

THE FOOD AND YOU SURVEY

WAVE 5

Combined report for
England, Wales and
Northern Ireland



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The Food and You Survey

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and Northern Ireland



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Acknowledgements

First and foremost our thanks go to all of the respondents who gave up their time to take part in the survey.

We would also like to thank the many interviewers who worked on this study and the colleagues who made a significant contribution to the project, particularly Sarah Morris, Sarah Allcock, Beverley Bates, Sandra Beeson, Claire Lapham, Melanie Norton, Annemijn Sondaal and Mari Toomse-Smith at NatCen Social Research, and Oonagh Tierney and Conor McKiernan at NISRA.

We are grateful for the input and support of the FSA Social Science team involved in the survey: Ely Mirzahosseinkhan, Alice Rayner and Lucy King.

We also thank the Food and You Working Group – Anne Murcott, Joy Dobbs and David Nuttall – for their valuable direction and guidance.

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This summary presents the key findings from Wave 5 of the Food and You survey, commissioned by the Food Standards Agency (FSA). Food and You is the FSA's principal source of methodologically robust and representative evidence on consumers' self-reported food-related activities and attitudes. The survey has been running on a biennial basis since 2010.

These findings are based on 2,241 interviews from a representative sample of adults aged 16 and over across England, Wales and Northern Ireland. Fieldwork was carried out between June and November 2018. Additional interviews were carried out in Wales and Northern Ireland in order to enable country-level analyses of the findings and these are published separately.

Shopping, cooking and eating

Dietary restrictions, food allergy and intolerance

Small proportions of respondents said that they were completely vegetarian (3%) or vegan (1%).

One in six respondents (17%) reported that they suffered an adverse reaction when they ate certain foods. The most common food groups that people reported having an adverse reaction to were cows' milk and cows' milk products (23% of those who reported any adverse reaction), fruit (16%) and cereals containing gluten (13%).

Among those who reported an adverse reaction to one or more types of food, 44% said they suffered from a food intolerance, and 24% said they suffered from a food allergy. Just under half (44%) of those who said that they had a food allergy had been clinically diagnosed (by an NHS or private practitioner). A quarter (25%) of those who described their condition as a food intolerance had been clinically diagnosed. Overall, 2% of the sample reported having a food allergy or intolerance that had been clinically diagnosed, a similar level to 2016.

Frequency of eating certain foods

Respondents were asked about consumption of certain types of foods that pose, or are perceived to pose, greater food safety risks.

Chicken and turkey were the most frequently eaten meat; 81% of respondents ate these at least once a week. This compares with 55% who ate cuts of beef, lamb or pork, 52% who ate pre-cooked meats, 32% who ate sausages, 31% who ate cured or dried meat and 17% who ate burgers at least once a week.

Over time, consumption of red meat and different types of processed meat have fallen. In Wave 2 (2012) of Food and You, 75% of adults ate cuts of beef, lamb or pork at least once a week, and 65% ate pre-cooked meats at least once a week. Consumption of chicken and turkey has declined across the same period; but at a much slower rate, from 86% in 2012 to 81% in 2018.

One in five (21%) respondents ate pre-packaged sandwiches at least once a week, and slightly more (25%) ate ready meals at least once a week.

Cooking

The majority of respondents (90%) reported having at least some responsibility for cooking or preparing food in the home, with almost half (48%) saying they were responsible for all or most of this. Women were more likely than men to have all or most of the responsibility for cooking or preparing food (63% compared with 33%).

Attitudes towards cooking and eating

In general respondents expressed positive attitudes to food and cooking. The majority agreed with the statements 'I like trying new things to eat' (72%) and 'I enjoy cooking and preparing food' (67%), and most disagreed with the statement 'I'm not generally interested in food' (81%).

Shopping

The majority of respondents (88%) reported having at least some responsibility for household food shopping with just under half (49%) saying they were responsible for all or most of this. As with cooking and preparing food, women were more likely than men to report having all or most of the responsibility for food shopping (64% compared with 32%).

Almost all respondents shopped for food in large supermarkets (96%). Other types of retailer were used by a minority of respondents, most commonly mini supermarkets (43%), independent butchers (31%) and local or corner shops (30%).

Since 2012, buying from mini supermarkets has increased from 35% to 43%, and supermarket home delivery has increased from 10% to 17%.

Food security

'Food security' means having access at all times to enough food that is both sufficiently varied and culturally appropriate to sustain an active and healthy life. The majority (80%) of respondents reported living in households with high levels of food security, 10% lived in households with marginal food security and 10% lived in households with low or very low food security (known as 'food insecure'). These proportions have remained at similar levels since Wave 4.

About one in six (17%) of respondents reported that their household worried in the last 12 months about running out of food before there was money to buy more. Similar proportions said that in the last 12 months they had experienced food running out when they did not have money to get more (12%) or that their household had experienced not being able to afford to eat balanced meals (11%).

Just under half of all respondents (47%) reported making at least one change in their buying or eating arrangements in the last 12 months for financial reasons.

Food safety in the home

The Index of Recommended Practice

The Index of Recommended Practice (IRP) is a composite measure of food hygiene knowledge and behaviours within the home, which includes questions on five 'domains' of food safety: cleanliness, cooking, chilling, avoiding cross-contamination and use by dates. A higher IRP score indicates more reported behaviours that are in line with recommended food safety practice.

There was an increase in average IRP score from 64 in Wave 1 to 67 in Wave 4. In Wave 5 it remained at the same level, and, as in previous years, was higher among women than men (69 compared with 64).

Cleanliness

More than eight out of ten respondents reported cleaning behaviours in line with recommended practices, saying they always washed their hands before starting to prepare or cook food (82%), and immediately after handling raw meat, poultry or fish (85%).

Cooking

More than three quarters (77%) of respondents said they always cooked food until it is steaming hot throughout in line with recommended practice. The proportions of respondents who reported that they never ate meat or meat products if the meat was pink or had pink/red juices, in line with recommended practice, was 88% for chicken or turkey, 79% for sausages, 73% for pork and 62% for burgers.

The majority of respondents said that they would reheat food no more than once (80%), in line with recommended reheating practice. A small proportion (8%) reported that they would reheat food twice or more.

Chilling

When asked what respondents thought the temperature inside the fridge should be, half (50%) said it should be between 0 and 5°C (the recommended temperature).

Of respondents who had a fridge, half (50%) reported that they or someone else checked the temperature. The majority of these (78%) said they did this at least once a month, which is in line with recommended practice.

Respondents were asked which methods they used to defrost meat or fish. The most common method was leaving meat or fish at room temperature (54%), which is not in line with recommended practice.

Cross-contamination

Less than half of respondents (45%) said that they always used different chopping boards for different foods, in line with practices recommended to avoid cross contamination, while 21% never did. Recommendations on storing food in the fridge were followed by 59% who stored raw meat and poultry on the bottom shelf of the fridge, and 65% who never stored food in open tins in the fridge.

Around half (50%) of respondents said they never washed raw chicken, and a similar proportion (49%) never washed raw meat (excluding chicken), both of which are in line with recommended practice. Less than a quarter said they always washed raw chicken (26%) or raw meat and poultry other than chicken (22%). The proportions who always washed raw chicken fell from 41% in Wave 3 (2014) to 28% in Wave 4 (2016) and has remained at a similar level in Wave 5. Conversely the proportions who said they never washed raw chicken rose from 41% to 49% between Waves 3 and 4 and has stayed at the same level in Wave 5.

A third of respondents (33%) never washed raw fish or seafood, while a quarter (25%) said that they always did.

More than half (55%) of respondents reported that they always washed fruit and vegetables that were going to be eaten raw. 11% said they never did this.

Respondents were asked whether they used any antibacterial surface sanitising spray or wipes to clean kitchen work surfaces. More than half (55%) reported always using antibacterial surface sanitising spray or wipes to clean kitchen work surfaces, while 13% said that they never did that. When asked how they normally use surface sanitising spray, the highest proportion reported that they spray it and immediately wipe it off (47%), which is not the FSA recommended practice.

Assessing if food is safe to eat

Respondents were asked how they would tell whether different types of foods were safe to eat or use in cooking. Respondents were most likely to say that they assessed the safety of these foods by how they smelt; specifically milk and yoghurt (73%), raw meat (66%), fish excluding shellfish (62%) and eggs (33%). In assessing whether cheese was safe to eat respondents were most likely to rely on how it looked (64%). The use-by date was mentioned by a minority of respondents as a way to assess the safety of milk and yoghurt (29%), raw meat (28%), eggs (25%), cheese (21%), and fish or shellfish (21%).

The FSA recommends that the use-by date is the best label to indicate whether food is safe to eat. Three quarters (75%) of respondents said that the use-by date was the label that best indicated food safety, an increase from 65% in Wave 2 (2012).

Respondents were asked whether they checked use-by dates when they are about to cook or prepare food. Nearly two thirds (63%) of respondents reported that they always did.

A third (33%) of respondents reported that they found it quite difficult to read labelling on food products due to the size of the print. Difficulty in reading product labels was associated with age and most of those aged 75 and over found it difficult to read product labels (59%).

The majority (73%) of respondents reported that they would eat leftover food within two days of cooking it, in line with recommended practice.

Sources of information about food safety

The most common sources of information about food safety were family and friends (46%), product packaging (36%) and food TV shows and cooking programmes (30%).

Eating outside the home

Frequency of eating out

The definition of eating out in the Food and You survey encompasses eating or buying food from a wide range of establishments including: restaurants, pubs, bars, nightclubs, cafés and coffee shops, sandwich bars, fast food outlets, canteens, hotels, and stalls as well as takeaway food.

Most respondents ate out, at least occasionally. They were most likely to eat dinner out; 85% did so, including 27% who ate or bought dinner away from home at least once a week. 70% ate lunch out, including 29% who did so at least once a week. A minority ate or bought breakfast away from home; 38%, including 11% who ate breakfast out at least once a week.

Deciding where to eat out

Respondents most commonly used their own experience of establishments (65%) when deciding where to eat out. Half of respondents also considered recommendations from family and friends (50%) or word of mouth (50%).

When shown a list of factors which might influence their decision on where to eat out, around three in five respondents mentioned good service (61%), a good hygiene rating score (60%) and the price of food (60%) as important.

Awareness of hygiene standards when eating out

Most respondents (69%) were very or fairly aware of hygiene standards when eating out or buying takeaway food. Those who said they were aware or neither aware nor unaware of hygiene standards, were most likely to judge them by the hygiene rating or score (61%) and the general appearance of the premises (60%).

The majority of respondents (87%) reported having seen the sticker belonging to the Food Hygiene Rating Scheme (FHRS). There have been increasing levels of recognition of the Scheme stickers since they were introduced in 2010, from 34% in Wave 2 (2012), to 68% in Wave 3 (2014), 83% in Wave 4 (2016) and 87% in Wave 5 (2018).

Food poisoning

Experience of food poisoning

In Wave 5, around half (47%) of respondents reported that they had experienced food poisoning at some time in their lives. This has increased from between 40% and 41% in Waves 1 to 3 and 44% in Wave 4 (2016).

When asked whether they had experienced food poisoning in the last year, 16% of adults said they had. 14% of adults who had experienced food poisoning in the last year reported seeing a doctor or going to hospital, representing 1% of the whole sample.

Respondents who had experienced food poisoning were asked what action they took as a result. As in previous waves, 43% of this group said that they took no action. Of those who did take some action, the most common actions were stopping eating at certain eating establishments (33%), stopping eating certain foods (16%), and trying to get more information about the issue (9%).

Attitudes towards food safety and food poisoning

Around three quarters (74%) of respondents agreed with the statement that they were unlikely 'to get food poisoning from food prepared in my own home', a similar proportion to previous waves. Two thirds (67%) agreed with the statement 'I always avoid throwing food away', compared with 48% in Wave 1.

Trust

Awareness of the FSA

Most respondents (86%) said that they had heard of the FSA before they were contacted about Food and You. More than half of respondents (54%) said that they had heard of the FSA but didn't know much about them or their responsibilities. A third (33%) said they had previously heard of the FSA and knew about their responsibilities. (The question took into account that Food and You is sponsored by the FSA and that this is strongly reflected in the survey materials.)

Trust in the FSA

Trust in the FSA was measured by asking respondents to consider how they thought the FSA would respond to seven food-related scenarios. Overall there was a high degree of confidence in the FSA.

Respondents' confidence was greatest when asked about the FSA's likely response in case of a food poisoning outbreak. Four in five respondents (82%) thought that there was a high likelihood that the FSA would take action to protect the public if there was a food poisoning outbreak.

Three quarters of respondents (73%) thought that there was a high likelihood that the FSA would inform the public if new evidence about food safety came to light. Seven in ten respondents (72%) thought that there was a high likelihood that the FSA would

respond as soon as possible to new evidence about food safety, and two thirds (66%) of respondents thought that there was a high likelihood that the FSA would tell the truth to the public if there was new evidence about food safety.

Three in five respondents (60%) thought that it was highly likely that the problem would be looked into if they wanted to report a food related issue to the FSA.

While seven in ten respondents (70%) thought there was a high likelihood that the FSA puts the public first, there was less confidence in the FSA's impartiality; 57% of respondents thought that there was a high likelihood that the FSA was impartial, acting independently of external sources.

Trust in the food supply chain

Food and You Wave 5 included five questions about consumers' trust in the food they buy and eat, covering provenance, quality, the food supply chain and safety.

Three in five (61%) respondents said they would be very or quite sure that they knew where the food they bought had come from, compared with 16% who said they would be very or quite unsure.

More than half (58%) were very or quite sure that the food they bought from Britain or the UK and Ireland had been prepared to the highest quality standards, compared with 12% who were unsure. There was less trust in food from abroad; a quarter (24%) said that they were very or quite sure that food and groceries from abroad were prepared to the highest quality standards, compared with more than a third (35%) who were very or quite unsure.

Nearly half (47%) of respondents were very or quite sure that that all the guidelines had been properly followed at all stages in bringing the food they bought from the farm to their home, compared with 20% who were very or quite unsure.

There was a high level of confidence in the safety of food; 80% of respondents were very or quite sure that the food they bought for their households was safe to eat, compared with 5% who were very or quite unsure of this.

Food authenticity

Most (84%) of respondents said that they were confident when buying or eating food that it was what it said it is on the label or the menu. Just over a quarter (26%) were confident all of the time, a decrease from 34% in Wave 4 in 2016. A further 58% were confident most of the time that food was what it was said to be.

Introduction

The UK's food system is complex. It is essential that food continues to remain safe, authentic, affordable and sustainable in a future affected by climate change, global population growth and innovations in the way food is produced, distributed and consumed, both nationally and globally.

The Food Standards Agency (FSA) is set up to protect the interests of the consumer through a range of activities, including regulation of food businesses and developing and targeting messages and initiatives for the public. The FSA's strategy for 2015 to 2020, *Food We Can Trust*,¹ renews its commitment to put consumers first.

The Food and You Survey is the FSA's principal source of methodologically robust and representative evidence on consumers' food-related activities and attitudes. Understanding the UK population's reported behaviour, attitudes and knowledge in relation to food issues is key to measuring the FSA's progress towards its strategic objectives, providing evidence that supports the FSA's campaigns and other activities, and identifying topics for further research or action.

About the FSA

The FSA was formed in 2000 as an independent non-ministerial government department, governed by a Board whose members have extensive knowledge and experience in a wide range of sectors relevant to the FSA. The FSA was set up to protect public health from risks which may arise in connection with the consumption of food (including risks caused by the way in which it is produced or supplied), and otherwise to protect the interests of consumers in relation to food.

The FSA is responsible for food safety and hygiene in England, Wales and Northern Ireland, and is committed to ensuring the general public can have trust and confidence in the food they buy

1 www.food.gov.uk/sites/default/files/media/document/Food-Standards-Agency-Strategy%20FINAL.pdf

and eat.² The FSA also enforces standards through its regulatory responsibilities. In 2010 the FSA launched the national Food Hygiene Rating Scheme (FHRS)³ in order to provide the public with information about the hygiene standards in food premises, helping them to make informed decisions when eating out (see Chapter 3 for more information).

The FSA also provides guidance to consumers on best practices for food safety and hygiene in order to minimise the risk of food poisoning. This includes advice on cleaning, cooking, cross-contamination and chilling (collectively known as the '4 Cs'). Guidance is also given on the use of date labels (such as 'use by' and 'best before' dates) and storage instructions on foods to help ensure safety of food eaten at home.

Since its inception in 2000, the FSA has commissioned surveys to collect quantitative data on the public's reported behaviour, attitudes and knowledge relating to food and food safety. Between 2000 and 2007 the FSA ran the Consumer Attitudes Survey (CAS). In 2008 the FSA's Social Science Research Committee (SSRC) recommended that a new survey – Food and You – be developed.

The Food and You survey

Background

Food and You is a biennial, cross-sectional survey of adults aged 16 years and over living in private households in England, Wales and Northern Ireland. Random probability sampling ensures that everyone in these countries has a known chance of being selected to take part, so the results are representative of the population.

The first three waves of the survey were carried out by TNS BMRB (in 2010, 2012 and 2014 respectively). The National Centre for

2 In 2010 responsibility for nutrition in England transferred from the FSA to the Department of Health, and subsequently, in 2013, to Public Health England (PHE). Responsibility for nutrition in Wales transferred to the Welsh Government in 2010. Responsibility for nutrition and healthy eating practices remains the responsibility of the FSA in NI. Food safety and nutrition in Scotland is the responsibility of Food Standards Scotland (FSS), a non-ministerial government department of the Scottish Government, established by the Food Act 2015.

3 www.food.gov.uk/safety-hygiene/food-hygiene-rating-scheme

Social Research (NatCen), in collaboration with the Northern Ireland Statistics and Research Agency (NISRA), have been contracted to carry out Waves 4, 5 and 6 of the survey.

Food and You has been an important means of measuring progress against the FSA's strategic objectives⁴ and topics have reflected the changing priorities and interests of the FSA, summarised below:

- Wave 1 (2010) assessed consumer attitudes and behaviour to food-related issues falling under the FSA's remit. Following Wave 1, the questionnaire was reviewed extensively in light of responsibility for nutrition in England and Wales being transferred from FSA to the Department of Health (England) and Welsh Government in 2010.
- Wave 2 (2012) focused on food safety and hygiene issues.
- Wave 3 (2014) was designed to monitor changes since the previous two waves in attitudes and reported behaviour about food issues, to identify at-risk groups for food safety issues, and to explore public understanding of issues regarding the FSA's targets. For the first time at Wave 3, results from Food and You were published as an official statistic, reflecting the robust methodology of the survey and the development of a regular time series of data.
- Wave 4 (2016) included new questions to cover affordability of food, choice, security and sustainability.
- Wave 5 (2018) continued this focus and additionally included questions about public awareness of and trust in the FSA.

Aims

Food and You provides data about the prevalence of different attitudes, reported behaviour and knowledge about ways in which food is purchased, stored, prepared and eaten. The aims

⁴ The FSA Strategic Plan up to 2015 is available at <https://webarchive.nationalarchives.gov.uk/20120403143220/http://food.gov.uk/multimedia/pdfs/strategy20102015.pdf>. The 2015 to 2020 strategy is available at www.food.gov.uk/sites/default/files/media/document/Food-Standards-Agency-Strategy%20FINAL.pdf

of Wave 5 were to provide the FSA with data on food hygiene and food safety and other food-related issues in order to:

- Explore public understanding and engagement with food safety;
- Assess knowledge of messages and interventions aimed at raising awareness and changing behaviour;
- Describe public attitudes to food production and the food system;
- Monitor trends in reported behaviour, attitudes and knowledge (compared with data from the previous four waves or from other sources);
- Identify target groups for future interventions (e.g. those most at risk or those among whom FSA policies and initiatives are likely to have the greatest impact); and
- Provide indicators and evidence for tracking the FSA's strategic plans.

About this report

Coverage

Fieldwork for Wave 5 was conducted between June and November 2018 and consisted of 2,241 interviews with a representative sample of adults aged 16 and over across England, Wales and Northern Ireland.

This report presents a descriptive overview of the findings for England Wales and Northern Ireland. Trends across the five survey waves are reported where available, and Wave 5 results are presented by key socio-demographic factors such as gender, age group, household size, presence of children in household, income and working status.

Additional respondents were interviewed in Northern Ireland and Wales to provide sufficient cases to enable country-level

analyses of the survey findings. This report is complemented by additional reports published separately which are based on the boosted sample:

- Country comparison report – focusing on differences between the three nations.
- Northern Ireland report – focusing on the Northern Ireland results.
- Wales report – focusing on the Wales results.

Each report is accompanied by detailed tables of results in Excel format.

More detail on the Wave 5 questionnaire development and the survey methodology, can be found in the following supplementary reports:

- Technical report – describing the methodology.
- Development report – documenting the Wave 5 questionnaire development.

The complete data set will be available in the UK Data Archive.⁵

Self-reported behaviours

Data collected through face to face interviews may not accurately reflect people's actual practices for a number of reasons. This includes inaccurate recall, difficulties recalling behaviour that has become habitual, and social desirability bias.⁶

In Food and You, self-reported behaviour is therefore used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

5 data-archive.ac.uk

6 Social desirability bias refers to respondents' tendency to answer questions based on what they think they ought to say, rather than reflecting what they actually do, know or think. As in previous waves, there were several topics in the questionnaire for which respondents might be reluctant to report behaviour which goes against what is possibly widely known advice (for example, not washing their hands before cooking or preparing food).

The questionnaire has been carefully designed with this in mind and follows best practice to minimise bias caused by self-report, for example asking questions about behaviour within specific time periods (for example, asking whether a respondent did something 'in the last seven days' rather than 'usually') and framing questions neutrally.

Questionnaire changes between waves

While efforts are made to ensure consistency in questions asked at each wave to allow for comparisons over time, there have been a number of changes made to the questionnaire between waves, reflecting changing FSA priorities and responsibilities.

Waves 4 and 5 of the survey were carried out in England, Wales and Northern Ireland, but not in Scotland, as in Waves 1 to 3. Comparisons within this report based on previous waves are therefore based on data from these three nations only and exclude data from Scotland.⁷

A number of other changes to individual questions and response categories have been introduced between waves. Full details of changes to the questionnaire are outlined in each of the published technical reports.

Reporting conventions: notes to text and tables

1. Tables accompanying each chapter in this report are in Excel format and can be accessed via www.food.gov.uk/research/food-and-you/food-and-you-wave-five. The chapter texts include references to the relevant tables.
2. The data used in the report have been weighted. Weighted and unweighted sample sizes are shown at the foot of each table.

⁷ In April 2015, responsibility for food safety and nutrition in Scotland were transferred to Food Standards Scotland (FSS), a non-ministerial government department of the Scottish Government. The FSS carries out its own programme of research.

