Food and You 2:

Wave 2 Key Findings

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Executive Summary

Overview of Food and You 2

Food and You 2 is a biannual representative sample survey, recognised as an official statistic, commissioned by the Food Standards Agency (FSA). The survey measures self-reported consumer knowledge, attitudes and behaviours related to food safety and other food issues amongst adults in England, Wales, and Northern Ireland.

Food and You 2 uses a methodology, known as 'push-to-web', which is primarily carried out online.

Fieldwork for Food and You 2: Wave 2 was conducted between 20th November 2020 and 21st January 2021. A total of 5,900 adults from 3,955 households across England, Wales and Northern Ireland completed the survey.

This survey was conducted during the Covid-19 pandemic and so it records the reported attitudes and behaviours under unusual circumstances which have had a significant impact on how and where people buy and eat food, and on levels of household food insecurity.

The modules presented in this report include 'Food we can trust', 'Concerns about food', 'Food security', 'Eating out and takeaways', 'Food hypersensitivities' and 'Eating at home'.

Summary of key findings

Food we can trust

Confidence in food safety and authenticity

- More than 9 in 10 (93%) respondents reported that they were confident that the food they buy is safe to eat.
- Almost 9 in 10 (89%) respondents were confident that the information on food labels is accurate.

Confidence in the food supply chain

- Over three quarters of respondents (77%) reported that they had confidence in the food supply chain.
- Respondents were more likely to report confidence in farmers (88%), shops and supermarkets (87%) than in takeaways (70%), and food delivery services (52%).

Awareness, trust and confidence in the FSA

- Over 9 in 10 respondents (92%) had heard of the FSA.
- Three quarters (78%) of respondents who had at least some knowledge of the FSA reported that they trusted the FSA to make sure food is safe and what it says it is.
- Over 8 in 10 (84%) respondents reported that they were confident that the FSA (or the government agency responsible for food safety) can be relied upon to protect the public from food-related risks, 79% were confident that the FSA is committed to communicating openly with the public about food-related risks, and 84% were confident that the FSA takes appropriate action if a food-related risk is identified.

Concerns about food

- Most respondents (88%) had no concerns about the food they eat, and only 12% of respondents reported that they had a concern.

- Respondents were asked to briefly explain what their concerns were about the food they eat. The most common concerns related to food production methods (23%), and food safety and hygiene (17%).
- Respondents were asked to indicate if they had concerns about a number of food-related issues, from a list of given options. The most common concerns related to the amount of sugar in food (60%), food waste (60%) and animal welfare (57%).

Food security

- Across England, Wales, and Northern Ireland, 84% of respondents were classified as food secure (73% high, 11% marginal) and 16% respondents were classified as food insecure (8% low, 7% very low)
- Food security levels were comparable across England, Wales, and Northern Ireland. Over three quarters of respondents were food secure (i.e. had high or marginal food security) in England (85%), Wales (82%) and Northern Ireland (84%). Approximately 1 in 6 respondents were food insecure (i.e. had low or very low food security) in England (15%), Wales (18%) and Northern Ireland (16%).

Eating out and takeaways

- Three fifths (60%) of respondents had eaten food which was ordered from a takeaway either ordered directly (47%) or via an online delivery company (for example, Just Eat, Deliveroo, Uber Eats etc.) (32%) in the previous 4 weeks.
- Almost a third (32%) of respondents had eaten food from a café, coffee shop or sandwich shop (either to eat in or take away) and approximately 1 in 5 (21%) respondents had eaten out at a restaurant, pub or bar in the previous 4 weeks.
- Most respondents (87%) reported that they had heard of the Food Hygiene Rating Scheme (FHRS). Almost half of respondents (47%) reported that they had heard of the FHRS and had at least some knowledge of the FHRS.

Food allergy, intolerance, and other hypersensitivities

- Most respondents (85%) reported that they did not have a food hypersensitivity. Fewer than 1 in 10 (9%) respondents reported that they had a food intolerance,

3% had a food allergy, 1% had coeliac disease and 1% had multiple food hypersensitivities.

- Of the respondents who reported having a food allergy, 35% reported having an allergy to fruit. Almost 1 in 5 (19%) reported that they had an allergy to crustaceans, and 19% reported that they had an allergy to peanuts.
- Of the respondents who reported having a food intolerance, 38% reported an intolerance to cow's milk and products made with cow's milk. Over a quarter (27%) reported an intolerance to 'other' foods. Almost 1 in 5 (18%) respondents reported an intolerance to cereals containing gluten.

Eating at home

Use-by dates

- Over two thirds (67%) of respondents identified the use-by date as the information which shows that food is no longer safe to eat.
- More than 6 in 10 (62%) respondents reported that they always check use-by dates before they cook or prepare food.
- Most respondents reported that they never ate smoked fish (81%), milk (68%), cooked meats (66%), bagged salads (53%) or cheese (52%) past the use-by date.

Best before dates

- Respondents who had eaten eggs in the last month were asked to indicate how often, if at all, they ate eggs past the best before date in the last month. Most respondents (63%) reported that they had not eaten eggs past the best before date in the last month. One quarter (25%) of respondents reported that they had eaten eggs past the best before date in the last month.

