9.2

Appendix E

TABLE 3 (continued)

	Households containing one male and one female adult with					
	Number of children					1 child and 1 adolescent
	0	1	2	3	4 or more	
<b>POTATOES</b>						
Old and new . . . . .	7.8	7.4	6.9	6.5	6.3	7.3
Chips and crisps . . . . .	1.9	2.2	1.8	2.3	2.6	2.2
All potatoes . . . . .	9.7	9.6	8.7	8.8	8.9	9.5
<b>FRESH GREEN VEGETABLES<sup>1</sup></b>						
8.2	5.9	4.5	3.4	2.4	5.1	
<b>OTHER VEGETABLES</b>						
Carrots . . . . .	0.7	0.8	0.7	0.5	0.5	0.8
Other roots and onions . . . . .	2.3	1.8	1.4	1.3	1.2	1.8
Miscellaneous <sup>2</sup> . . . . .	4.9	4.9	4.0	3.4	2.9	4.0
All vegetables other than potatoes . . . . .	16.1	13.4	10.6	8.6	7.0	11.7
<b>FRUIT</b>						
Tomatoes <sup>3</sup> . . . . .	7.3	6.0	4.7	3.7	2.5	5.8
Citrus fruit . . . . .	2.3	1.9	1.8	1.3	0.9	1.6
Apples and pears . . . . .	3.9	3.4	2.6	2.1	1.7	3.4
Other fresh fruit . . . . .	3.6	3.4	3.0	2.4	1.5	2.3
Canned and bottled fruit <sup>4</sup> . . . . .	1.3	1.7	1.2	0.9	0.7	1.2
Dried fruit and nuts <sup>5</sup> . . . . .	1.7	1.4	1.2	1.1	0.6	1.3
All fruit . . . . .	20.1	17.8	14.5	11.5	7.9	15.6
<b>BREAD AND FLOUR</b>						
Bread <sup>6</sup> . . . . .	12.4	10.6	9.5	10.1	11.1	12.0
Flour . . . . .	2.0	1.7	1.5	1.3	1.4	2.1
All bread and flour . . . . .	14.4	12.3	11.0	11.4	12.5	14.1
<b>OTHER CEREAL PRODUCTS</b>						
Biscuits . . . . .	4.5	4.3	3.9	3.7	2.8	3.8
Cakes, buns, scones <sup>7</sup> . . . . .	14.6	10.3	8.3	7.2	5.2	10.6
Oatmeal and oat products . . . . .	0.6	0.6	0.6	0.6	0.5	0.5
Breakfast cereals . . . . .	1.0	1.3	1.6	1.6	1.4	1.4
Other cereal foods . . . . .	3.7	3.5	3.1	2.8	2.1	3.2
All other cereal products . . . . .	24.4	20.0	17.5	15.9	12.0	19.5
<b>BEVERAGES</b>						
Tea . . . . .	6.2	4.7	4.3	4.2	3.7	5.5
Coffee (beans and powder only) . . . . .	0.9	0.6	0.4	0.2	0.1	0.5
Cocoa and cocoa drinks . . . . .	1.1	0.9	0.7	0.7	0.6	0.7
All beverages . . . . .	8.2	6.2	5.4	5.1	4.4	6.7
Other foods . . . . .	10.3	7.7	6.6	5.6	4.6	8.2
Total food expenditure . . . . .	207.4 (17s. 3d.)	175.1 (14s. 7d.)	154.6 (12s. 11d.)	140.2 (11s. 8d.)	122.7 (10s. 3d.)	174.1 (14s. 6d.)

<sup>1</sup>Includes leafy salads.

<sup>2</sup>Includes canned and dried vegetables and vegetable products.

<sup>3</sup>Includes canned tomatoes.

<sup>4</sup>Includes fruit juices.

<sup>5</sup>Includes fruit and nut products.

<sup>6</sup>Includes rolls, sandwiches, muffins and crumpets.

<sup>7</sup>Includes fruit bread.

## APPENDIX F

*Nutrient requirements based on British Medical Association's Recommendations 1950 used in National Food Survey*

Category		Calories	Protein	Calcium	Iron	Vitamin A	Vitamin B <sub>1</sub>	Riboflavin	Nicotinic acid	Vitamin C
			<i>g.</i>	<i>g.</i>	<i>mg.</i>	<i>i.u.</i>	<i>mg.</i>	<i>mg.</i>	<i>mg.</i>	<i>mg.</i>
Man	Over 65 years . . . . .	2,250	62	0·8	12	2,500	0·9	1·4	9	20
	Sedentary . . . . .	2,500	69	0·8	12	2,500	1·0	1·5	10	20
	Moderately active . . . . .	3,000	82	0·8	12	2,500	1·2	1·8	12	20
	Active . . . . .	3,500	96	0·8	12	2,500	1·4	2·1	14	20
	Very active . . . . .	4,250	117	0·8	12	2,500	1·7	2·6	17	20
134 Woman	Over 60 years . . . . .	2,000	55	0·8	12	2,500	0·8	1·2	8	20
	Sedentary . . . . .	2,100	58	0·8	12	2,500	0·8	1·3	8	20
	Moderately active . . . . .	2,500	69	0·8	12	2,500	1·0	1·5	10	20
	Active . . . . .	3,000	82	0·8	12	2,500	1·2	1·8	12	20
	Pregnancy, latter half . . . . .	2,750	96	1·5	15	3,000	1·1	1·6	11	40
Child	Under 1 year . . . . .	800	28	1·0	6	1,500	0·3	0·5	3	10
	1-3 years . . . . .	1,300	46	1·0	7	1,500	0·5	0·8	5	15
	4-6 years . . . . .	1,600	56	1·0	8	1,500	0·6	1·0	6	15
	7-9 years . . . . .	1,950	68	1·0	10	1,500	0·8	1·2	8	20
	10-12 years . . . . .	2,450	86	1·2	12	1,500	1·0	1·5	10	25
Boy	13-15 years . . . . .	3,150	110	1·4	15	1,500	1·3	1·9	13	30
	16-20 years . . . . .	3,400	119	1·4	15	2,500	1·4	2·1	14	30
Girl	13-15 years . . . . .	2,750	96	1·3	15	1,500	1·1	1·6	11	30
	16-20 years . . . . .	2,500	88	1·0	15	2,500	1·0	1·5	10	30

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