3. Weights were applied to correct for the lower selection probabilities of adults aged 16 and over in multi-adult households and dwellings, as well as for the selection of one dwelling unit or household if two or more were found at the selected address.
4. Where an earlier survey year (from Waves 1 to 4) is not shown in a table, this is generally because the question(s) was not asked in that year.
5. Unless stated otherwise, where comparisons are made in the text between different population groups or variables, only those differences found to be statistically significant at the 95% level are reported. In other words, differences as large as those reported have no more than a five per cent probability of occurring by chance.
6. The following conventions have been used in tables:
 - no observations (zero value).
 - 0 non-zero values of less than 0.5% and thus rounded to zero.
 - [] estimates based on 30 to 49 cases are presented in square brackets.
 - * estimates based on fewer than 30 cases are not shown.
7. Because of rounding, column percentages may not add exactly to 100%. For questions where respondents could give more than one response, the percentages will add up to more than 100%.
8. 'Missing values' occur for several reasons, including refusal or inability to answer a particular question/section and cases where the question is not applicable to the participant.
9. The term 'significant' refers to statistical significance (at the 95% level) and is not intended to imply substantive importance.
10. Where a table contains more than one variable, the bases may not be exactly the same. Tables will usually show the bases for the first variable in the table, and for any other variables where the bases are not of a similar magnitude.

1 Shopping, cooking and eating

1.1 Introduction

This chapter provides an overview of people's shopping, cooking, and eating habits. The FSA's *Food We Can Trust Strategy 2015–2020* aims to ensure that “we have access to an affordable healthy diet, and can make informed choices about what we eat, now and in the future”, within the context of guaranteeing food safety and accountability.⁸ It is important therefore that this report not only addresses food safety concerns, but also the role that food can play in people's everyday lives.

The topics covered in this chapter include:

- An estimate of the proportions of people who restrict their diet in some way, including vegetarians, vegans and those affected by food allergies and intolerances.
- The frequency of consumption of different types of food that have been linked to food poisoning.
- Cooking habits, with particular attention given to understanding who is responsible for cooking in the household.
- People's attitudes towards cooking and eating, reflecting this wave's focus on eating out rather than eating at home.
- Food shopping habits, including responsibility for shopping and types of shops used.
- Food security – the ability to access an adequate diet.

As outlined in the Introduction to this report, in Food and You, self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

Tables accompanying this chapter are available in Excel at www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

1.2 Dietary restrictions, food allergy and intolerance

Vegetarianism, veganism and other reasons for avoiding certain foods

Only a small proportion of respondents said they were completely vegetarian (3%), or vegan (1%).⁹ The proportions of vegetarians, but not vegans, varied with ethnicity; 9% people from Asian ethnic backgrounds were vegetarian, compared with 2% or less of other groups. There was also variation according to religious affiliation. Respondents who identified as Christian (1%) or with no religious affiliation (4%) were less likely to be vegetarian than those from other religious backgrounds (9%).

Respondents were also asked whether they avoided certain foods for other reasons, not specified but not because of allergies – 13% said they did.¹⁰ The proportions who did so varied by ethnicity, and was highest among respondents from Asian and Black ethnic backgrounds (24% and 29% respectively). It also varied according to religious affiliation, being lower among those who identified as Christian (12%) or with no religious affiliation (9%), compared with respondents from other religious backgrounds (27%).

Table 1.1

Adverse reactions to foods

One in six (17%) of respondents said that they suffered adverse reactions when eating certain foods. Women were more likely than men to report an adverse reaction (19% of women, compared with 14% of men).

⁹ This is consistent with previous waves, although the question wording has varied slightly, making direct comparisons impossible.

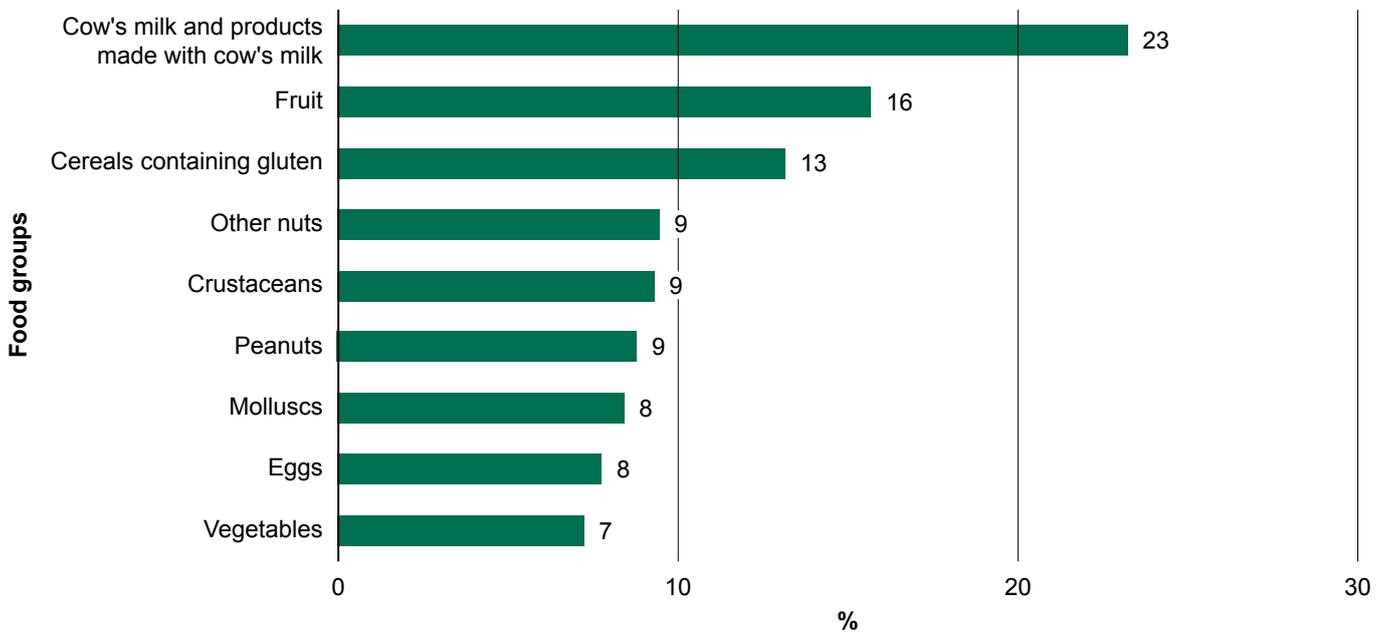
¹⁰ This was a new question; in previous waves people were asked about avoiding food for religious or cultural reasons, and relatively few people reported this (4% in Wave 4).

A smaller percentage (5%) reported that they avoided certain foods that might cause an adverse reaction. In total, 22% reported actual or potential adverse reactions. These proportions are unchanged since Wave 4 (2016).

Table 1.2.1

Respondents who either suffered adverse reactions or avoided certain foods that might cause an adverse reaction were asked whether they experienced any reaction to a list of 14 different foods.¹¹ Of those who reported an adverse reaction or avoided certain foods, cow’s milk and products made with cow’s milk was the most common cause of reaction (23% of affected respondents), followed by fruit (16%) and cereals containing gluten (13%). 32% of respondents said they suffered from an adverse reaction to another type of food not mentioned in the list.

Figure 1.1. Foods causing (potential) adverse reactions (Wave 5 respondents who reported adverse reactions to foods or avoided foods that might cause an adverse reaction)



¹¹ These 14 foods are listed in Annex II of the EU Food Information for Consumers Regulation No.1169/2011 as allergy or intolerance producing products or substances. As a result, they must always be labelled on packaging when used as an ingredient or processing aid <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32011R1169>

Women were more likely than men to report an adverse reaction to cow’s milk and its products (27% compared with 19%).

Table 1.2.2

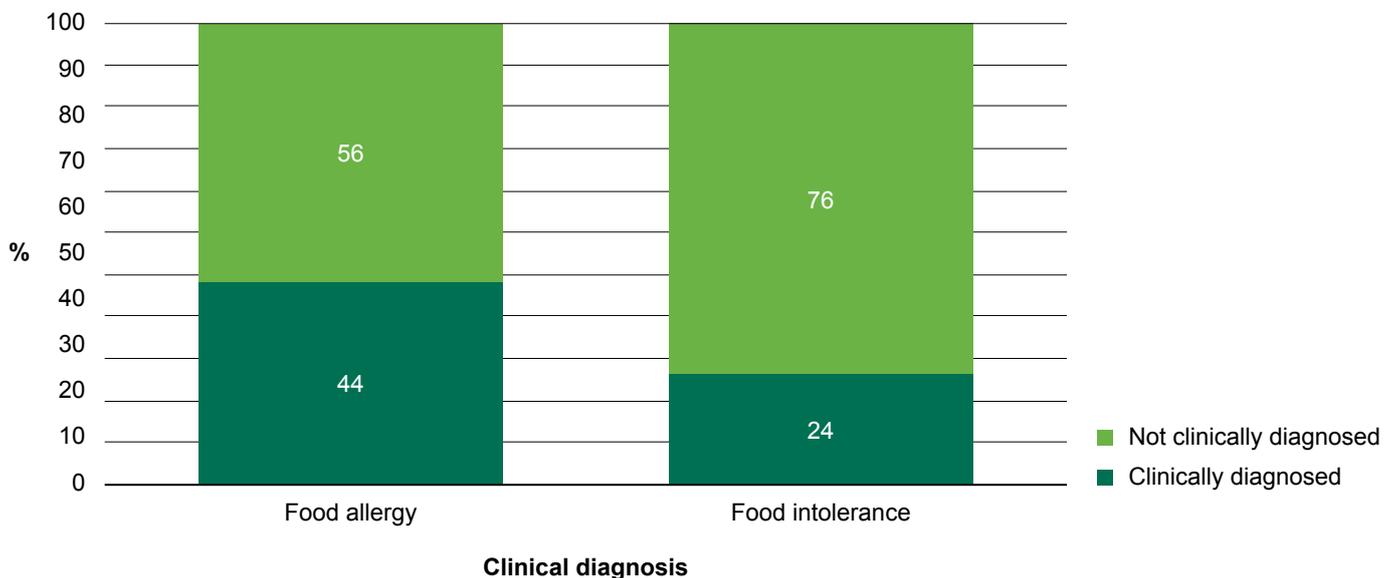
When asked about specific reaction types, 44% of all respondents who had reported an adverse reaction to one or more types of food said they suffered from a food intolerance, and 24% said they suffered from a food allergy. Other reaction types, for example coeliac disease or intolerance of lactose or gluten, were much less commonly reported. Women were more likely than men to say they had a food intolerance (48% and 37% respectively).

Table 1.2.3

All respondents reporting either a reaction or intolerance were asked whether this had been clinically diagnosed by an NHS or private practitioner. Under half of respondents (44%) described their food allergy as clinically diagnosed, whilst a quarter (24%) of people described their food intolerance as being clinically diagnosed. Overall, 2% of the sample reported having a food allergy or intolerance that had been clinically diagnosed, at a similar level to Wave 4 (2016), and too low to allow comparisons between groups.

Table 1.3

Figure 1.2. Clinically diagnosed allergy or food intolerance (Wave 5 respondents who reported food allergy or food intolerance)



1.3 Frequency of eating certain foods

This section discusses the consumption of certain types of foods that pose, or are perceived to pose, the greatest food safety risks, for example in relation to food poisoning.

Meat and poultry

Chicken and turkey were the most frequently eaten type of meat with 81% of respondents reporting that they ate it at least once a week.

Around a half of respondents reported eating **beef, lamb or pork** (55%) once a week. A similar proportion ate **pre-cooked meats** (52%) once a week.

Fewer respondents ate **sausages** (32%), **cured or dried meats** (30%) or **burgers** (17%) at least once a week and consumption of **duck and goose** was relatively uncommon (1% at least once a week).

Over time, the consumption of red meat and pre-cooked meat has gradually fallen. In Wave 2 (2012) of Food and You, 75% of adults ate cuts of beef, lamb or pork at least once a week, compared with 55% in the current wave (2018). Similarly, 65% ate pre-cooked meats at least once a week in Wave 2, but this has declined to 52%¹². Consumption of chicken has declined across the same period; but at a much slower rate, from 86% in 2012 to 81% in 2018. Sausages and burgers were first asked about in Wave 4 of Food and You. Consumption of burgers has risen from 13% to 17% since then, with consumption of sausages remaining at similar levels over the same period.

Men and women were equally likely to eat chicken at least once a week, but men were more likely to eat other types of meat:

¹² Until Wave 4, respondents were asked about 'Pre-cooked meats such as ham or paté'; in Wave 5 they were asked about 'Pre-cooked meats' with no examples given.

- 58% of men and 51% of women ate cuts of beef, lamb or pork at least once a week;
- 57% of men and 48% of women ate pre-cooked meats at least once a week;
- 37% of men and 28% of women ate sausages at least once a week;
- 23% of men and 11% of women ate burgers at least once a week.

There were differences by age in the consumption of burgers and chicken and turkey. Between 82% and 84% of adults aged between 16 and 64 ate chicken and turkey at least once a week, but this was lower among adults aged 65 and over (72% to 75%). Burger consumption was highest among 16 to 24 year olds; 36% ate burgers at least once a week, declining with age to 4% of respondents aged 75 and over.

Table 1.4

Figure 1.3. Proportion of respondents eating different types of meat at least once a week, by survey wave



Milk and eggs

Nearly all respondents said they consumed **milk and dairy foods** such as cheese and yoghurt at least once a week (92%, down from 97% in 2012). 69% reported consuming milk and dairy products at least every day. A small proportion (2%) reported drinking **raw milk**.

Three quarters (75%) of respondents ate **cooked eggs** at least once a week, including 8% who ate them every day. The majority of respondents (86%) never ate **raw or uncooked eggs**.

Table 1.5

Fish and shellfish

Fewer people reported eating fish and shellfish than meat and poultry. More respondents ate **cooked or smoked fish** (41%) at least once a week than **cooked shellfish** (10%), which 42% of respondents said they never ate. 90% of respondents never ate **raw oysters**.

Older people were more likely to eat cooked or smoked fish at least once a week (32%, increasing with age to 55% of respondents aged 75 and over).

Table 1.6

Fruit and vegetables

Most respondents (91%) reported eating **raw fruit** at least once a week, including 56% who ate it every day. Similarly high proportions said they ate vegetables at least once a week, both **cooked vegetables** (95%) and **raw vegetables** (87%), the latter including salads. 40% ate cooked vegetables (up from 35% in 2012) and 28% ate raw vegetables (up from 20% in 2012) at least once a day.

Women were more likely than men to eat fruit and vegetables every day:

- 63% of women and 49% of men ate raw fruit every day;
- 43% of women and 37% of men ate cooked vegetables every day;
- 32% of women and 24% of men ate raw vegetables, including salad daily.

There were also the following differences between age groups:

- 37% of 16 to 24 year olds consumed raw fruit at least once a day, increasing to 66% of those aged 75 and over.
- Daily consumption of cooked vegetables was lowest among respondents aged 16 to 24 (32%) and highest among those aged over 75 (46%).
- Daily consumption of raw vegetables including salad was lowest among the youngest and oldest age groups (20% of 16 to 24 year olds, 19% of over 75s) but between 28% and 31% for all other age groups.

Table 1.7

Pre-packaged sandwiches and ready meals

One in five (21%) respondents ate **pre-packaged sandwiches** at least once a week, and slightly more (25%) ate **ready meals** at least once a week. Most people who ate either of these did so no more than once or twice a week (14% and 18% respectively).

The proportions consuming pre-packed sandwiches at least once a week varied between groups.

- **Gender:** Men were more likely to eat pre-packaged sandwiches at least once a week than women (26%, compared with 16%).
- **Age:** The proportion who ate pre-packaged sandwiches at least once a week decreased with age from 38% of 16 to 24 year olds to 6% of those aged 75 and over.

- Household income:** Consumption was higher among those in highest income households; 27% in this group ate pre-packaged sandwiches at least once a week, compared with between 16% and 18% in other income groups.

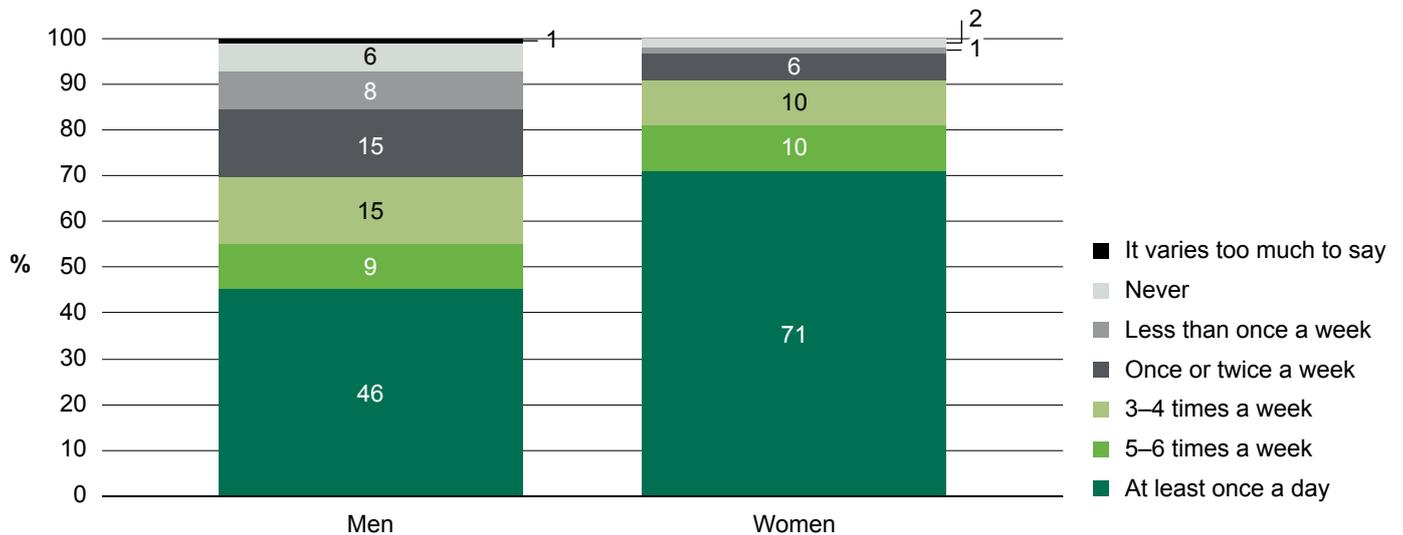
Men were also more likely than women to eat ready meals; 29% of men did so at least once a week, compared with 22% of women. Otherwise there was little significant variation between groups.

Table 1.8

1.4 Cooking

The majority of respondents (90%) reported having at least some responsibility for cooking or preparing food in the home,

Figure 1.4. Frequency of cooking meals at home, by gender (Wave 5)



with almost half (48%) saying they were responsible for all or most of this. 59% of the respondents also reported cooking or preparing food at least once a day.

Women were more likely than men to have all or most of the responsibility for cooking (63% compared with 33%), and to report cooking at least once a day (71% compared with 46%). 16% of men said they had no responsibility for cooking or preparing food, compared with 4% of women.

This pattern was similar in Wave 4 of the survey (2016).

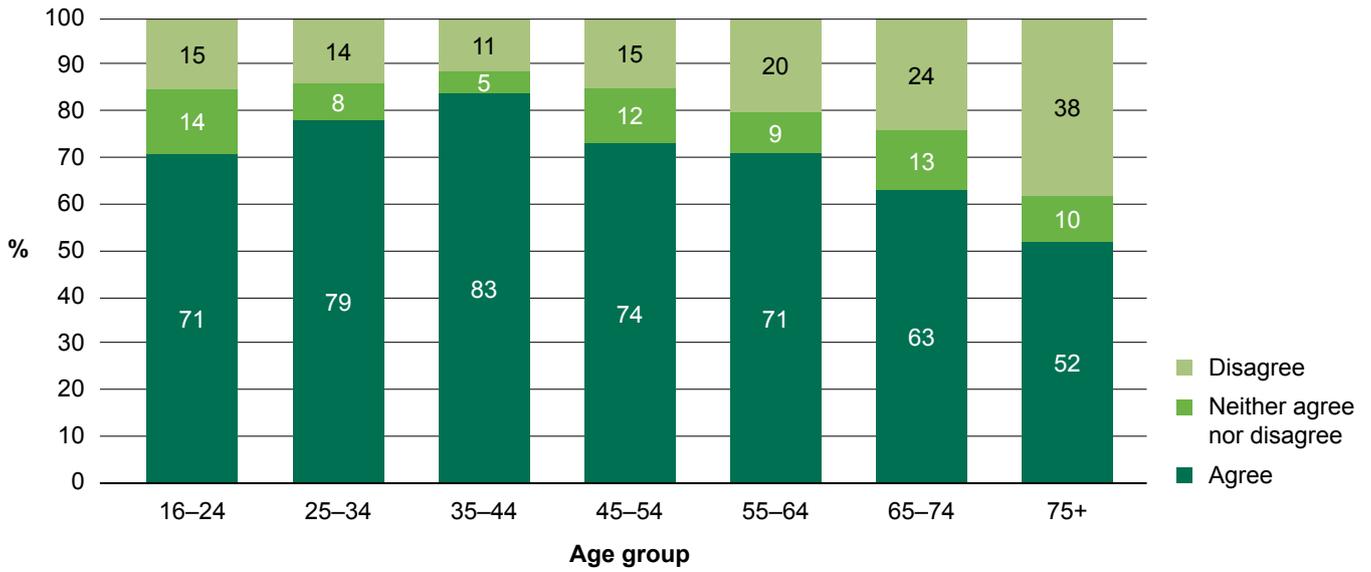
Tables 1.9, 1.10

1.5 Attitudes towards cooking and eating

Respondents were asked about their views on cooking and eating. As in previous waves, most respondents had a generally positive outlook towards cooking and eating. The majority of people agreed with the statements 'I like trying new things to eat' (72%) and 'I enjoy cooking and preparing food' (67%). Most respondents disagreed with the statements 'I'm not generally interested in food' (81%) and 'I don't have time to spend preparing and cooking food' (68%). There were differences between groups.

- **Gender:** Men were more likely than women to agree that they **don't have time to prepare and cook food** (24% compared with 15%).
- **Age:** 71% of 16 to 24 year olds agreed that they **like to try new things to eat**, and this proportion rose with age to 83% of 35 to 44 year olds, before declining among older age groups to 52% of those aged 75 and over. There was a similar pattern by age for the statement '**I enjoy cooking and preparing food**'. Between 5% and 9% of those aged between 16 and 54 agreed that '**I am not generally interested in food**' but agreement was higher for older respondents, highest (19%) in those aged 75 and over.
- **Income:** Respondents in the two lowest household income categories were less likely than in higher income households to agree that they **liked to try new things to eat** (63% to 64%, compared with 81%). The proportions agreeing that

Figure 1.5. 'I like trying new things to eat' by age group (Wave 5)



they were **not generally interested in food** declined from 16% of the lowest income households to 6% in the highest income households.