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Introduction

The Food Standards Agency: role, remit, and responsibilities

The Food Standards Agency (FSA) is an independent Government department working to protect public health and consumers' wider interests in relation to food in England, Wales, and Northern Ireland[1]. The FSA's overarching mission is 'food we can trust'. The FSA's goal and vision is to ensure that food is safe, and food is what it says it is, such that consumers can make informed choices about what to eat. In Northern Ireland, the FSA is responsible for nutrition policy and has the additional goal to ensure that consumers have access to an affordable diet, now and in the future.

Food and You 2 is designed to monitor the FSA's progress against these goals and inform policy decisions by measuring self-reported consumers' knowledge, attitudes and behaviours related to food safety and other food issues in England, Wales, and Northern Ireland on a regular basis.

Food and You 2

Ipsos MORI were commissioned by the FSA to develop and run a biannual survey, 'Food and You 2', carried out primarily online.

Food and You 2 replaces the FSA's face-to-face Food and You survey (2010-2018)[2], Public Attitudes Tracker (2010-2019) and Food Hygiene Rating Scheme (FHRS) - Consumer Attitudes Tracker (2014-2019). Due to differences in the question content, presentation and mode of response, direct comparisons should not be made between

[1] In Scotland, the non-ministerial office Food Standards Scotland, is responsible for ensuring food is safe to eat, consumers know what they are eating and improving nutrition.
[2] The Food and You survey has been an Official Statistic since 2014.

these earlier surveys and Food and You 2. More information about the history and methodology can be found in Annex A.

Food and You 2: Wave 2 data were collected between 20th November 2020 and 21st January 2021, during the COVID-19 pandemic which had a significant societal and economic impact and an impact on the day-to-day lives of everyone. The COVID-19 pandemic had a widely reported impact on food security in England, Wales, and Northern Ireland. It is expected that the COVID-19 pandemic had an impact on the level of food security reported by respondents in Food and You 2[3].

Food and You 2: Wave 2

Fieldwork for Food and You 2: Wave 2 was conducted between 20th November 2020 and 21st January 2021. A total of 5,900 adults from 3,955 households across England, Wales, and Northern Ireland completed the survey (an overall response rate of 28%).

Food and You 2 is a modular survey, with 'core' modules being included every wave, 'rotated' modules being repeated annually or biennially, and 'exclusive' modules being asked on a one-off basis. The modules presented in this report include 'Food we can trust' (core), 'Concerns about food' (core), 'Food security' (rotated), 'Eating out and takeaways' (rotated), 'Food hypersensitivities' (rotated), and 'Eating at home' (brief, rotated)[4].

This report presents key findings from the Food and You 2: Wave 2 survey. Not all questions asked in the Wave 2 survey are included in the report. The full results are available in the accompanying data tables and underlying dataset.

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[3]Covid-19 consumer tracker survey (2021), FSA. Food in a pandemic (2021). FSA. Life under Covid-19: Food waste attitudes and behaviours in 2020 (2021), WRAP. State of hunger: Building the evidence on poverty, destitution, and food insecurity in the UK (2021). The Trussell Trust.
Family Resources Survey (FRS): financial year 2021 to 2020 (2021). DWP. The FRS asks respondents to report experiences of food insecurity in the last 30 days so responses cannot be compared with Food and You 2.

[4] Two versions of the Eating at Home module have been created, a brief version which includes a limited number of questions, and a full version which includes all related questions. The full version of the module was reported in Wave 1.

Interpreting the findings

To highlight the key differences between socio-demographic and other sub-groups, variation in response profiles are typically reported only where the absolute difference is 10 percentage points or larger and is statistically significant at the 5% level ($p<0.05$). However, some differences between socio-demographic and other sub-groups are included where the difference is fewer than 10 percentage points, when the finding is notable or judged to be of interest. These differences are indicated with a double asterisk (**).

The report presents trends between some socio-demographic and sub-groups in the population. In some cases, it was not possible to include the data of all sub-groups, however these data are available in the full data set and tables.

Key information is provided for each reported question in the footnotes, including:

- Question wording (question) and response options (response).
- Percentages for response options or sub-groups not reported in the main text (additional differences).
- Number of respondents presented with each question and description of the respondents who answered the question (base = N).
- A single asterisk (*) indicates that the value is not reported as the base size is below 100 and therefore is not representative of the population.
- N.B. indicates important points to consider when interpreting the results.

Future publication plans

Modules expected to be reported in the Food and You 2: Wave 3 Key Findings report include, ‘Food we trust’ (core), ‘Concerns about food’ (core), ‘Food security’ (rotated), and ‘Food shopping’ (rotated). However, findings included in the Food and You 2: Key Findings reports will be responsive to new and emerging issues and observations which are novel or of interest. A series of secondary reports will explore key modules in more detail.

Chapter 1: Food we can trust

Introduction

The FSA's overarching mission is 'food we can trust'. The FSA was established in 2000 following several high-profile outbreaks of food-related illness. The FSA aims not only to protect people but also to reduce the economic burden of foodborne illnesses and support the economy and trade by ensuring that food has a strong reputation for safety and authenticity in the UK and abroad. The FSA is responsible for the systems that regulate food businesses and is at the forefront of tackling food crime.