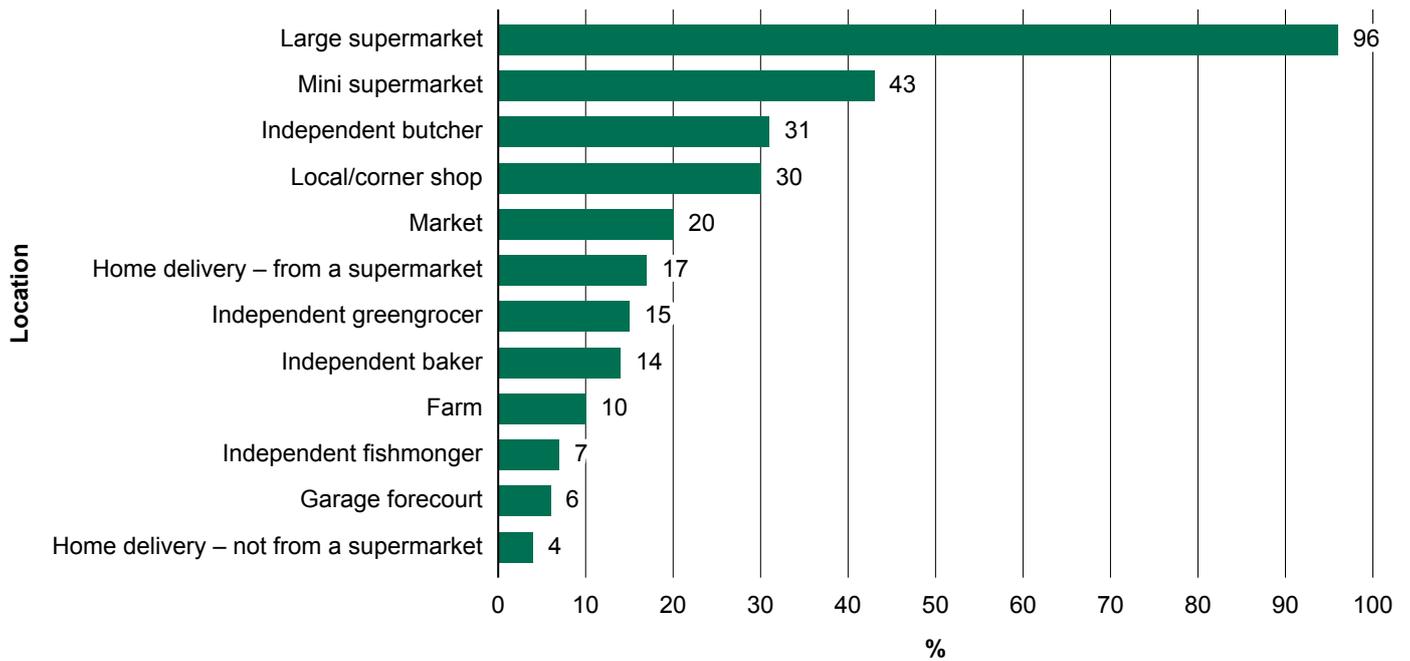
Table 1.10

1.6 Shopping

Most respondents reported having at least some responsibility for household food shopping (88%), with just under half saying they had all or most of the responsibility (49%). Women were twice as likely as men to report having all or most of the responsibility for household food shopping (64% compared with 32%). 14% of 16 to 24 year olds had all or most of the responsibility, but this was higher among older age groups and highest among those aged 65 and over (60% to 61%).

Table 1.12

Figure 1.6. Where households shop for food (Wave 5)

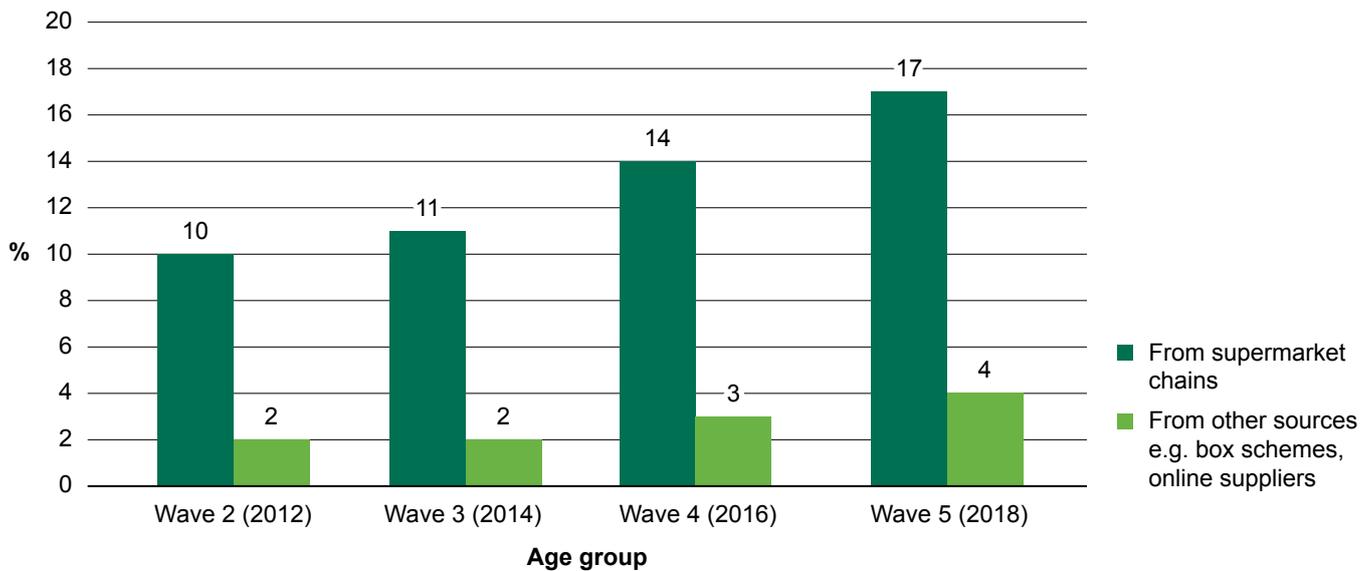


As in previous waves, almost all respondents shopped for food in large supermarkets (96%). Other types of retailer were used by a minority of respondents, most commonly mini supermarkets (43%), independent butchers (31%) and local or corner shops (30%).

Since 2012, the proportions of respondents buying from mini supermarkets has increased from 35% to 43%, and those using supermarket home delivery from 10% to 17%. Other forms of home delivery (e.g. vegetable boxes, Hello Fresh and Amazon Fresh) have also increased in popularity (from 2% to 4%) although the proportion of respondents using these services remains low.

The use of supermarket home delivery is highest in the 35 to 44 age group (28%) and lowest among older people (6% of those aged 65 and over). It is also more common in households with children (25% of people living with children under 16, compared with 13% who were not), larger households (23% of people in four-person households and 21% in households with five or more

Figure 1.7. Trends in the use of home delivery services by survey wave



members, compared with 10% of single person households), and people in the highest household income group (26%, compared with 15% to 16% in other income groups).

Table 1.13

1.7 Food security

Definition

Food security, as defined by the United Nations' Committee on World Food Security, is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and preferences for an active and healthy life.¹³

¹³ For an account of the evolution of this definition see www.fao.org/3/y4671e/y4671e06.htm#fn31

In Food and You, household food security is measured using responses to ten different questions relating to experiences with accessing and consuming food.¹⁴ Respondents are allocated a score based on these responses (see Technical report for more detail),¹⁵ and these are categorised below. Households that report three or more conditions indicating food insecurity are classified as 'food insecure'.

- **High food security (score = 0):** Households had no problems, or anxiety about, consistently accessing adequate food.
- **Marginal food security (score = 1 or 2):** Households had problems at times, or anxiety about, accessing adequate food, but the quality, variety, and quantity of their food intake were not substantially reduced.
- **Low food security (score = 3 to 5):** Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.
- **Very low food security (score = 6 to 10):** At times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money and other resources for food.

Overall levels of food security

Based on these scores 80% of respondents lived in households with high food security, 10% in households classified as marginally food secure, and 10% reported living in household with low or very low food security. These proportions are at similar levels to Wave 4 (2016).

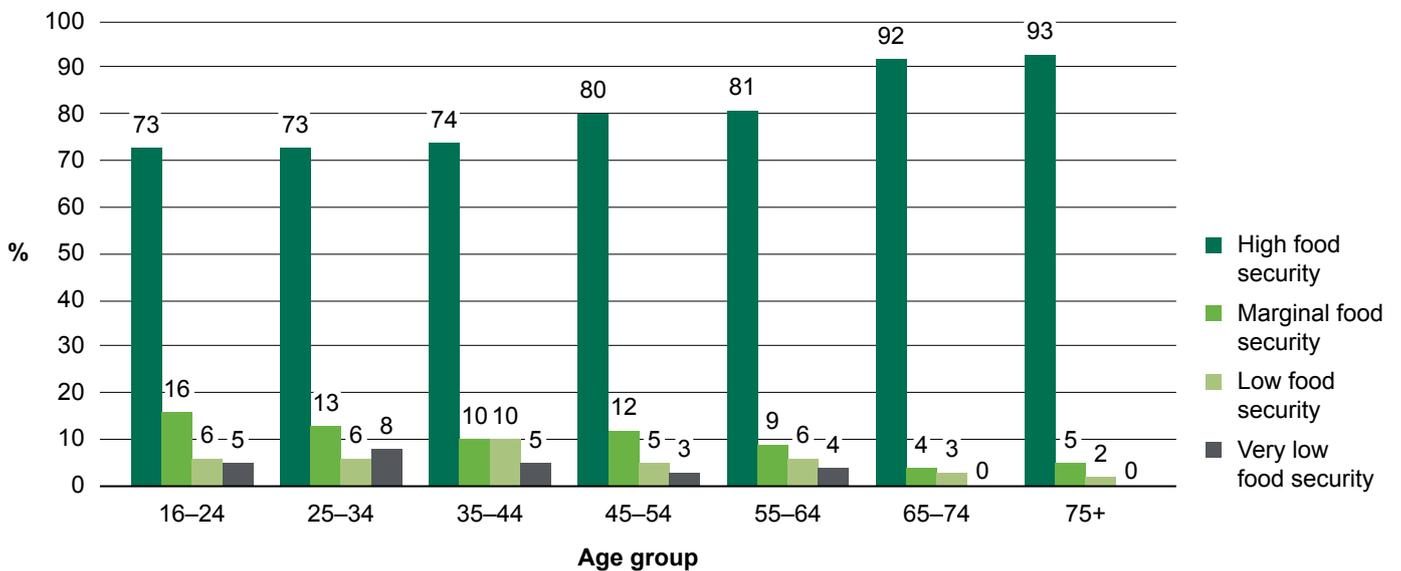
The following differences were observed between groups of respondents:

14 These ten questions asked within the Food and You survey are used by the United States Department of Agriculture Research Service. See www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement for further details.

15 www.food.gov.uk/research/food-and-you/food-and-you-wave-five

- **Age:** The proportions living in households with high food security increased broadly with age, from 73% of people aged 16 to 24 to 93% of over 75s.
- **Households with children:** Respondents who lived with children under the age of 16 were less likely than those with no children to have high levels of food security (70% compared with 84%), and there was a similar difference for those living with children aged under 6.
- **Working status:** People in work were also more likely than those who were unemployed to report living in households with high food security (80% compared with 49%). Almost

Figure 1.8. Food security status by age group (Wave 5)



a quarter (23%) of unemployed people lived in households with very low food security, compared to 4% of those in work.

- **Household income:** 59% of households in the lowest income group had high food security, increasing with income to 93% in the highest income households. Unsurprisingly 13% of

households in the lowest income groups had very low food security (compared with less than 1% of those in the highest income households).

Table 1.14

Specific concerns

The majority of respondents (83%) said they had never worried about running out of food before there was money to buy more. 17% had worried about this at some time, and there were variations across groups.

- **Age:** A quarter (25%) of respondents aged between 16 and 24 mentioned they had worried about running out of food before there was money to buy more, whereas only 5% of over 75s said the same.
- **Households with children:** The proportion of respondents living with a child under the age of 6 who had worried about running out of food (29%) was double the proportion of respondents also living with a child under the age of 6 who had not (15%), and there was a similar pattern for those in households with children aged under 16.
- **Household income:** In the lowest income households 36% had worried about running out of food before there was money to buy more, and this proportion declined with increasing income to 5% of the highest income households.

Most respondents had not felt that the food they bought didn't last, and they didn't have money to get more, or that they couldn't afford to eat balanced meals. But 12% had felt that the food they bought didn't last, and they didn't have money to get more, and 11% had felt that they couldn't afford to eat balanced meals. There were again differences among age groups; 18% of 16 to 24 year olds agreed that the food they bought didn't last, but this proportion decreased with age to 4% of over 65s. There was a similar pattern in the proportions who often or sometimes couldn't afford to eat balanced meals (from 13% of 16 to 24 year olds to 3% of over 75s).

Around a quarter of respondents in the lowest income households had felt that the food they bought just didn't last and they didn't have money to get more (24%) and the same proportion sometimes or often couldn't afford to eat balanced meals. These proportions reduced with increasing income and in the highest income households, the corresponding proportions were 4% and 5%.

Changes in buying or eating habits

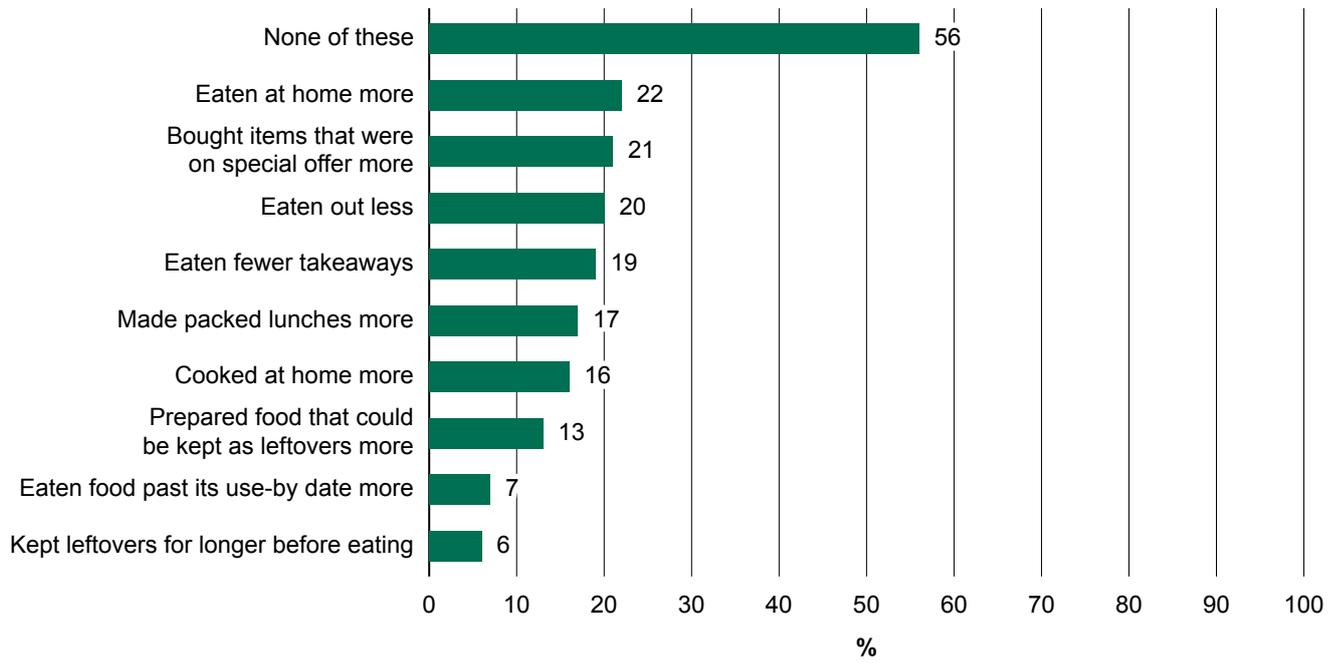
Just under half of all respondents (47%) reported making at least one change in their shopping or eating behaviour for financial reasons over the previous 12 months, down from 61% in Wave 2 (2012). The most commonly reported changes were eating at home more (22%), buying more items on special offer (21%), eating out less frequently (20%), changing the places where food was bought to cheaper alternatives (20%), and eating fewer takeaways (19%).

There were differences across groups in the proportions who had made changes.

- **Gender:** Women were more likely than men to say they made a change to their eating or shopping habits for financial reasons (53% compared with 40%).
- **Age:** 62% of people aged 16 to 24 made at least one change for financial reasons, compared with 16% of over 75s.
- **Households with children:** Respondents living with children under the age of 6 were more likely than those who were not to make at least one change to their shopping or eating habits for financial reasons (61% compared with 45%), and there was a similar pattern according to whether respondents lived in households with children under 16.

Table 1.15

Figure 1.9. Changes in buying and eating arrangements for financial reasons (Wave 5)



2 Food safety in the home

2.1 Introduction

The prevention of food-borne disease is at the heart of FSA's aims and responsibilities. The FSA's *Food We Can Trust Strategy 2015–2020* includes a focus on consumers, specifically in enabling them to store, prepare and cook food safely. Handling food in the home in line with food safety regulations and best practice is particularly important in reducing incidences of food-borne illnesses. Good practice includes taking extra precautions when cooking for vulnerable people, and taking account of available information when making food decisions.¹⁶ An improved understanding of the population's domestic food safety activities when shopping for, storing, preparing, cooking and eating food, supports the delivery of the FSA's aims.

Food and You is a key source of information on people's reported behaviour, attitudes and knowledge relating to food safety, and whether this is in line with recommended practice. This information helps to inform FSA communications and policy making, for instance through identifying particular groups to target. It is also used in authoritative reports, the most recent example being the 3rd ACMSF report on *Campylobacter*, where the draft report is currently out for consultation.¹⁷ Comparisons across waves of the survey also allow examination of trends over time and help to assess whether previous food safety campaigns and interventions (such as the 2014 Food Safety Week 'Don't wash raw chicken') have had an impact on people's behaviours.

This chapter covers respondents' knowledge and reported behaviour across five domains of food safety, described below. The questions were generally the same as those included in previous waves, with the addition of questions about use of sanitising spray to gain further insight into behaviours aimed at preventing cross-contamination.

16 www.food.gov.uk/sites/default/files/media/document/Food-Standards-Agency-Strategy%20FINAL.pdf

17 At the time of writing, this report is out for consultation. Chapter 8, 'People's attitudes and behaviours regarding risk' draws heavily on Food and You data, particularly the 4Cs. See *Third Report on Campylobacter*, Advisory Committee on the Microbiological Safety of Food Ad Hoc Group on *Campylobacter* (forthcoming).

As outlined in the Introduction to this report, in Food and You, self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

Tables accompanying this chapter are available in Excel at www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

2.2 Do people follow recommended food safety practices?

Food and You asks respondents a series of questions about their normal behaviour in relation to five important elements or 'domains' of food safety:

- Cleaning;
- Cooking;
- Chilling;
- Avoiding cross-contamination;
- Use-by dates.

These domains are reported on separately within this chapter.

To get an overall picture of people's food safety behaviour, the Index of Recommended Practice (IRP) can be used. The IRP is a composite measure of food hygiene knowledge and behaviours within the home, which includes questions from each of the five food safety domains.¹⁸ Questions were selected for the IRP because they mapped onto practices that, if not followed, were more likely to increase the risk of foodborne disease. Each item scores 1 for responses in line with recommended practice or

¹⁸ www.food.gov.uk/sites/default/files/media/document/fs409012-2finalreport.pdf

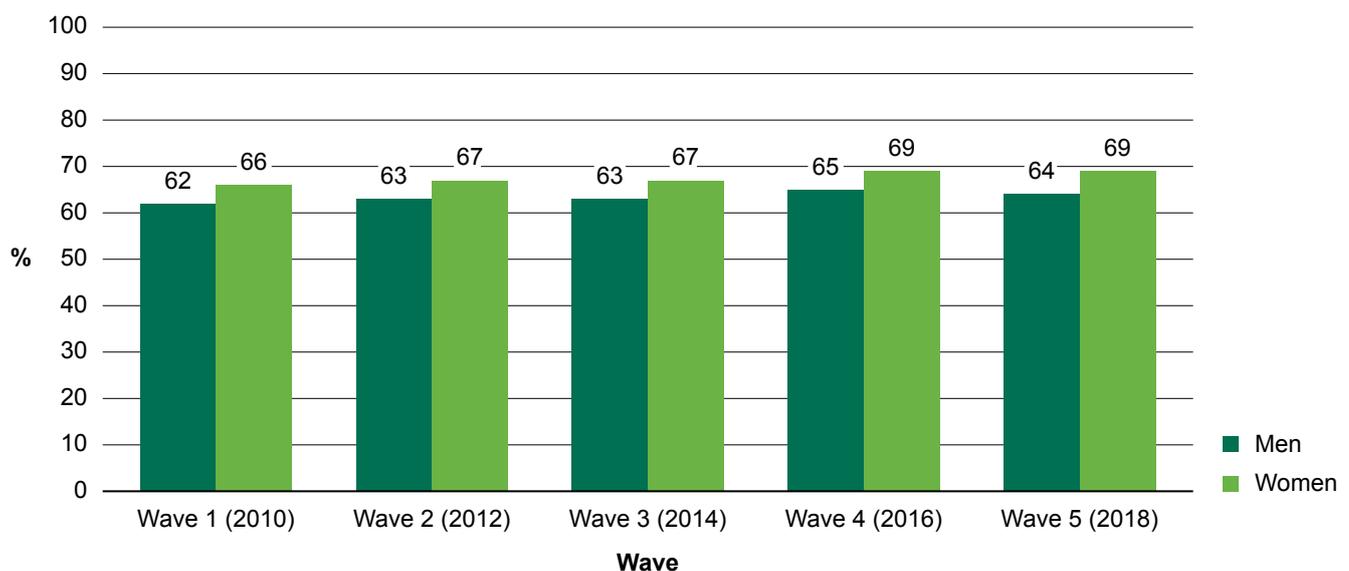
0 for responses not in line with recommended practice. The overall score is then converted to a score out of 100 with a higher score indicating more reported behaviours that are in line with recommended food safety practice. It is important to note that IRP gives an overall indication of whether recommended practices are being followed and this is useful for comparing across subgroups but it does not inform about individual behaviours. The findings are used by the FSA to track progress towards its strategic aims and to identify groups within the population who are less likely to report behaviour in line with recommended practice.

The mean IRP score increased from 64 in Wave 1 (2010) to 67 in Wave 4 (2016) and stayed at this level in Wave 5.

The mean IRP score differed across groups.

- **Gender:** Women had a higher IRP score than men (69, compared with 64).
- **Age:** The youngest respondents (aged 16 to 24) had a lower mean IRP score (62) than other age groups (between 66 and 69).

Figure 2.1. IRP scores by gender and survey wave



- **Marital status:** Those who were married, in civil partnerships or living with a partner had a higher mean IRP score (68) than respondents who were not (64).
- **Ethnicity:** Respondents of white ethnicity had a higher IRP score than other ethnic groups (68 and 62 respectively).

Table 2.1

2.3 Cleanliness

The FSA recommendation is always to wash hands with warm soapy water before preparing, cooking and eating food as well as after touching raw meat, poultry or fish.

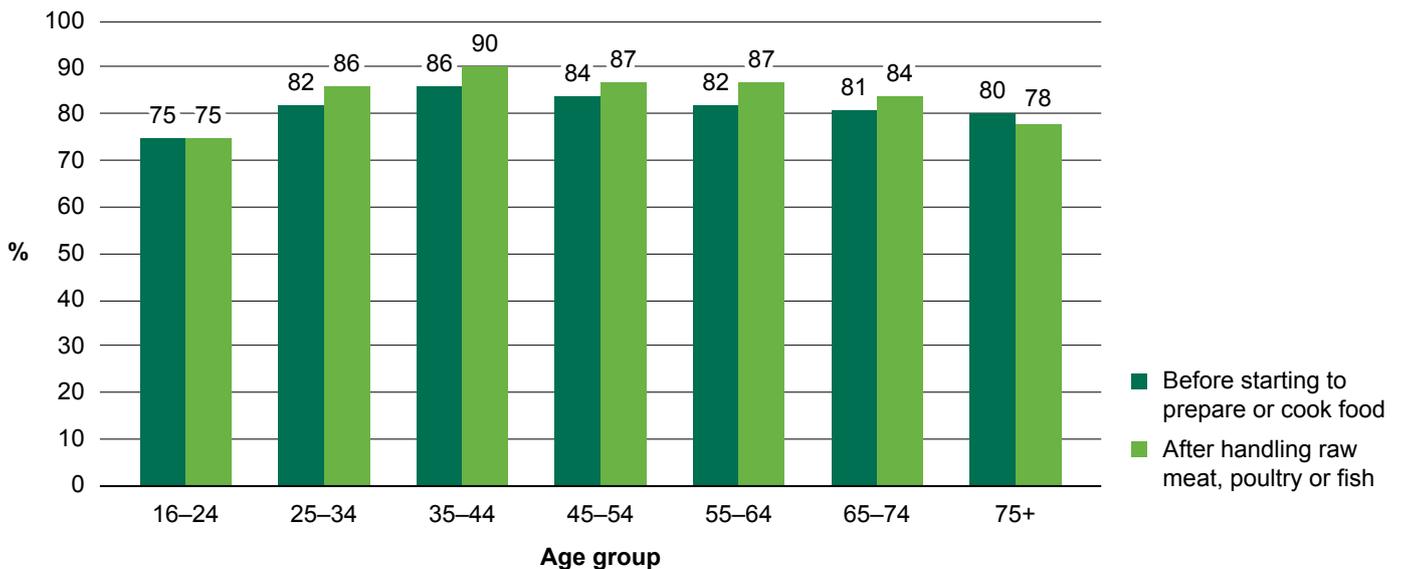
Four fifths of respondents (82%) reported always washing their hands before starting to prepare or cook food. Women were more likely always to wash their hands before starting to prepare or cook food than men (86% and 77% respectively). Those aged between 16 and 24 were less likely to do this than older age groups (75%, compared with between 80% and 86%).

A similar proportion, 85%, respondents reported always washing their hands immediately after handling raw meat, poultry or fish. Women were more likely to report always washing their hands immediately after handling raw meat, poultry or fish than were men (90% and 80% respectively). The oldest and youngest respondents were less likely than other age groups to wash their hands immediately after handling raw meat, poultry or fish (75% of those aged 16 to 24 and 78% of those aged 75 and over, compared with 84% to 90% of other age groups).

The proportions of those who reported always washing their hands, both before starting to prepare or cook food and immediately after handling raw meat, poultry or fish were similar across Waves 1 to 5.

Table 2.2

Figure 2.2. Always wash hands before starting to prepare or cook food and after handling raw meat, poultry or fish, by age (Wave 5)



2.4 Cooking

Ensuring food is properly cooked

The FSA stresses the importance of cooking food at the right temperature and length of time to ensure all harmful bacteria is killed and food is safe to eat.

The FSA recommends that most meat and meat products such as turkey, chicken, duck, goose, pork, minced meat products such as kebabs, sausages and burgers need to be steaming hot and cooked all the way through before eating.

In addition, most frozen vegetables also should be cooked and steaming hot before consumption.

Respondents were asked whether they cooked food until it is steaming hot throughout. Overall, 77% of respondents reported that they always did, while 2% of respondents reported that they never did. This was similar to the proportions recorded in previous waves. Women were more likely than men to always cook food until it was steaming hot throughout (84% and 70% respectively). The youngest age group were less likely to do this than older adults (59% of 16 to 24 year olds, compared with between 77% and 82% of older respondents). The proportion of those who always cook food until it is steaming hot throughout increased with age before slightly decreasing at the age of 75 and over.

Meat and meat products

The FSA recommends that most meat and meat products such as turkey, chicken, duck, goose, pork, minced meat products such as kebabs, sausages and burgers should not be eaten if the meat is pink or has pink or red juices.

Respondents were asked whether they ate different types of meat when it was pink or had pink or red juices. 88% reported that they never ate **chicken or turkey** if the meat was pink or had pink or red juices, and this proportion increased with age, to 90% or more among respondents aged 45 and over.

Two in five respondents (41%) reported that they never ate **duck** if the meat was pink or had pink or red juices, although 41% said that this question was not applicable to them. 18% reported eating duck when the meat was pink or had pink or red juices at least sometimes – this is not in line with FSA food safety recommendations.

It is safe to eat steak or other whole cuts of red meat rare as long as they have been properly cooked and sealed on the outside, as this is where harmful bacteria are normally found in this type of meat.

Two in five respondents (40%) reported that they never ate **red meat** if the meat was pink or had pink or red juices, although 50% said they did at least sometimes. This proportion has declined over time, from 48% in Wave 1 of the survey (2010). Women were more likely to report that they never ate red meat like this than were men (46% and 33% respectively). The proportion who never ate red meat if the meat was pink or had pink or red juices increased broadly with age, from 38% of 16 to 24 year olds to 57% of those aged 75 and over.

The FSA recommends always to cook burgers thoroughly, as rare or undercooked burgers may contain harmful bacteria and cause food poisoning.

Just over three fifths (62%) of respondents reported that they never ate **burgers** if the meat was pink or had pink or red juices. This proportion was lowest among those aged under 45 (57% to 58%) and highest among those aged between 55 and 74 (69% to 70%).

There is a similar recommendation for **sausages**, and 79% of respondents reported that they never ate sausages if the meat was pink or had pink or red juices. This proportion was higher among women than men (83% and 76% respectively), and increased with age from 69% of under 25s to 84% of those aged 55 and over.

The FSA recommends that pork should not be eaten pink or rare.

Around three quarters (73%) of respondents reported that they never ate whole cuts of **pork** or pork chops if the meat was pink or had pink or red juices. 77% of women said that never ate whole cuts of pork or pork chops like this, compared with 68% of men. The likelihood of never eating pork if pink or rare increased with age, from 58% of those aged 16 to 24, to 83% of those aged 75 and over.

Table 2.3

Figure 2.3. Never eats meat if pink or has pink or red juices, by age (Wave 5)

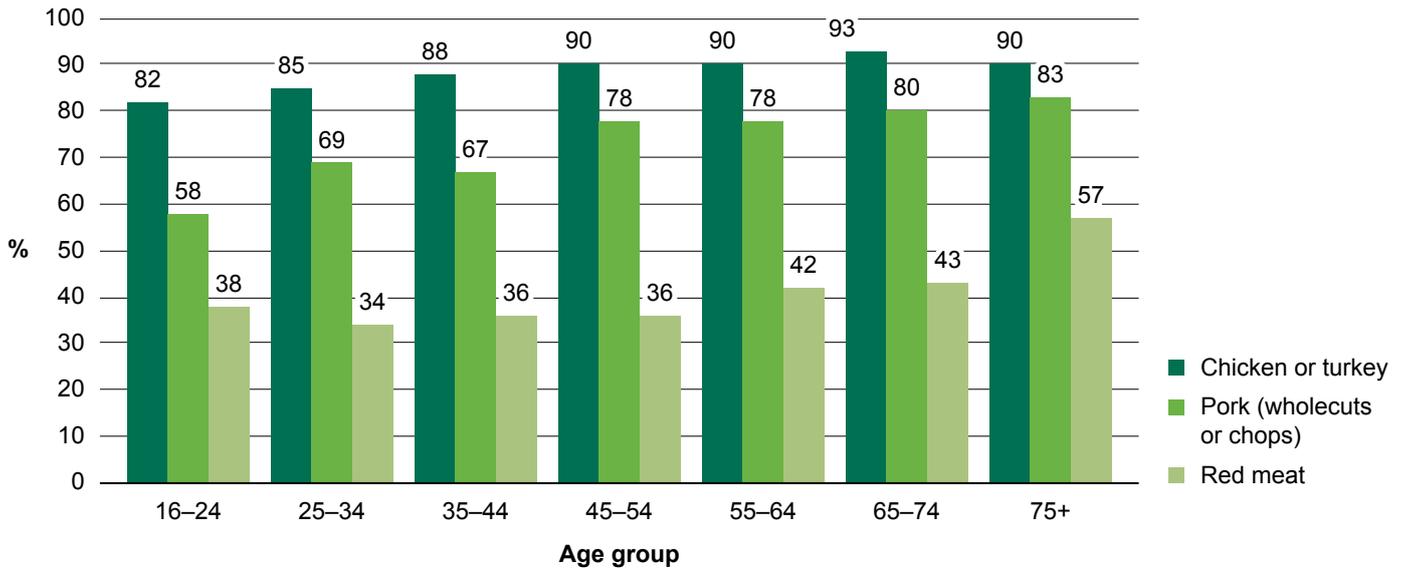
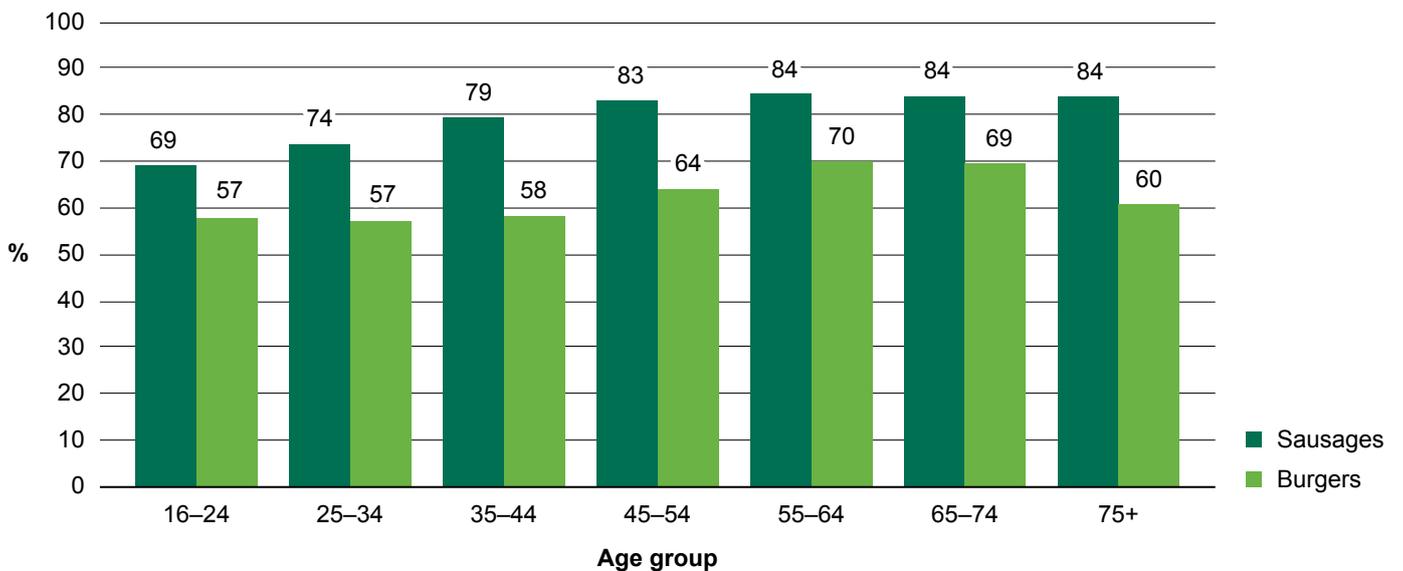


Figure 2.4. Never eats sausages or burgers if pink or has pink or red juices, by age (Wave 5)



Reheating food

The FSA recommends not to reheat food more than once and always to ensure it is heated throughout and steaming hot before eating.

Less than one in ten respondents (8%) reported reheating food twice or more, compared with 80% of respondents who reported reheating leftovers once and 11% who said they did not reheat food at all. This was similar in previous waves.

Respondents were asked how they usually tell food has been reheated properly. The most frequent responses were seeing that steam is coming from it (44%) and checking if the middle is hot (41%).

Table 2.4

2.5 Chilling

Checking fridge temperature

The temperature in the fridge should be checked using a fridge thermometer, rather than the dials on the fridge as the latter may be inaccurate.

Of those who have a fridge, 50% of respondents said that they (or someone else in the household) checked the fridge temperature, while 47% said they did not. This was similar in previous waves. The majority of respondents who did check the temperature, said they did so at least once a month (78%), in line with the FSA recommendations.

Table 2.5

The most common ways of checking fridge temperature reported by the respondents were checking the setting or gauge on the fridge (38%) and checking the temperature display or thermometer built into the fridge (37%).

Table 2.6

Knowledge of the recommended fridge temperature

The FSA recommends that the fridge temperature should be kept below 5 degrees C to stop harmful bacteria from growing and to avoid food poisoning.

Respondents were asked about their knowledge of recommended fridge temperature. Half (50%) responded that the fridge temperature should be between 0 and 5 degrees Celsius (32 to 41 degrees Fahrenheit), which is the recommended temperature. A third of respondents (35%) did not know what the fridge temperature should be. Older respondents, aged 75 and over, were least likely to know the correct temperature (37%) and also most likely to report not knowing (52%).

Lack of knowledge about the recommended fridge temperature also varied by household income and working status. Those on the lowest household income were the most likely not to know the recommended fridge temperature (42%), and this proportion decreased as household income increased, to 23% in the highest income households. Those in work were the least likely to report that they did not know the recommended fridge temperature (28%, compared with 39% of unemployed respondents and 48% of retired respondents).

Table 2.7

Defrosting food

When defrosting food, it should be placed in the fridge, or if this is not possible, food should be defrosted in a microwave. It is unsafe to defrost food at room temperature.

Respondents were asked which methods they had used to defrost frozen meat or fish. The most common response was leaving the meat or fish at room temperature (54%), which is not recommended by the FSA. The second most common response was leaving the meat or fish in the fridge, the recommended method (50%).

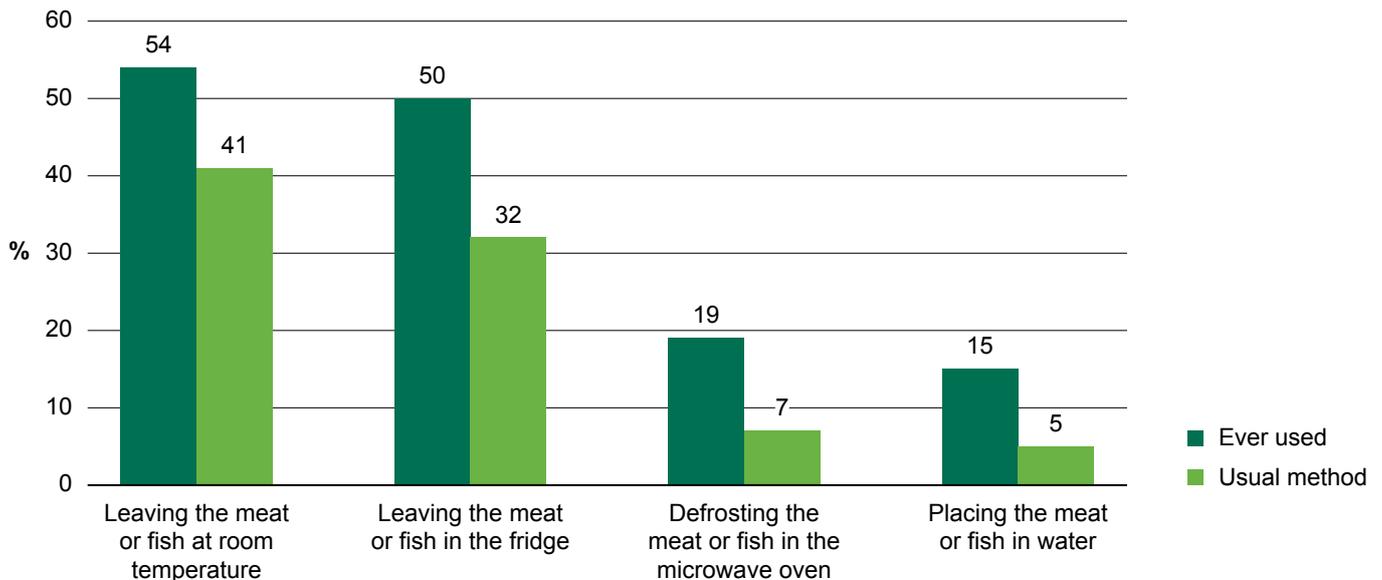
Table 2.8.1

Women were more likely than men to report defrosting meat or fish by leaving it in the fridge (56% and 44% respectively). Respondents, aged 16 to 24, were the least likely to use the recommended defrosting method (27%, compared with 50% or more of older respondents). But the youngest respondents were also the most likely not to defrost meat or fish (30%, compared with 7% to 15% in other age groups).

When asked which single method they usually use to defrost frozen meat or fish, 41% said that they usually left the meat or fish at a room temperature and 32% that they usually left the meat or fish in the fridge. The proportion who usually defrosted meat or fish at room temperature has decreased since Wave 2 (2010) when it was 50%, and the proportion defrosting meat or fish in the fridge has increased over the same period from 28% to 32%. Women were more likely than men to leave the meat or fish in the fridge as their preferred defrosting method (37% and 26% respectively).

Table 2.8.2

Figure 2.5. Methods used to defrost frozen meat or fish (Wave 5)



2.6 Cross contamination

Cross contamination occurs when harmful bacteria or other microorganisms are transferred between objects, for example bacteria can be transferred between raw and cooked food. Cross contamination can cause food poisoning.

To avoid cross contamination and its risks, the FSA recommends never washing raw meat, always storing covered raw meat, poultry, fish and shellfish on the bottom shelf of your fridge and using different utensils, plates and chopping boards for raw and cooked food.

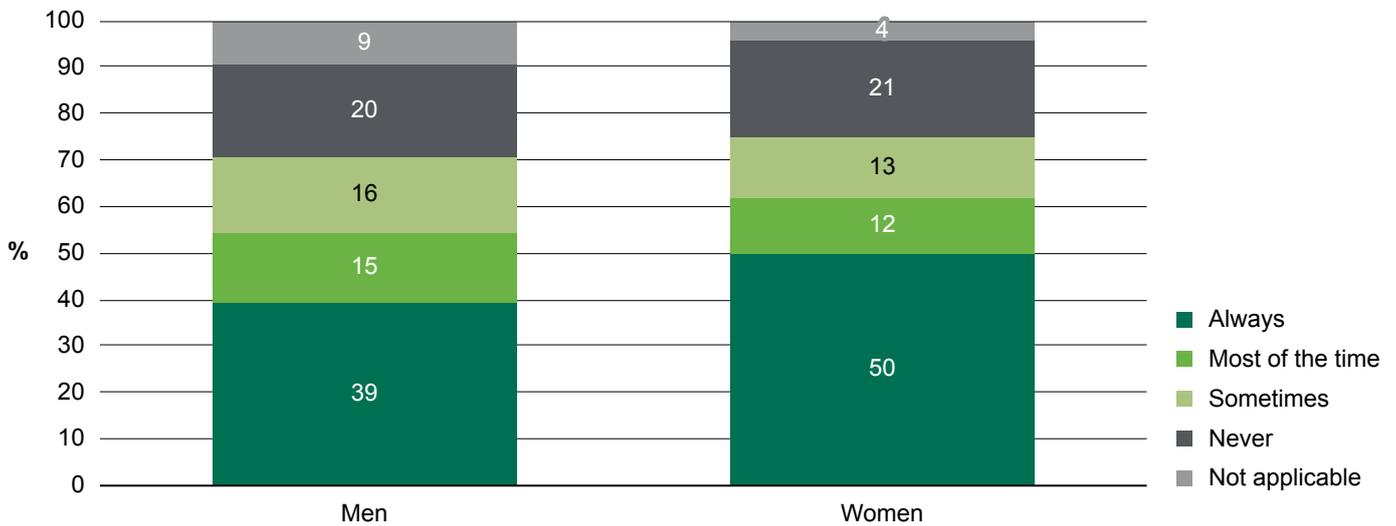
Chopping boards

When asked whether they use different chopping boards for different foods, 45% of respondents said that they always did, while 21% said that they never did. This was similar to previous

waves. Women were more likely than men always to use different chopping boards for different foods (50% and 39% respectively). Respondents who lived alone were less likely always to use different chopping boards for different foods than were respondents in larger households (36% compared with between 44% and 49%).

Table 2.9.1

Figure 2.6. Whether uses different chopping boards for different foods by gender (Wave 5)



When respondents were asked why they think they should wash chopping boards after preparing raw meat, poultry or fish, the most commonly reported reasons were to prevent cross contamination (58%) and to wash away germs or bacteria (54%). The proportion of respondents who said that the reason for washing chopping boards after preparing raw meat, poultry or fish was to prevent cross contamination was slightly lower than in Wave 4 (2016), when it was 62%, but much higher than in Waves 1 to 3, when it was below 10%. In Waves 4 and 5, the proportion of respondents who said the reason for washing chopping boards was to wash away germs and bacteria was lower than in previous Waves 1 to 3, when this response was given by 74% to 79% of respondents.

Table 2.9.2

Storing food in the fridge

Respondents were asked where in the fridge they stored **raw meat and poultry**. 59% of respondents reported storing raw meat and poultry on the bottom shelf of the fridge in line with recommended practice. This was similar to previous waves.

Table 2.10.1

When asked how they stored raw meat and poultry in the fridge, the most common response was storing it in its packaging (61%) which is the recommended practice (as long as the packaging is unopened). The proportion of respondents who did this was the same as in Wave 4 (2016), when it was 61%, and higher than in Waves 1 to 3 (between 52% and 57%). Otherwise, 30% of respondents reported storing raw meat and poultry in the fridge in a covered container, 29% covered it with film or foil and 14% stored it on a plate, similar proportions to previous waves.

Table 2.10.2

When asked whether they stored **open tins** in the fridge, around two thirds of respondents (65%) reported that they never did, in line with FSA recommended practice. The proportion of those who never store open tins in the fridge has declined over time from 70% in the first three waves.

A third (32%) of respondents reported storing **open tins** in the fridge at least some of the time. Women were more likely than men to say that they never stored open tins in the fridge (69% and 60% respectively). Older respondents were more likely to say this than younger respondents; (80% of 65 to 74 year olds and 71% of over 75s, compared with 53% to 54% of under 35 year olds).

Table 2.11

Washing food

The FSA recommends never to wash raw meat, poultry and fish as splashing water transfers harmful bacteria to surrounding surfaces which then can come in contact with ready-to-eat food.

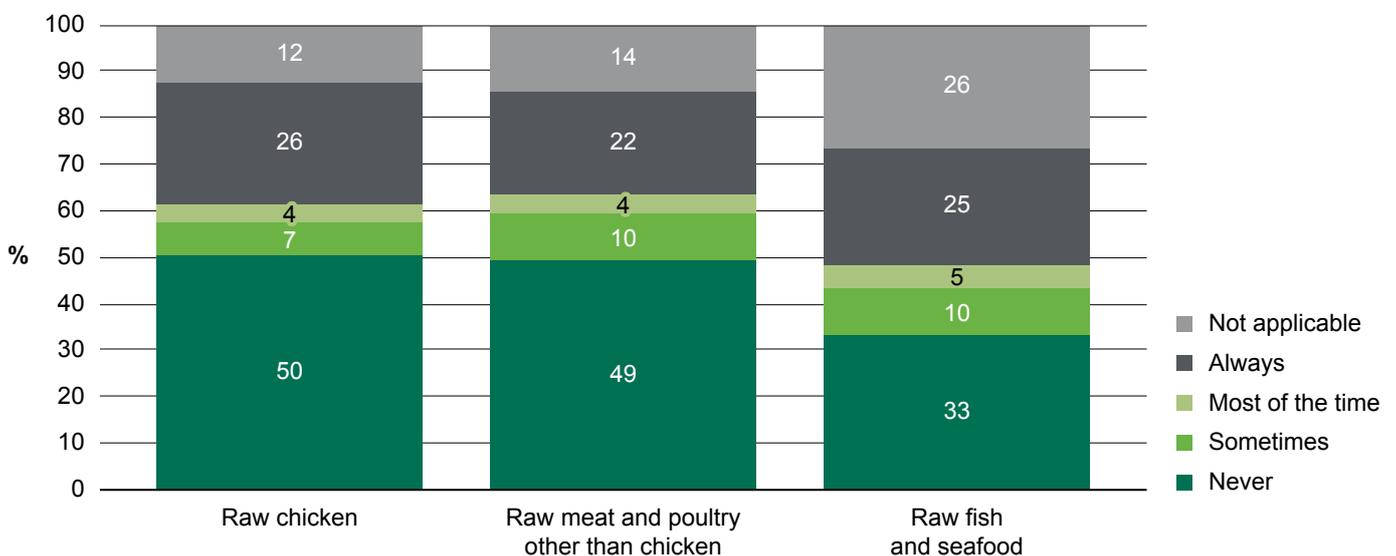
Respondents were asked whether they washed chicken, raw meat and poultry other than chicken, and fish or seafood. Half (50%) of respondents reported never washing **raw chicken** and a similar proportion (49%) never washed **raw meat and poultry other than chicken**. Substantial minorities said they always washed raw chicken (26%), or raw meat and poultry other than chicken (22%).

The proportions who always washed raw chicken fell from 41% in Wave 3 (2014) to 28% in Wave 4 (2016) and has remained at a similar level in Wave 5. Conversely the proportions who said they never washed raw chicken rose from 36% to 49% between Waves 3 and 4 and has stayed at a similar level in Wave 5.

A third of respondents (33%) never washed **raw fish or seafood**, while a quarter (25%) said that they always did.

Table 2.12

Figure 2.7. How often washes raw meat, poultry or fish (Wave 5)



The FSA recommends that unless the packaging says 'ready-to-eat', fruit and vegetables should be washed before consumption.

More than half (55%) of respondents reported always washing **fruit and vegetables** to be eaten raw, and 46% of respondents reported always washing fruit and vegetables to be eaten cooked. Conversely, 11% said that they never washed fruit and vegetables to be eaten raw, while 16% said that they never washed fruit and vegetables to be eaten cooked. Women were more likely than men to wash fruit and vegetables to be eaten raw (61% and 48% respectively) and fruit and vegetables to be eaten cooked; 51% of women reported always doing so compared with 41% of men.

Table 2.13

Sanitising spray

The FSA recommends cleaning and disinfecting kitchen work surfaces to kill harmful bacteria and prevent them from spreading into food. It is recommended using a sanitising spray and leave it on the surface for the time specified on the bottle before wiping it off.

Respondents were asked whether they used any antibacterial surface sanitising spray or wipes to clean kitchen work surfaces. More than half (55%) reported always using antibacterial surface sanitising spray or wipes to clean kitchen work surfaces, while 13% said that they never did that. Always using antibacterial surface sanitising spray or wipes to clean kitchen work surfaces was most likely among those aged between 25 and 44 (68% to 71%) and was lower among other age groups, lowest among respondents aged 75 and over (35%).

The proportion of respondents who reported that they always use any antibacterial surface sanitising spray or wipes to clean kitchen work surfaces was higher among those who live in households with children (67% of those who live in households with children under 16, compared with 50% of those who do not).

When asked how they normally use surface sanitising spray, the highest proportion reported that they spray it and immediately wipe it off (47%), not as recommended by the FSA. A third (35%) followed the recommended action and sprayed it, leaving it for a few minutes before wiping it off.

Table 2.14

Figure 2.8. Always uses sanitising spray or wipes to clean kitchen surfaces, by age group (Wave 5)

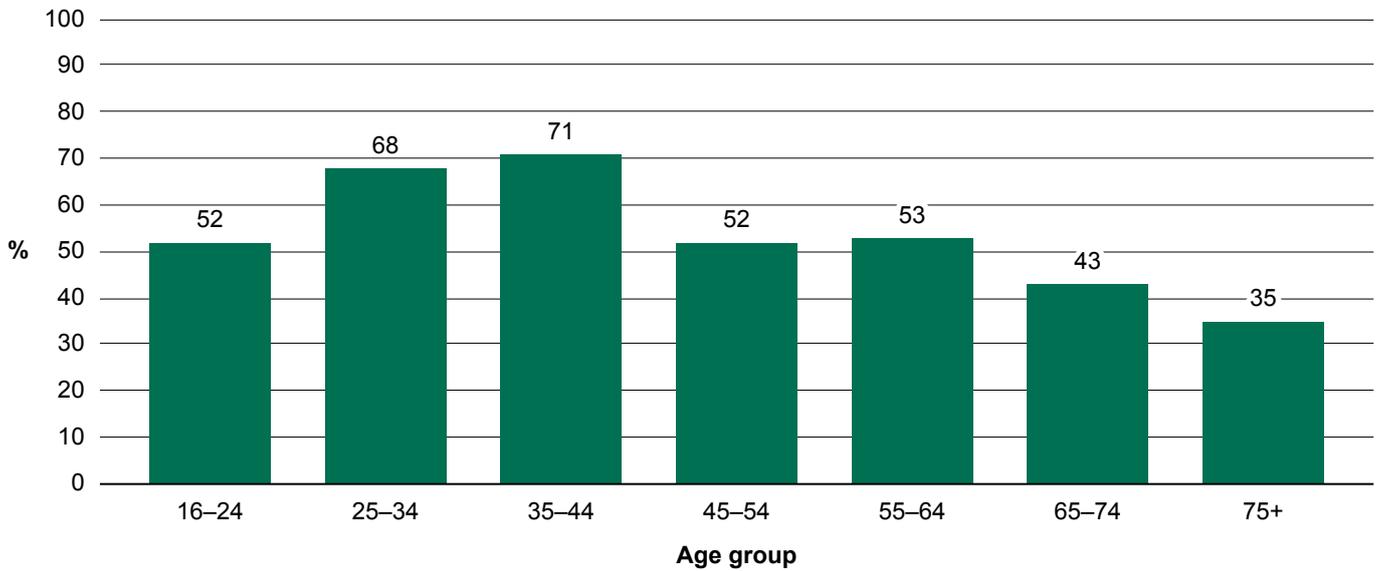


Figure 2.9. How uses sanitising spray or wipes (Wave 5)



2.7 Assessing if food is safe to eat

Respondents were asked how they would tell whether different types of foods were safe to eat or use in cooking. Respondents were most likely to say that they assessed the safety of these foods by how they smelled; specifically milk and yoghurt (73%), raw meat (66%), fish excluding shellfish (62%) and eggs (33%). In assessing whether cheese was safe to eat respondents were most likely to rely on how it looked (64%).

The recommended way of telling whether food is safe to eat or use in cooking is the use-by date.

The use-by date was mentioned by a minority of respondents as a way to assess the safety of various foods: milk and yoghurt (29%), raw meat (28%), eggs (25%), cheese (21%), and fish (21%).

Tables 2.15 to 2.19

Product labelling

When asked which date labels indicate whether food is safe to eat or use, 76% of respondents identified the use-by date. Three-quarters (75%) of respondents also said that the use-by date was the best indicator of food safety. This was at similar levels in Wave 2 (2012) and Wave 3 (2014), 65% and 64% respectively. Since then it has increased steadily to 70% in Wave 4 (2016) and 75% in Wave 5.

There was some variation by age. Adults aged between 35 and 54 were most likely to identify the use-by date as the best indicator (81% to 82%) whereas the youngest and oldest age groups were least likely (64% among those aged under 25 and 66% of those aged 75 and over). There was a similar pattern across age groups for identifying the use-by date as an indicator.

Tables 2.20.1, 2.20.2

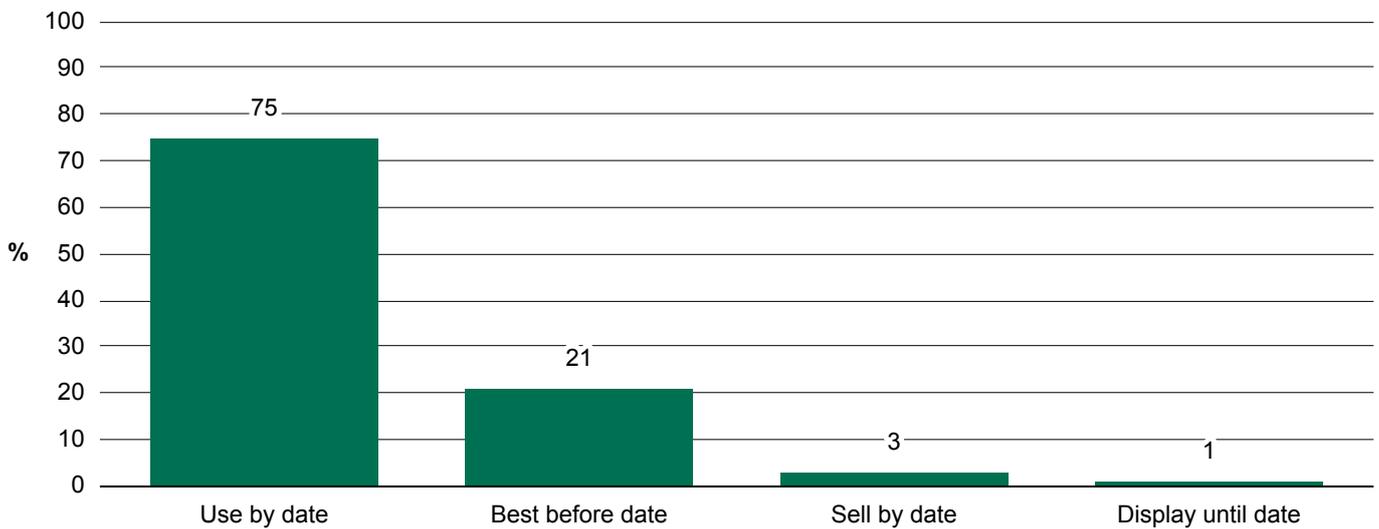
Respondents were asked whether they checked use-by dates when they are about to cook or prepare food. 63% of respondents reported always checking use-by dates (down from 68% in Wave 1 in 2010), while 5% said that they never did.

Table 2.21

Just under a quarter (24%) of respondents reported that they found it quite difficult to read labelling on food products due to the size of the print and a further 10% found it very difficult. This was similar in previous waves. Difficulty in reading product labels was associated with age, and the majority of those aged 75 and over found it difficult to read product labels (59%, compared with 8% of those aged 16 to 24).

Table 2.22

Figure 2.10. Which label is the best to tell whether food is safe (Wave 5)



Using leftovers

The FSA recommends eating leftover food no more than two days from cooking (that is, up to Tuesday if cooked on Sunday).

After that the food may be unsafe to eat. 73% of respondents followed this recommendation. This was similar to Wave 4 in 2016 (72%) and lower than in Waves 1 to 3 (74% to 79%).

Table 2.23

2.8 Sources of information about food safety

The most common sources of information about how to prepare and cook food safely were family and friends (46%), product packaging (36%) and food TV shows and cooking programmes (30%). In general, the proportions of young people aged between 16 and 24 citing these sources were higher than for other age groups, notably on family and friends (66%), and internet search engines (45%, compared with 28% of respondents in general).

Around a fifth (22%) of respondents said that they do not look for information on how to prepare and cook food safely at home. This was much higher among those aged 75 and over (42%, compared with 26% or less in other age groups).

Table 2.24

3 Eating outside the home

3.1 Introduction

This chapter focuses on food bought outside the home. Changes in consumer behaviour and greater flexibility in personal budgets have led to an increasing shift towards substituting home cooking with eating out. The consumption of food and beverages from outside the home has undergone considerable growth over the last decade, with households in the financial year 2016/17 spending an average of £19 per week on restaurant and café meals, £5.00 on takeaways and snack food eaten outside the home, and £5.10 on takeaways eaten at home.¹⁹

The FSA's strategy for 2015 to 2020²⁰ highlights its commitment to protect public health from the risks which may arise in connection with the consumption of food, and outlines a number of consumer rights which underpin this, including the right to be protected from unacceptable levels of risk, and the right to make choices knowing the facts.

These rights also apply to obtaining and eating food outside the home. Therefore helping consumers to make informed choices about where they eat out and purchase their food is an important part of the FSA's commitment. As part of this commitment, in 2010 the FSA launched the national Food Hygiene Rating Scheme (FHRS)²¹ in partnership with Local Authorities and businesses across England, Wales and Northern Ireland.

The FHRS provides the public with information about the hygiene standards in food premises at the time they are inspected for compliance with legal requirements. This helps people to make an informed decision when eating out or buying food. By recognising businesses with good standards, it also acts as an incentive for businesses with lower standards to make improvements. The overall aim of the scheme is to improve hygiene standards of food establishments and reduce the incidence of food-borne illness.

19 <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familyspendingintheuk/financialyearending2017>

20 www.food.gov.uk/sites/default/files/media/document/scistrat%20%282%29.pdf

21 www.food.gov.uk/safety-hygiene/food-hygiene-rating-scheme

Local authorities are responsible for carrying out inspections of food businesses to check that they comply with legal requirements and for awarding food hygiene ratings based on the findings of inspections.²² Businesses in England are encouraged, although not legally required, to display these ratings, whereas in Wales and Northern Ireland display of FHRS ratings is mandatory.^{23,24}

In 2014, the FSA introduced a consumer attitudes survey to focus specifically and in detail on consumer awareness, recognition and use of the FHRS.²⁵ Food and You, on the other hand, has a broader focus on exploring respondents' attitudes and behaviours when eating out or purchasing takeaway food, and covers:

- Where and how often respondents eat out or buy takeaways.
- The types of information respondents use to decide where to eat out and which factors they consider important when making these decisions.
- Respondents' awareness of hygiene standards and recognition of the Food Hygiene Rating Scheme (FHRS).

As outlined in the Introduction to this report, in Food and You, self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

Tables accompanying this chapter are available in Excel at www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

22 Food businesses are issued with a sticker and the rating is uploaded to www.food.gov.uk/ratings for public use.

23 Displaying FHRS ratings has been mandatory in Wales since 2013 following the Food Hygiene Rating (Wales) Act 2013, and in Northern Ireland since 2016, following the Food Hygiene Rating Act (Northern Ireland) 2016.

24 Since 2011, the FSA has commissioned independent research to track the proportion of businesses who display their FHRS ratings by audit and telephone survey. Latest figures found that in 2017, 55% of businesses in England, 85% in Northern Ireland and 86% in Wales were displaying their rating. <https://www.food.gov.uk/research/research-projects/display-of-food-hygiene-ratings-in-england-wales-and-northern-ireland-2017-wave-of-research>

25 <https://www.food.gov.uk/research/research-projects/food-hygiene-rating-scheme-consumer-attitudes-tracker-wave-7>

3.2 Frequency of eating out

The definition of eating out in Food and You includes eating away from home and also buying takeaway food from different types of establishments including restaurants, fast food outlets, pubs, bars, nightclubs, cafés, and coffee shops, sandwich bars, canteens, hotels and B&Bs, and mobile vans and stalls. Respondents were not asked where they ate the takeaways they bought. Breakfast, lunch or dinner were asked about separately, unlike in Wave 4 (2016), when respondents were asked about how often they ate out or bought takeaway food in general. Consequently it is not possible to compare these findings with previous waves of the survey.

Breakfast

In Wave 5, 38% of respondents reported that they ate breakfast out or bought a takeaway for breakfast. This included 11% who ate breakfast out at least once a week, 13% who did so less often than that but at least once a month, and 13% who ate breakfast out less than once a month.

The following differences across demographic groups were observed:

- **Gender:** Men were twice as likely as women to eat out or buy takeaway food for breakfast at least once a week (14% of men, compared with 7% of women).
- **Age:** Younger respondents were most likely to eat breakfast out at least once a week (18% of 16 to 24 year olds, declining with age to 3% of adults aged 75 and over).
- **Working status:** 2% of retired people ate out or bought takeaway food for breakfast at least once a week, compared with 16% of unemployed people and 14% of those in employment.

- **Household income:** The proportions of respondents eating or buying breakfast away from home at least once a week increased with household income from 6% in the lowest income households to 13% in the highest income households.

Table 3.1

Lunch

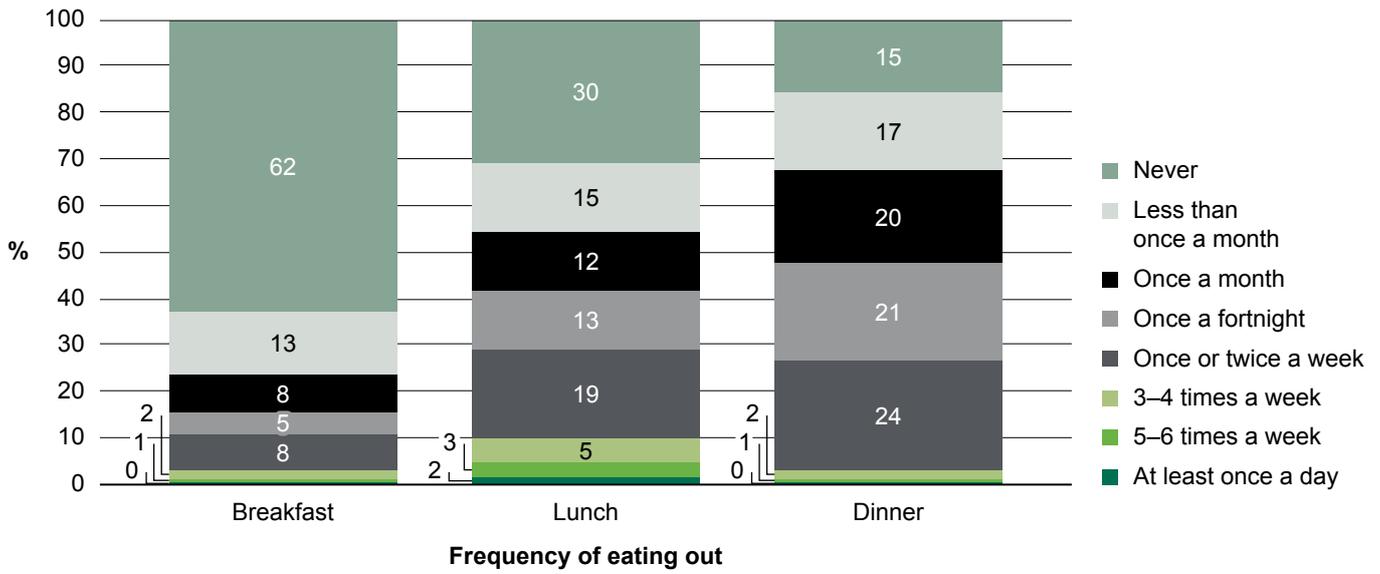
The majority of respondents (70%) ate or bought lunch outside the home. This included 29% who ate lunch out at least once a week, 25% who did so less often than that but at least once a month, and 15% who ate lunch out less than once a month.

There were some differences across groups:

- **Gender:** Men were more likely than women to eat or buy lunch away from home at least once a week (34% and 24% respectively).
- **Age:** Younger respondents were more likely than older respondents to report eating or buying lunch outside the home at least once a week (44% of 16 to 24 year olds compared with 18% of those aged 75 and over).
- **Work status:** Those in employment were most likely to eat or buy lunch out at least once a week (36% of those in work compared with 15% in retirement and 24% unemployed).
- **Household income:** Eating or buying lunch away from home was also associated with higher household income; 23% of respondents in the lowest income households reported eating or buying lunch away from the home at least once a week, increasing to 37% in the highest income households.

Table 3.2

Figure 3.1. Frequency of eating or buying breakfast, lunch or dinner away from home (Wave 5)



Dinner

Dinner was the meal most likely to be eaten or bought away from home; 85% of respondents said they ate dinner out, including 27% who did so once a week or more, 41% who did so less often than that but at least once a month, and 17% who ate dinner out less than once a month.

As with other meals, there were differences across demographic groups:

- **Gender:** Eating or buying dinner away from home at least once a week was more common among men (31%) than women (23%).
- **Age:** Eating or buying dinner outside the home at least once or twice a week decreased with age from 42% of 16 to 24 year olds to 13% of 75 year olds and over.
- **Working status:** Retired people were much less likely to eat or buy dinner outside the home at least once a week than other groups (13% of retired people, compared with 31% of those in employment and 39% of unemployed adults).

Table 3.3

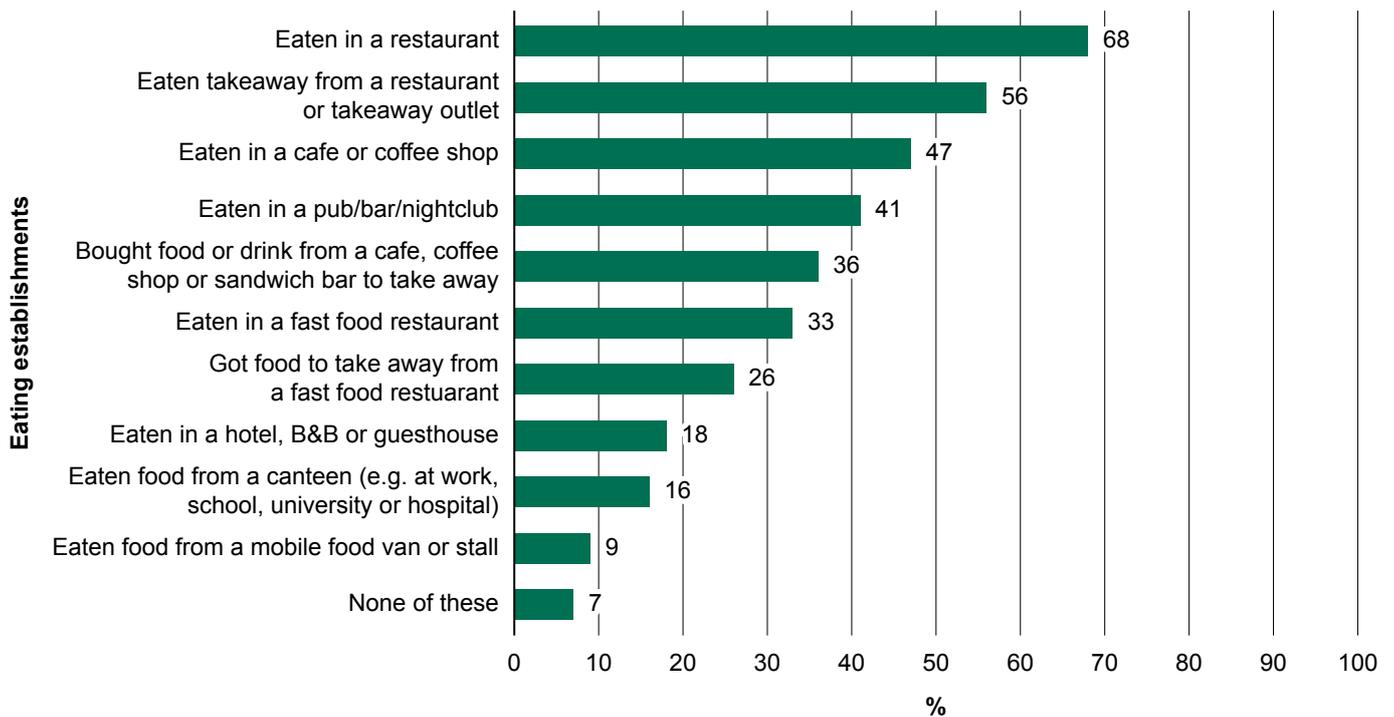
3.3 Where people eat out or buy takeaway food

Almost all the respondents had eaten or bought takeaway food away from home in the last month in at least one of the outlets asked about, most frequently a restaurant (68%), a takeaway restaurant or outlet (56%) or a café or coffee shop (47%).

There were differences across groups.

- **Gender:** There were some differences between men and women; in particular, men were more likely than women to have eaten in a fast food restaurant (38%, compared with 28% respectively).
- **Age:** More than seven in ten adults aged under 55 had eaten in a restaurant in the last month (72% or 73%, depending on age group). Eating in a restaurant was less common among older people, and least common among those aged 75 and over (56%). Younger respondents were most likely to have eaten takeaway food from a restaurant or takeaway outlet in the last month (77% of 16 to 24 year olds, declining to 16% of 75 years and over). Few of those aged 16 to 24 had not eaten or bought food away from home (1%) in the last month, but this proportion increased with age to 21% of those aged 75 and over.
- **Employment:** Respondents in employment were more likely than those who were unemployed or retired to have eaten out or bought takeaway food in the last month; for example, 75% of those in work had eaten in a restaurant, compared with 59% of retired people and 46% of those who were unemployed.
- **Household income:** In particular, respondents in the highest income quartile were around twice as likely to have eaten in a restaurant in the last month than those in the lowest income quartile (84% compared with 47%).
- **Households with children:** Those with children aged under 16 were more likely than those with no children to have eaten in a fast food restaurant (42%, compared with 29%).

Figure 3.2. Where ate out or bought takeaway food in the last month (Wave 5)



3.4 Deciding where to eat out

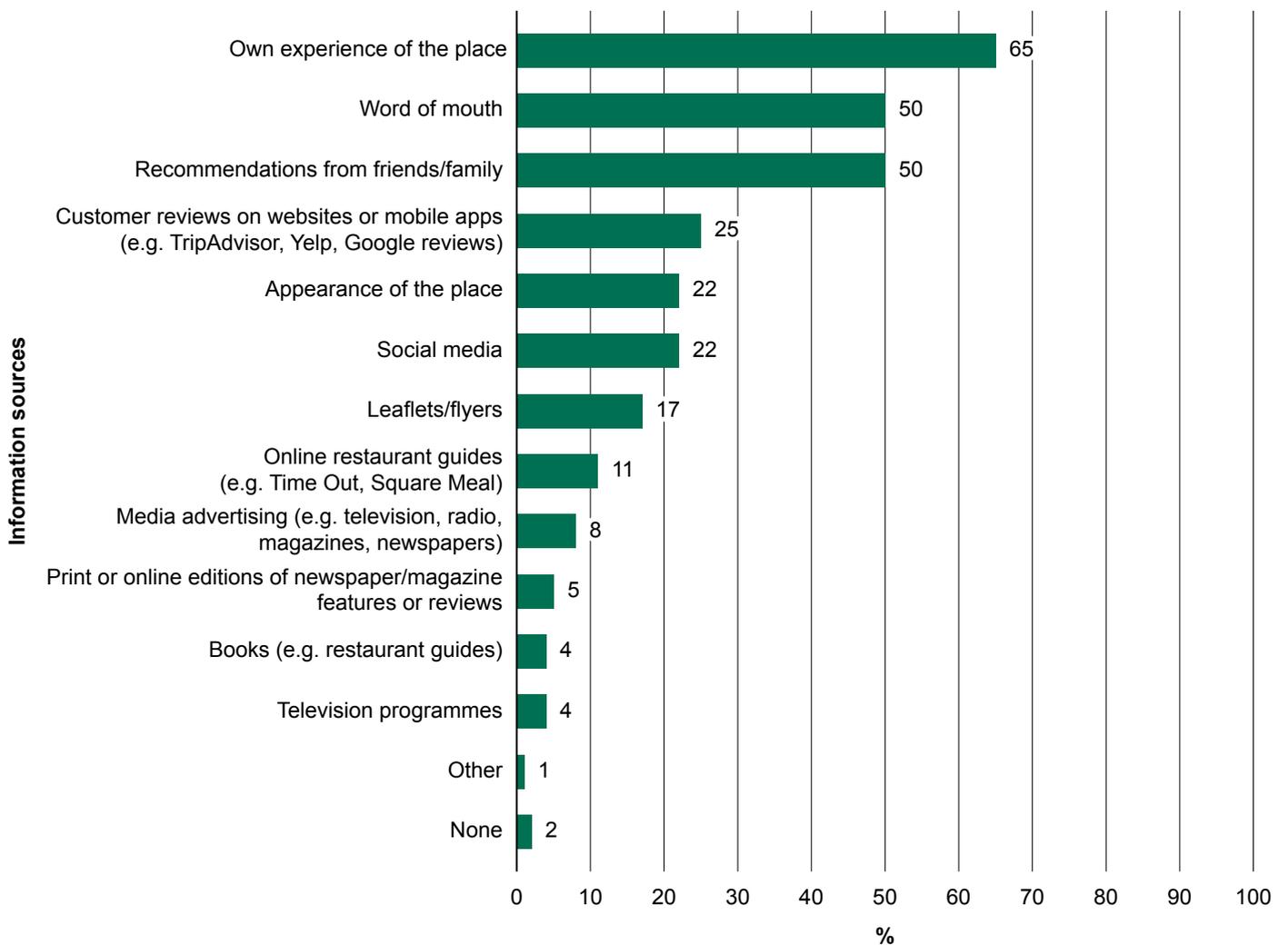
When deciding where they ate out in the last twelve months, respondents were most likely to rely on their own experience of the place (65%). Half of respondents also considered recommendations from family and friends (50%) or word of mouth (50%).

There was some variation by age in the other information sources. For example, customer reviews on websites or apps were most often used by adults aged between 35 and 44 (35%) and were less likely to be used by other age groups. Younger respondents were most likely to consider social media when deciding where to eat out: 39% of respondents aged 16 to 24 did so. Use of social media for this purpose declined with age to 3% of 75 year olds and over. Younger age groups were also more likely to use leaflets and flyers;

between 19% and 22% of those aged between 16 and 54 did so, but this proportion declined with age thereafter to 8% of those aged 75 and over.

Table 3.5.1

Figure 3.3. Information sources considered when deciding where to eat out (Wave 5)

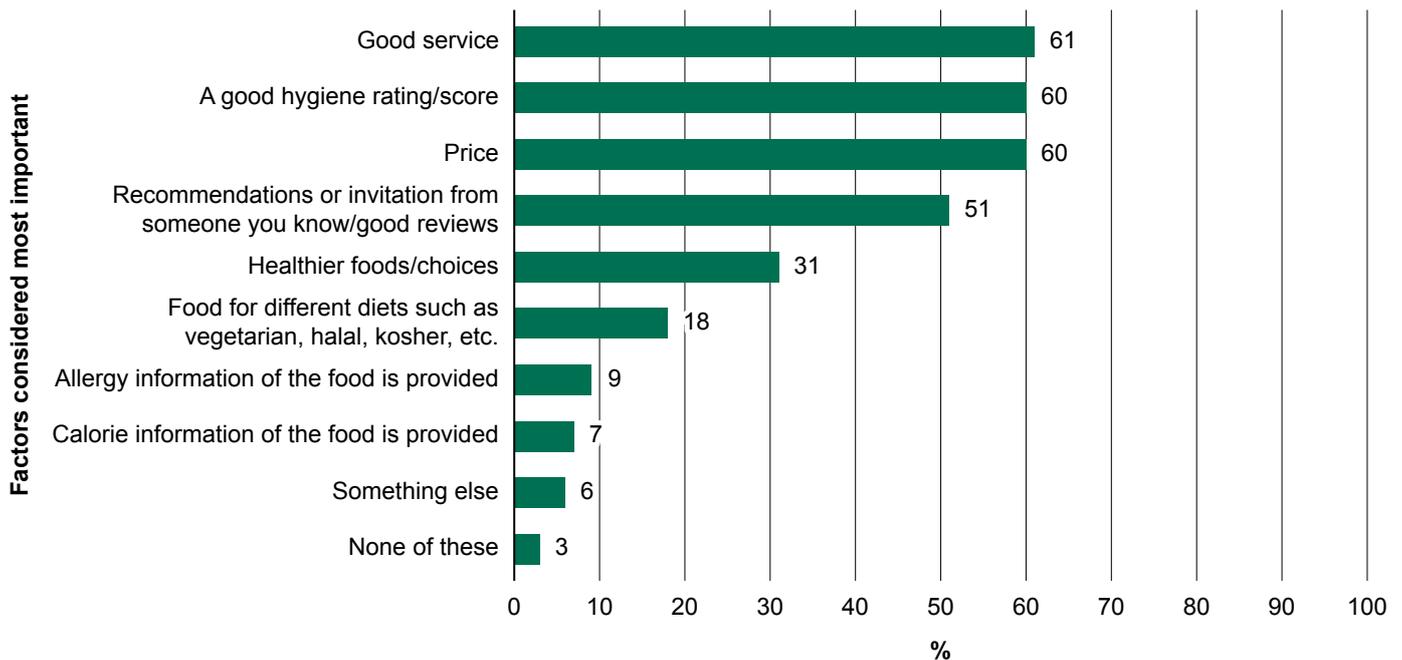


Around three in five respondents mentioned good service (61%), a good hygiene rating score (60%) and the price of food (60%) as important in their decisions about where to eat out.

The price of food was important to younger respondents (67% of 16 to 24 year olds considered price, but its importance declined with age to 41% of 75 year olds and over). Younger respondents were also more likely to consider food for different diets such as vegetarian, halal and kosher foods. This was an important factor for 29% of 16 to 24 year olds, but this declined to 19% to 21% in age groups aged between 25 and 54, and 8% to 11% of those in age groups above 55.

Table 3.5.2

Figure 3.4. Factors considered important in deciding where to eat out (Wave 5)



3.5 Awareness of hygiene standards when eating out

Consistent with previous waves, most respondents (69%) were very or fairly aware of hygiene standards when eating out or buying takeaway food. 16% said they were very or fairly unaware of hygiene standards.

Those aged between 16 and 24 were least likely to be aware of hygiene standards (64%) and awareness increased broadly with age (74% for those aged 75 and over, the age group most likely to say that they did not eat out or buy takeaways).

Table 3.6

Those who said they were aware of hygiene standards and those who described themselves as neither aware or unaware were asked how they assessed hygiene standards when eating out. The hygiene rating score (61%) and the general appearance of the premises (60%) were most commonly mentioned. Younger respondents were more likely to report using the hygiene rating score; this was mentioned by 82% of 16 to 24 year olds, declining with age to 33% of those aged 75 years and over. Conversely, older respondents were more likely to rely on the appearance of the premises and staff within the eating establishment. The appearance of the premises increased broadly in line with age from 45% of 16 to 24 year olds to 72% of those aged 75 years and over, and there was a similar pattern of mentions of the appearance of staff.

Table 3.7

3.6 Recognition of the food hygiene rating scheme (FHRS)

Respondents were shown images of the stickers for the FHRS in their respective countries (shown below) and were asked whether they had seen these images before. The FHRS was formally introduced in 2010. Businesses in England are encouraged, although not legally required, to display their FHRS rating, while display has been mandatory in Wales since 2013, and in Northern Ireland since 2016.

Recognition of the Scheme stickers has increased since it was first asked about in Wave 2 (2012), from 34% to 68% in Wave 3 (2014) and 83% in Wave 4 (2016). In 2018, recognition continued to increase, to 87%.



Younger respondents were more likely to recognise the FHRS. More than nine in ten adults aged under 55 recognised the stickers, including 96% of those aged under 35, but this declined with age, decreasing to 59% of those aged 75 and over. Respondents living in higher income households were more likely to recognise the scheme than those in lower income households (91% to 92% of those in the two higher income groups, compared with 82% to 83% in the two lower income groups).

Table 3.8

Figure 3.5. Recognition of Food Hygiene Rating Scheme by survey wave

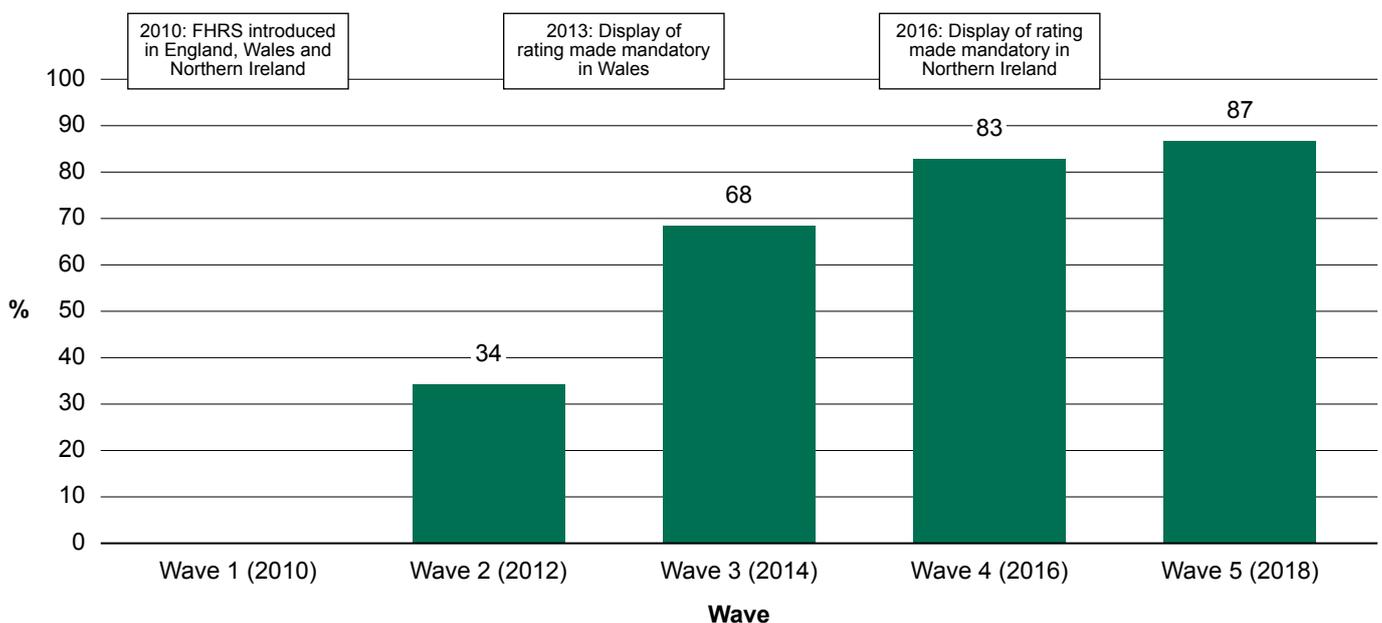
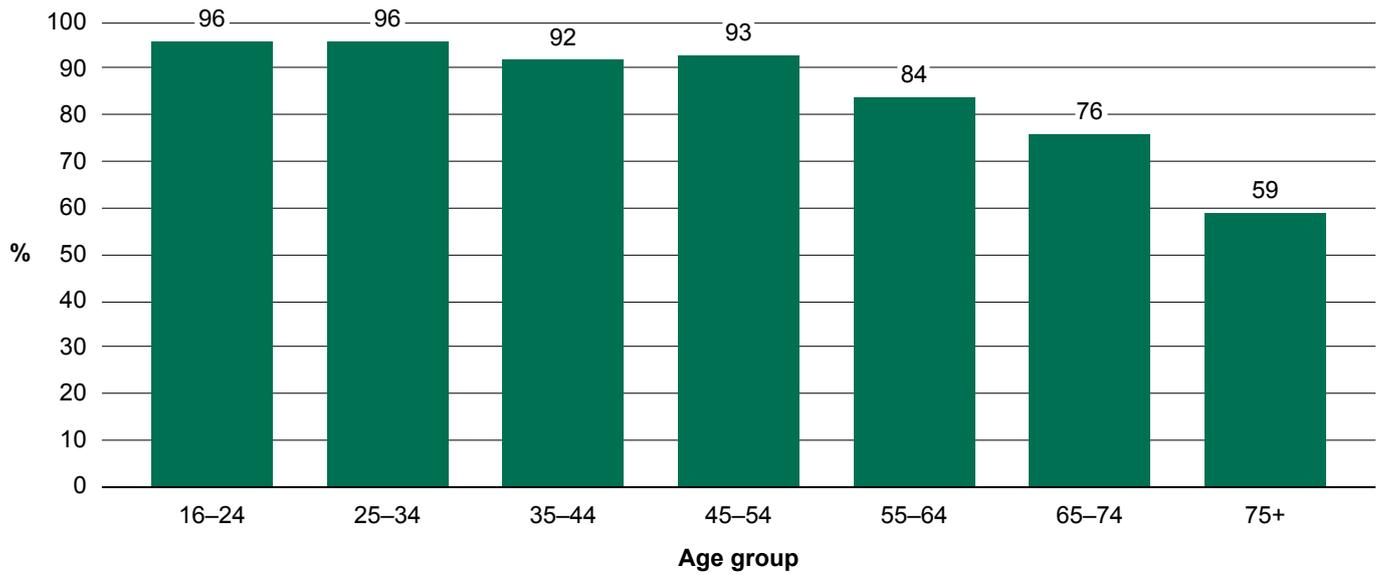


Figure 3.6. Recognition of Food Hygiene Rating Scheme by age group (Wave 5)

4 Food poisoning

4.1 Introduction

The current incidence of food poisoning within the UK is difficult to quantify. Although food poisoning is classed as a legally notifiable infection under the Health Protection Regulations 2010, the second study of Infectious Intestinal Diseases in the Community (IID2) estimated that for every case notified to the authorities, there were around ten GP consultations and 147 cases in the community. The same study estimated that in 2008–2009 around a quarter of the population suffered from symptoms during the course of a year.²⁶

Campylobacter was the most common foodborne pathogen identified through the IID2, closely followed by *Clostridium perfringens* and norovirus. *Salmonella* was the cause of the most hospital admissions. Less common pathogens may have more serious effects. For example, *Listeria monocytogenes*, causes listeriosis, which may be fatal, particularly among vulnerable groups, such as pregnant women, people with reduced immunity, new-born babies and people aged over 60.²⁷

In the FSA's Strategic Plan 2015 to 2020,²⁸ the FSA set out its commitment to ensuring 'Food is safe' and 'Empowering consumers' to make informed decisions about the food they buy, prepare and eat'.

This chapter covers respondents' experience of food poisoning, their action taken as a result of having food poisoning and their attitudes towards food poisoning and food safety.

As outlined in the Introduction to this report, in Food and You, self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

26 <https://www.food.gov.uk/research/research-projects/the-second-study-of-infectious-intestinal-disease-in-the-community-iid2-study>

27 www.food.gov.uk/safety-hygiene/listeria

28 www.food.gov.uk/sites/default/files/media/document/FSA-Strategic-plan-2015-2020.pdf

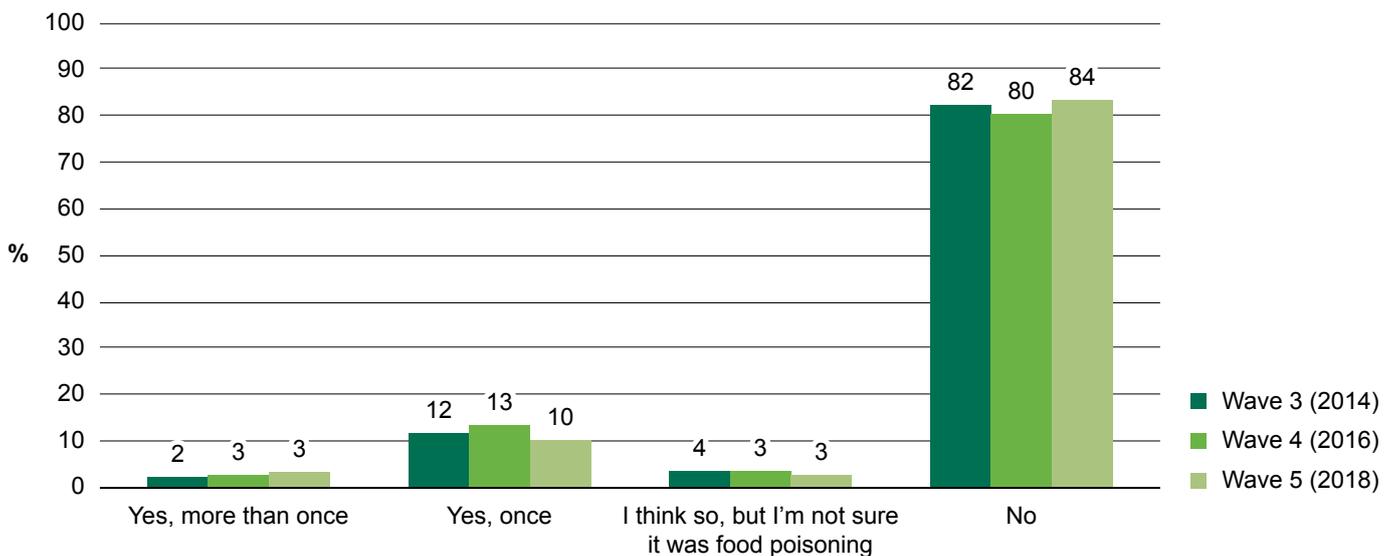
Tables accompanying this chapter are available in Excel at www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

4.2 Experience of food poisoning

In Wave 5, around half (47%) of respondents reported that they had experienced food poisoning at some time in their lives. This has increased from between 40% and 41% in Waves 1 to 3 (2010 to 2014) to 44% in Wave 4 (2016) and 47% in Wave 5. Food poisoning was least common in the youngest and oldest age groups; 37% of those aged 16 to 24 and 33% of those aged 75 and over reported this, compared with between 47% and 54% in other age groups.

When asked whether they had experienced food poisoning in the last year, 16% of adults said they had. This comprises 10% who had it once, 3% who had it more than once and 3% who thought they had had food poisoning but were not sure. These proportions are similar to previous waves.

Figure 4.1. Food poisoning in the last year by wave



33% of 16 to 24 year olds reported food poisoning in the last year, and this decreased with age to between 11% and 13% of those aged 45 and over.

Table 4.1

14% of adults who had food poisoning in the last year reported seeing a doctor or going to hospital. This comprises 1% of the whole sample (31 individuals) who sought medical help, similar to past years.

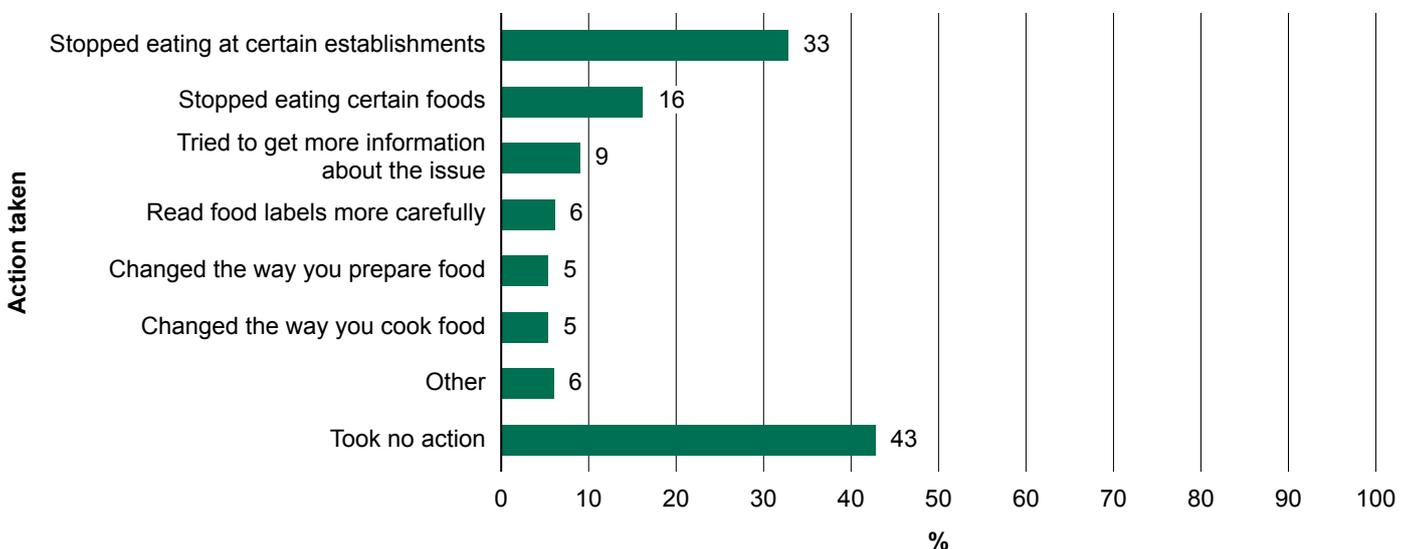
Table 4.2

Respondents who had experienced food poisoning were asked what action they took as a result. As in previous waves, 43% of this group said that they took no action.

Of those who did take some action, the most common actions were stopping eating at certain eating establishments (33%), stopping eating certain foods (16%), and trying to get more information about the issue (9%). Between 5% and 6% read food labels more carefully, changed the way they prepared food or cooked food or did something else.

Table 4.3

Figure 4.2. Actions taken as a result of having had food poisoning on most recent occasion (Wave 5)



4.3 Attitudes towards food safety and food poisoning

Two thirds (67%) of respondents agreed that **'I always avoid throwing food away'**. This has increased steadily from 48% in Wave 1 (2010). The proportion who agreed with this statement increased with age from 58% of 16 to 24 year olds to 76% of those aged 75 and over.

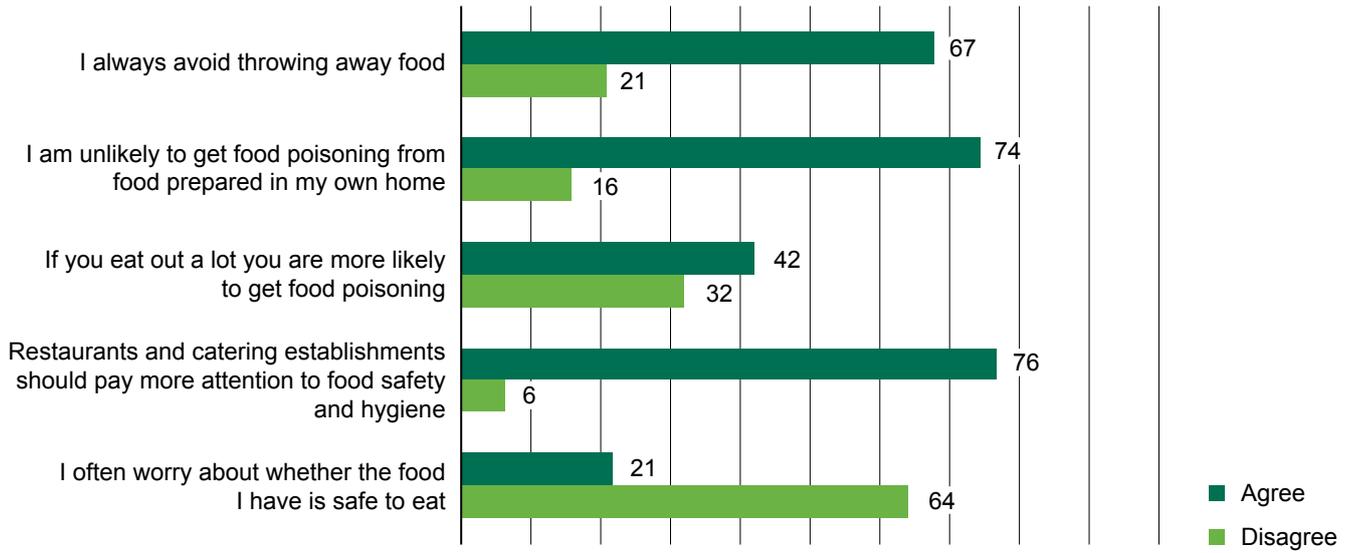
Around three quarters (74%) of respondents agreed with the statement that **'I am unlikely to get food poisoning from food prepared in my own home'**. This has varied across survey waves, being at its peak in Wave 3 in 2014 (77%). The proportion who agreed increased with age from 68% of respondents aged under 35 to 86% of those aged 75 and over.

Around two in five (42%) agreed that **'If you eat out a lot you are more likely to get food poisoning'**; this has remained at a similar level across survey waves. Men were more likely than women to agree with this statement (45%, compared with 38%), and levels of agreement increased with age from 35% of 16 to 24 year olds to 55% of those aged 75 and over.

Around three quarters (76%) agreed that **'Restaurants and food establishments should pay more attention to food hygiene'**, and one fifth (21%) agreed that **'I often worry about whether the food I have is safe to eat'**. Levels of agreement with each of these statements did not vary between men and women or across age groups, and, for both statements, the proportions agreeing have remained at similar levels across survey waves.

Table 4.4

Figure 4.3. Attitudes to food safety (Wave 5)



5.1 Introduction

The Food Standards Agency (FSA) published its 2015–2020 strategic plan under the title *Food We Can Trust*.²⁹ The strategy identifies the importance of ensuring “Food is safe and what it says it is”. Achieving this entails trust in all elements of the food chain as well as trust in the FSA and its role in ensuring the integrity of the food we eat.

In order to understand and monitor consumer trust in food and the FSA, the FSA has commissioned research into trust, including an evidence review and deliberative forums,³⁰ and questions on the bi-annual Public Attitudes Tracker Survey.³¹ As part of this investigation, new questions exploring trust in the FSA were also added in Wave 5 of Food and You, building on areas explored in Wave 4 of the survey that looked at knowledge and attitudes regarding the food production system and authenticity of food.

OECD guidelines³² recommend an approach to measuring trust which comprises a core bank of five questions which measure a respondent’s general levels of trust, alongside three other types of trust questions (evaluative, expectational and experiential) each focusing on trust through a different lens. Each set of questions can be further divided into interpersonal (e.g. trust in neighbours, trust in other people in general) and institutional trust (e.g. trust in the NHS or the police).

The trust questions asked in Food and You broadly follow the OECD guidelines, focusing on institutional trust as opposed to interpersonal trust. The questions were also guided by the OECD’s five dimensions of trust specific to trust in the institutions of government: integrity, responsiveness, reliability, openness, and fairness.

29 www.food.gov.uk/sites/default/files/media/document/FSA-Strategic-plan-2015-2020.pdf

30 www.food.gov.uk/research/research-projects/trust-in-a-changing-world

31 www.food.gov.uk/about-us/biannual-public-attitudes-tracker

32 www.oecd.org/governance/oecd-guidelines-on-measuring-trust-9789264278219-en.htm

Questions focused specifically on:

- Authenticity (that food is what it says it is);
- Trust in the food system (the production, distribution and sale of food);
- Trust in food regulation (that food is regulated effectively to protect consumers);
- Trust in the FSA itself as a department (that the department meets the five dimensions of trust).

These categories cover individual, structural and relational trust, which are the three types of trust identified by the Trust in a Changing World project.³³

This chapter focuses on awareness of and confidence in the FSA, as well as questions on trust in food and the food supply chain, and food authenticity.

As outlined in the Introduction to this report, in Food and You, self-reported behaviour is used as a proxy for actual behaviour. Where the report refers to behaviour, attitudes or knowledge, the fact that the data refer to reported behaviour must always be taken into account.

Tables accompanying this chapter are available in Excel at www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

5.2 Awareness of the FSA

In measuring awareness of the FSA, the questionnaire took account of the fact that participants had been introduced to the survey with letters carrying the FSA logo and signed by an FSA research officer, and the survey leaflets similarly referred

³³ www.food.gov.uk/research/research-projects/trust-in-a-changing-world

extensively to the FSA.³⁴ Respondents were therefore asked whether they had heard of the FSA before they were contacted to take part in the interview.³⁵

Most respondents (86%) said that they had heard of the FSA before they were contacted about Food and You. More than half of respondents (54%) said that they had heard of the FSA but didn't know much about them or their responsibilities. A third (33%) said they had previously heard of the FSA and knew about their responsibilities.

There were differences in the proportions of respondents who had heard of the FSA across different demographic groups:

- **Age:** Awareness of the FSA increased with age from 77% of 16 to 24 year olds to over 90% in age groups between 45 and 74. It was relatively low among those aged 75 and over (78%).
- **Working status:** Those in work or who were retired were more likely than unemployed respondents to have heard of the FSA previously; 89% of working respondents and 86% of those who were retired, compared with 80% of those who were unemployed.
- **Household income:** Awareness of the FSA was associated with higher levels of income; 84% and 85% of respondents in the two lower income groups and 91% and 93% in the two higher income groups.

The proportions of respondents who said that they had already heard of the FSA and knew about their responsibilities varied in a similar way:

- **Age:** The proportion who said they were already aware of the FSA's responsibilities increased from 23% of 16 to 24 year olds to 40% of those aged between 45 and 54. Thereafter it declined with age to 29% of those aged 75 and over.

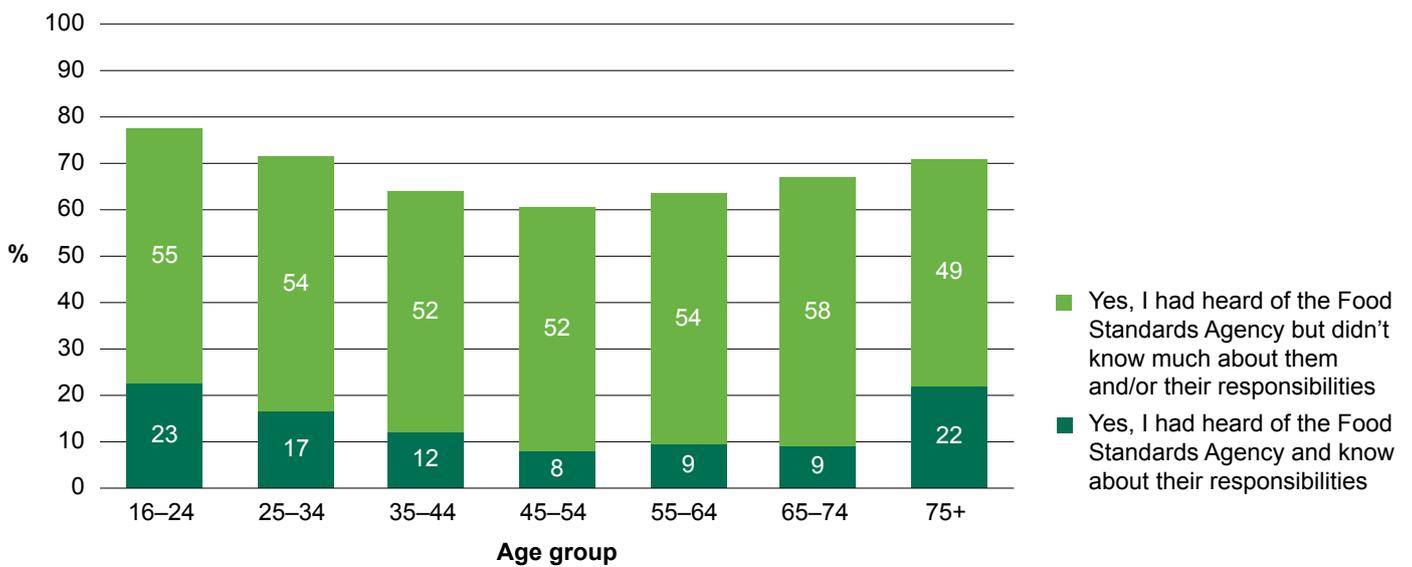
34 The introductory letter and survey leaflets can be found in the Food and You Wave 5 Technical Report www.food.gov.uk/research/food-and-you/food-and-you-wave-five.

35 Despite this qualification, it is possible that some respondents may not have accurately recalled their prior awareness of the FSA, so this estimate should be treated with caution.

- **Working status:** Awareness of the FSA’s responsibilities was highest among those in work (36%) and lowest among unemployed respondents (28%).
- **Household income:** Awareness of the FSA’s responsibilities increased from 28% of those in the lowest income households to 42% of those with the highest incomes.

Table 5.1

Figure 5.1. Prior knowledge of the FSA, by age group (Wave 5)



5.3 Trust in the FSA

Trust in the FSA was measured by asking respondents to consider how they thought the FSA would respond to seven food-related scenarios (e.g. an outbreak of food poisoning). Each item was scored on how likely the FSA was to respond in a certain way from 0 (very unlikely) to 10 (very likely) and have been grouped as follows:

- Low likelihood (0 to 3);
- Medium likelihood (4 to 6);
- High likelihood (7 to 10).

For these ratings, 'don't know' responses are also shown.

As well as asking respondents about their trust in the FSA they were asked about their trust in other people and institutions, specifically:

- Other people (in general);
- Other people you know personally;
- The British parliament;
- The police.

Each of these was scored on a scale from 0 (not at all) to 10 (complete trust). These have been grouped into three categories:

- Low trust (0 to 3);
- Medium trust (4 to 6);
- High trust (7 to 10).³⁶

These general trust ratings can be compared with the specific aspects of trust in the FSA to account for overall trust levels within the population.

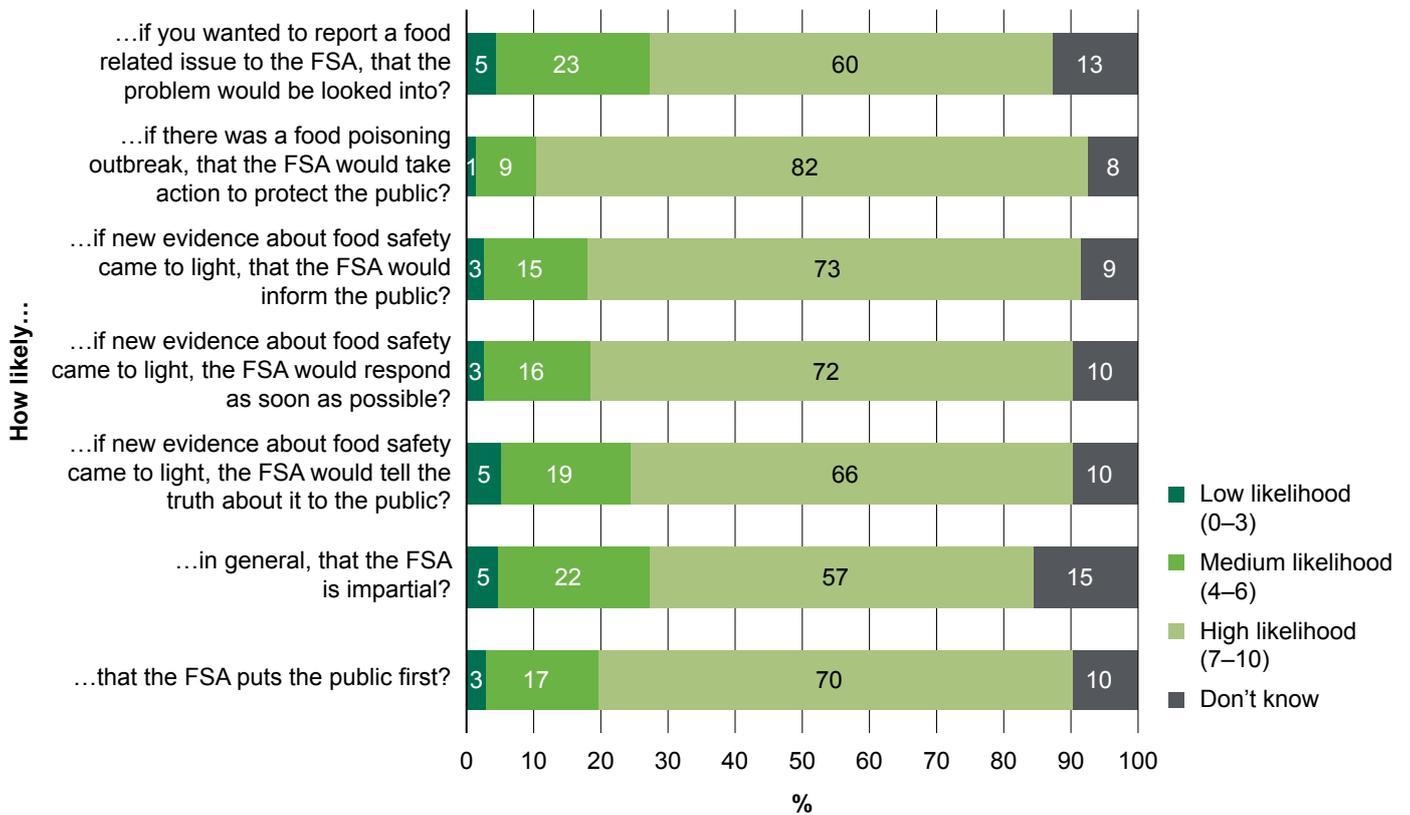
Overall there was a high degree of confidence in the FSA, particularly that the FSA would take action if there were a food poisoning outbreak (82% thought there was a high likelihood of this). There was least certainty about the FSA's impartiality, with 57% of respondents saying that there was a high degree of likelihood that the FSA is impartial.

³⁶ Small numbers of respondents answered 'don't know' to each of these and have been excluded from the analysis.

There were some variations across demographic groups, and, in general, confidence in the FSA increased with levels of trust in each of the other types of people or institutions asked about.

Tables 5.2.1 to 5.6.2

Figure 5.2. How likely... (Wave 5)



If you wanted to report a food related issue to the FSA, how likely do you think it would be that the problem would be looked into?

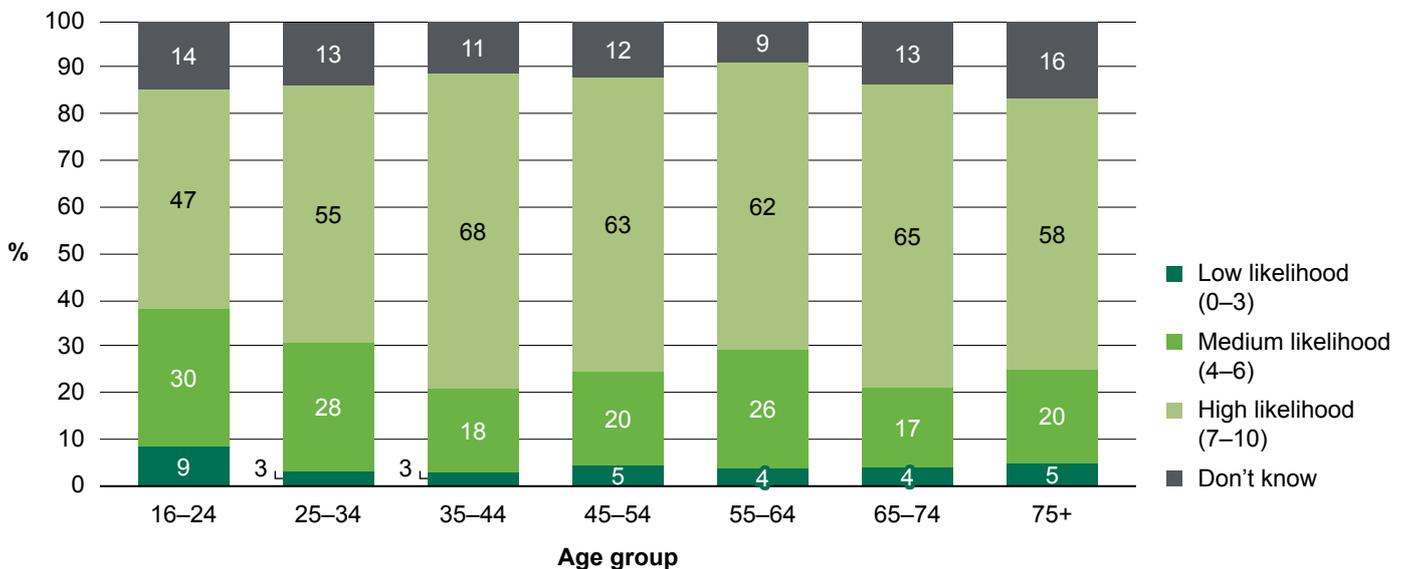
Three in five respondents (60%) thought that it was highly likely that the problem would be looked into if they wanted to report a food related issue to the FSA. Under a quarter (23%) thought there would be a medium likelihood that it would be looked into, 5% thought there was a low likelihood and 13% didn't know.

There was some variation across groups.

- **Age:** Less than half (47%) of 16 to 24 year olds thought that there was a high likelihood that the FSA would look into a problem if reported, compared with 55% or more in other age groups. The proportion was highest among those aged 35 to 44 (68%).
- **Working status:** Those in work (63%) or who were retired (62%) were more likely than unemployed respondents (46%) to think that there was a high likelihood that the FSA would look into a problem that was reported to them. This difference was partly accounted for by the higher proportion of unemployed people who said they didn't know; 22%, compared with 10% of those in work and 15% of retired people.

Table 5.2.1

Figure 5.3. How likely would the FSA be to act on a report of a food related issue, by age (Wave 5)

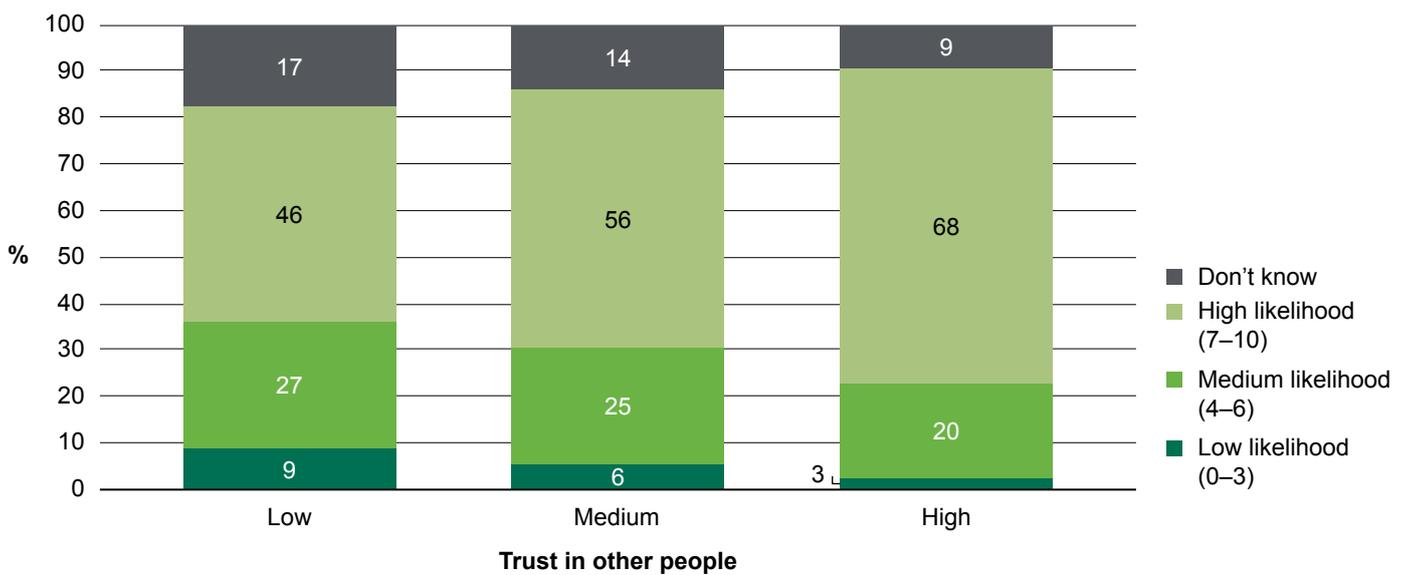


Respondents' opinions varied according to their levels of trust in other people and institutions, with a general tendency for respondents with high trust levels to be more likely to think there

was a high likelihood that the FSA would look into a food-related issue if it were reported to them. This varied from 46% of those with low levels of trust in other people, to 56% with medium trust in other people and 68% of those with high trust. There were similar differences according to levels of trust in people personally known, the British parliament and the police.

Table 5.2.2

Figure 5.4. How likely would the FSA be to act on a report of a food related issue, by trust in other people (Wave 5)



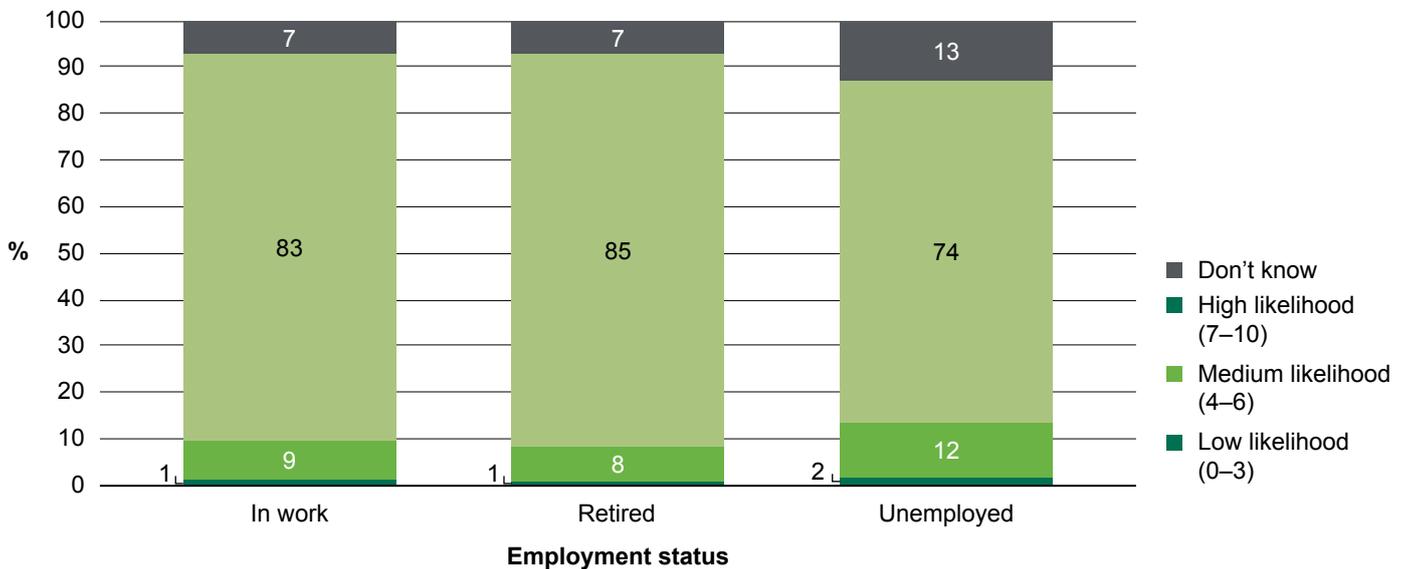
If there was a food poisoning outbreak, how likely or unlikely do you think it would be that the FSA would take action to protect the public?

Four in five respondents (82%) thought that there was a high likelihood that the FSA would take action to protect the public if there was a food poisoning outbreak. 9% thought there was a medium likelihood, 1% a low likelihood and 8% didn't know. There was little variation across groups, with the following exceptions.

- Working status:** Those who were unemployed were less likely than others to think that there was a high likelihood that the FSA would take action to protect the public in the event of a food poisoning outbreak; 74% of unemployed respondents thought there was a high likelihood of this compared with 83% of those in work and 85% of retired respondents.
- Household income:** Those in the two higher income categories were more likely than others to think that there was a high likelihood that the FSA would take action; 88% in the highest income category and 89% in the second highest category, compared with 79% in the lowest income category.

Table 5.3.1

Figure 5.5. How likely would the FSA be to take action to protect the public if there were a food poisoning outbreak, by employment status (Wave 5)



As before, respondents' opinions varied according to their levels of trust in other people and institutions, with a general tendency for respondents with high trust levels to be more likely to think there was a high likelihood that the FSA would take action to protect the public. Patterns of difference varied. For example, this proportion increased in line with levels of trust in other people,

from 71% with low trust, to 80% with medium trust and 87% of those with high trust in other people. 78% of those with low trust in the British parliament thought there was a high likelihood that the FSA would act to protect the public, and this proportion was at higher levels among medium and high trust respondents (87% for each).

Table 5.3.2

If new evidence about food safety came to light, how likely or unlikely do you think it would be that the FSA would inform the public?

Three quarters of respondents (73%) thought that there was a high likelihood that the FSA would inform the public if new evidence about food safety came to light. 15% thought there was a medium likelihood, 3% a low likelihood, and 9% didn't know. There were few differences across groups.

- **Age:** There were differences between the proportion who thought there was a high likelihood that the FSA would inform the public, but with no clear pattern. The youngest and oldest were most likely to say they did not know; 12% of under 35s and those aged 75 and over didn't know how likely it was that the FSA would inform the public if new evidence about food safety came to light, compared with 8% or lower among other age groups.
- **Household income:** Those in the lowest income group were less likely to think there was a high likelihood that the FSA would inform the public if new evidence about food safety came to light (61%, compared with 76% to 81% in other income groups).

Table 5.4.1

Belief that there was a high likelihood that the FSA would inform the public if new evidence about food safety that came to light varied with levels of trust in other people and institutions. For example, the proportion who thought there was a high likelihood that the

FSA would inform the public increased from 61% of those with low trust in other people to 81% of those with high trust. There was a similar pattern of differences according to levels of trust in people personally known, the British parliament and the police.

Table 5.4.2

If new evidence about food safety came to light, how likely or unlikely do you think it would be that the FSA would respond as soon as possible?

Seven in ten respondents (72%) thought that there was a high likelihood that the FSA would respond as soon as possible to new evidence about food safety, 16% thought there was a medium likelihood, 3% a low likelihood and 10% didn't know. There was relatively little variation across demographic groups in the proportion who thought there was a high likelihood of this, apart from some variation by age, with younger respondents least likely to think there was a high likelihood of this (68% of 16 to 24 year olds, 64% of 25 to 34 year olds), and 35 to 44 year olds most likely (78%).

Table 5.5.1

Belief that there was a high likelihood that the FSA would respond as soon as possible to new evidence about food safety increased in line with trust in other people and institutions.

Table 5.5.2

If new evidence about food safety came to light, how likely do you think it would be that the FSA would tell the truth about it to the public?

Two thirds (66%) of respondents thought that there was a high likelihood that the FSA would tell the truth to the public if there was new evidence about food safety, 19% thought this was a medium

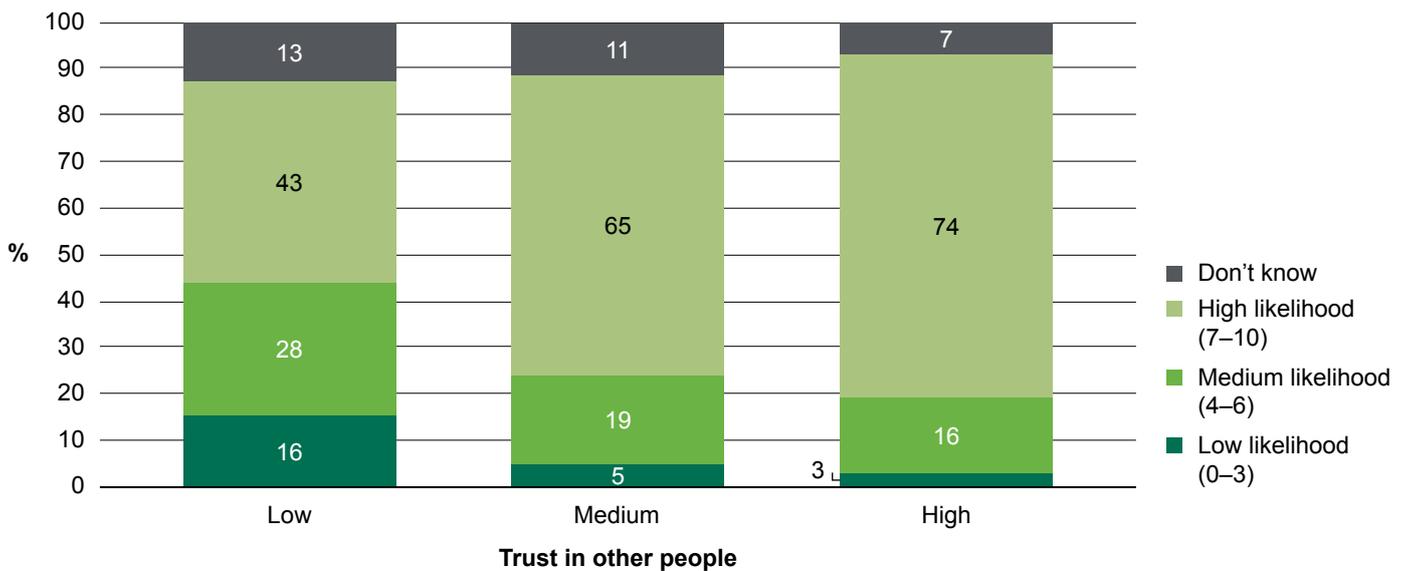
likelihood, 5% thought it was a low likelihood and 10% didn't know. There was relatively little variation across demographic groups in the proportion who thought there was a high likelihood of this, apart from some variation by household income, with people in the lowest income group less likely to think this than those with higher household incomes (52%, compared with 68% or more in other groups).

Table 5.6.1

Belief that there was a high likelihood that the FSA would tell the truth to the public about new evidence on food safety increased in line with trust in other people and institutions. This was particularly the case for trust in other people (from 43% of those with low trust to 74% of those with high trust) and trust in the police (from 40% of those with low trust to 74% of those with high trust).

Table 5.6.2

Figure 5.6. How likely would the FSA be to tell the truth about a new food safety issue, by trust in other people (Wave 5)



In general, how likely or unlikely do you think it is that the FSA is impartial? By this we mean that the FSA acts independently of external sources?

Less than three in five respondents (57%) thought that there was a high likelihood that the FSA was impartial, 22% thought this was a medium likelihood, 5% thought it was a low likelihood and 15% didn't know. Confidence in the FSA's impartiality was lower than for other aspects asked about, and the proportion giving a 'don't know' response was higher (15% compared with 10% or less for most other aspects).³⁷ Opinions varied across groups.

- **Age:** There was variation by age in the proportions who thought there was a high likelihood that the FSA was impartial and the proportions who didn't know. Under 35s were least likely to think there was a high likelihood that the FSA was impartial (50%), and were – along with the oldest age group – most likely to say they didn't know (21% of 16 to 24 year olds, 18% of 25 to 34 year olds, 22% of those aged 75 and over). Those aged 55 to 64 included the highest proportion of those who thought there was a high likelihood (63%) and the lowest proportion of don't knows (9%).
- **Household income:** The proportion of don't knows declined as income increased from 17% of those with the lowest incomes to 8% of those with the highest incomes.

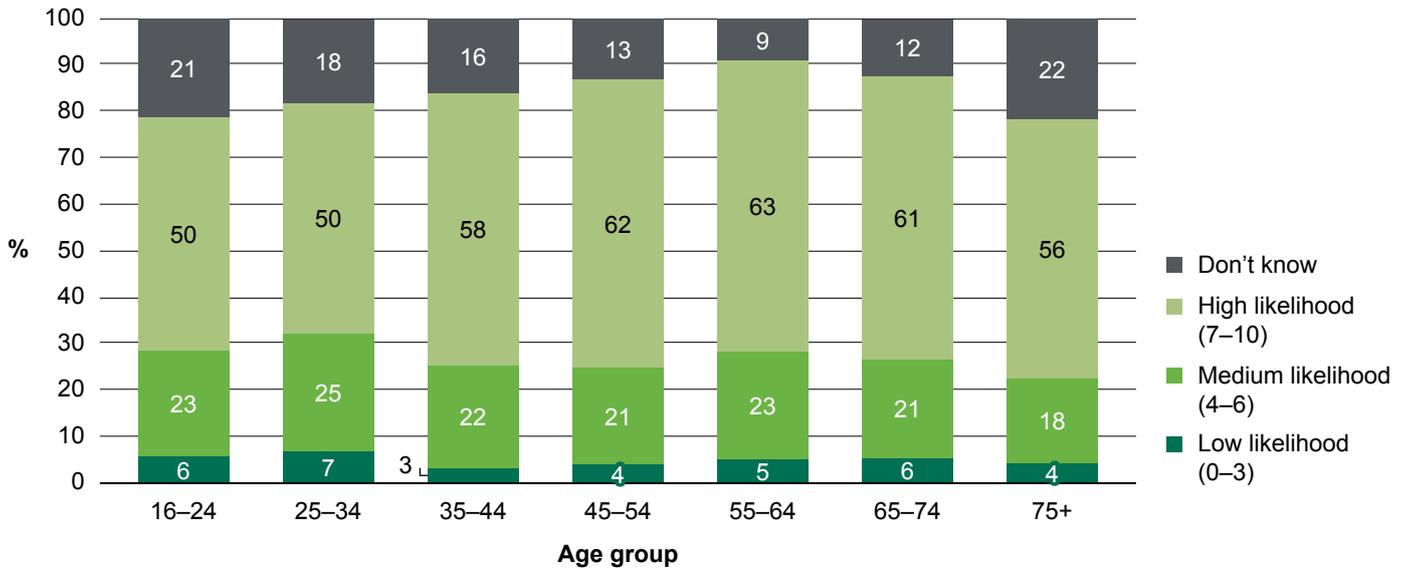
Table 5.7.1

Belief that there was a high likelihood that the FSA was impartial increased in line with trust in other people and institutions, for example from 39% of those with low trust in other people to 67% of those with high trust).

Table 5.7.2

³⁷ A comparable proportion, 13%, also responded 'don't know' when considering how likely it was that if they wanted to report a food related issue to the FSA the problem would be looked into.

Figure 5.7. How likely is it that the FSA is impartial, by age group (Wave 5)



In general, how likely or unlikely do you think it is that the FSA puts the public first?

Seven in ten respondents (70%) thought there was a high likelihood that the FSA puts the public first. 17% thought there was a medium likelihood, 3% thought there was a low likelihood and 10% didn't know. In general this did not vary much across groups, except that the proportion thinking there was a high likelihood increased in line with household income, from 64% in the lowest income group to 78% in the highest income group.

Table 5.8.1

Belief that there was a high likelihood that the FSA puts the public first increased in line with trust in other people and institutions. This was particularly the case for trust in the police (from 47% of those with low trust to 78% of those with high trust).

Table 5.8.2

5.4 Trust in the food supply chain

Food and You Wave 5 included five questions about consumers' trust in the food they buy and eat, covering provenance, quality, the food supply chain and safety. In England and Wales the questionnaire asked about buying food and groceries in Britain; in Northern Ireland the question referred to buying food and groceries in the UK and Ireland.

Provenance

Three in five (61%) respondents said they would be very or quite sure that they knew where the food they bought had come from, compared with 16% who said they would be very or quite unsure. There was very little difference across groups.

Quality

Respondents were asked separately about food from Britain or the UK and Ireland and food from abroad.

More than half (58%) were very or quite sure that the food they bought from Britain or the UK and Ireland had been prepared to the highest quality standards, compared with 12% who were unsure. The proportions who were sure of the quality of British food they bought increased broadly in line with age from 43% of 16 to 24 year olds to 68% of those aged 75 and over. Otherwise there was very little variation across groups.

There was less trust in food from abroad. A quarter (24%) said that they were very or quite sure that food and groceries from abroad were prepared to the highest quality standards, compared with more than a third (35%) who were very or quite unsure.

There were some variations across groups, largely in the proportions who were unsure.

- **Gender:** Women were more likely to be unsure of the quality of food from abroad; 38%, compared with 31% of men.
- **Age:** Respondents aged between 65 and 74 were most likely, and those aged 35 to 44 were least likely, to be unsure about the quality of food from abroad; 42% and 27% respectively.
- **Working status:** Those in work were less likely to be unsure about the quality of food from abroad than were retired or unemployed respondents (31%, compared with 42% and 41% respectively).
- **Household income:** The proportions who were quite or very sure about the quality of food from abroad was higher in the highest income group; 30%, compared with 23% or less among respondents with lower household incomes.

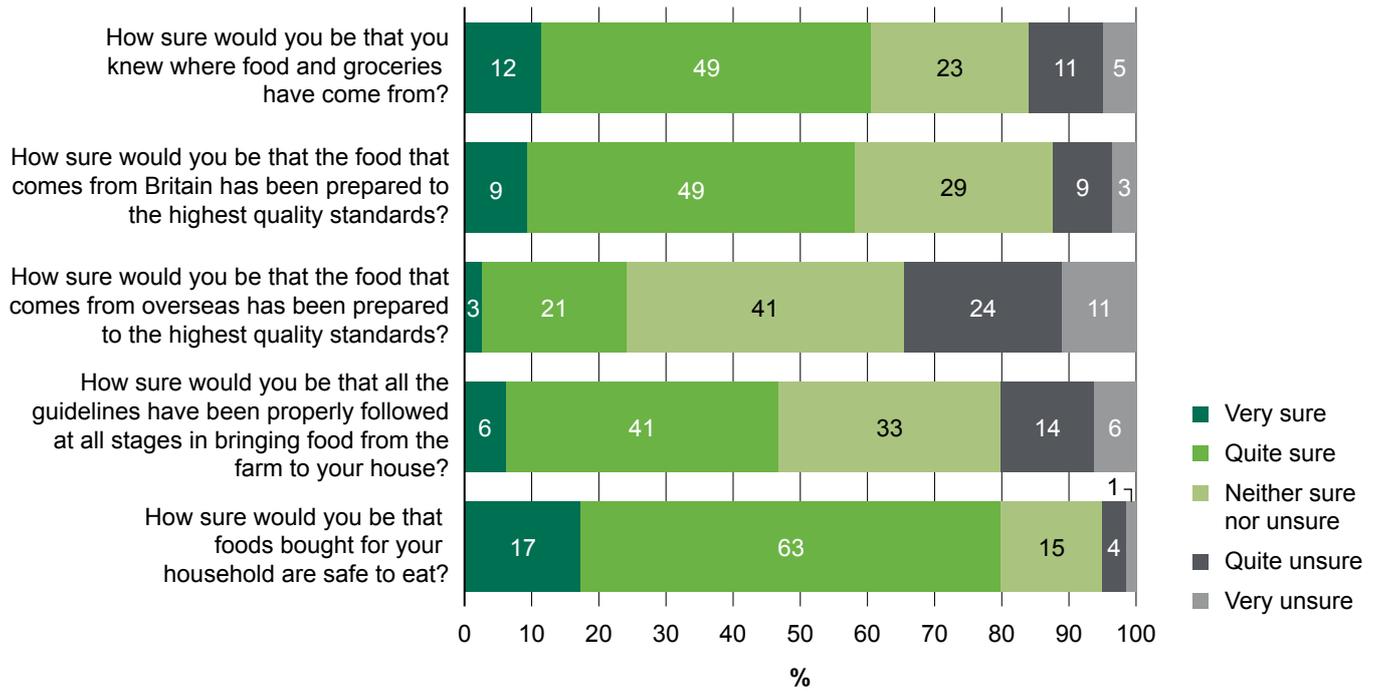
The food supply chain

Nearly half (47%) of respondents were very or quite sure that that all the guidelines had been properly followed at all stages in bringing the food they bought from the farm to their home, compared with 20% who were very or quite unsure. Respondents who were unemployed were most likely to be very or quite unsure about this, 28%, compared with 20% of respondents who were working and 16% who were retired. Otherwise the opinions of different groups were similar.

Food safety

There was a high level of confidence in the safety of food. Four fifths (80%) of respondents were very or quite sure that the food they bought for their households was safe to eat, compared with 5% who were very or quite unsure of this. This was at similar levels across all groups.

Figure 5.8. Trust in the food supply: confidence when buying food or groceries (Wave 5)



5.5 Food authenticity

When asked how confident they were that when buying or eating food that it was what it said it is on the label or the menu, 26% of respondents were confident all of the time (down from 34% in Wave 4 in 2016) whilst 58% were confident most of the time.

Table 5.10



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