This chapter provides an overview of respondents' confidence in food safety and authenticity, and awareness of and trust in the FSA.

Confidence in food safety and authenticity

Most respondents reported confidence in food safety and authenticity; 93% of respondents reported that they were confident that the food they buy is safe to eat, and 89% of respondents were confident that the information on food labels is accurate[5].

Confidence in food safety varied between different types of people in the following ways:

- National Statistics Socio-Economic Classification (NS-SEC): respondents who were long term unemployed and/or had never worked (77%) were less likely to report being confident that the food they buy is safe to eat, compared to respondents in many other occupational groups (for example, 95% of those in managerial, administrative and professional occupations).
- Ethnic group: 95% of white respondents reported being confident that the food they buy is safe to eat, compared to 83% of Asian or Asian British respondents.

[5] Question: How confident are you that… A) the food you buy is safe to eat. B) the information on food labels is accurate (for example, ingredients, nutritional information, country of origin). Responses: Very confident, Fairly confident, Not very confident, Not confident at all, It varies, Don't know. Base= 4814, all respondents. N.B. 'Very confident' or 'Fairly confident' respondents are referred to as confident.

Confidence in the information on food labels being accurate varied between different types of people in the following ways:

- NS-SEC: respondents who were long term unemployed and/or had never worked (73%) were less likely to report being confident that the information on food labels is accurate, when compared to full-time students (91%), or respondents in many other occupational groups, such as those in intermediate occupations (93%).
- Ethnic group: white respondents (90%) were more likely to report being confident that the information on food labels is accurate, compared to Asian or Asian British respondents (78%).

Confidence in the food supply chain

Over three quarters of respondents (77%) reported that they had confidence in the food supply chain[6].

[6] Question: How confident are you in the food supply chain? That is all the processes involved in bringing food to your table. Responses (additional differences): Very confident (13%), Somewhat confident (64%), Not very confident (13%), Not at all confident (2%), It varies (3%), Don't know (5%). Base= 4814, all online respondents and those answering the Eating at Home postal questionnaire. N.B. 'Very confident' or 'Fairly confident' respondents are referred to as confident.

Figure 1: Most respondents were confident that food supply chain actors ensure food is safe to eat.

Source: Food and You 2: Wave 2

Respondents were asked to indicate how confident they were that key actors involved in the food supply chain ensure that the food they buy is safe to eat. Respondents were more likely to report confidence in farmers (88%), and shops and supermarkets (87%) than in takeaways (70%), and food delivery services (52%) (Figure 1)[7].

Awareness, trust and confidence in the FSA

Over 9 in 10 respondents (92%) had heard of the FSA[8]. Respondents who had at least some knowledge of the FSA were asked how much they trusted the FSA to do its job.

[7] Question: How confident are you that... A) Farmers, B) Slaughterhouses and dairies, C) Food manufacturers for example, factories, D) Shops and supermarkets, E) Restaurants, F) Takeaways, G) Food delivery services for example, Just Eat, Deliveroo, Uber Eats…in the UK (and Ireland) ensure the food you buy is safe to eat. Responses (Additional differences): Very confident, Fairly confident, Not very confident, Not at all confident, It varies (A=2%, B=2%. C=2%, D=2%, E=3%, F=5%, G=4%), Don't know (A=4%, B=7%, C=4%, D=3%, E=4%, F=5%, G=14%). Base= 4850, all online respondents and those who completed the Eating Out postal questionnaire.

[8] Question: Which of the following, if any, have you heard of? Please select all that apply. Response: Food Standards Agency (FSA), (England) Public Health England (PHE),

Three quarters (78%) reported that they trusted the FSA to make sure food is safe and what it says it is[9].

Awareness of the FSA varied between different types of people in the following ways:

- Age group: older respondents were more likely to have heard of the FSA than younger respondents. For example, 98% of those aged 65-74 years had heard of the FSA, compared to 80% of those aged 16-24 years.
- Employment status: working (93%) or retired (97%) respondents were more likely to have heard of the FSA than those who were not working (82%).
- NS-SEC: respondents in occupational groups (for example, 94% of those in managerial, administrative and professional occupations) were more likely to have heard of the FSA compared to full-time students (78%).
- Food security: respondents with high food security (96%) were more likely to have heard of the FSA compared to those with low (86%) or very low (84%) food security.
- Responsibility for cooking: respondents who were responsible for cooking were more likely to have heard of the FSA (94%), compared to those who do not cook (69%).

Over half of respondents reported some knowledge of the FSA (52%); 5% reported that they knew a lot about the FSA and what it does, and 47% reported that they knew a little about the FSA and what it does. Fewer than half (48%) of respondents reported that they

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(England) Department for Environment, Food and Rural Affairs (DEFRA), (England) Environment Agency, (England and Wales) Health and Safety Executive (HSE), (Wales) Public Health Wales (PHW), (Wales) Natural Resources Wales, (NI) Public Health Agency (PHA), (NI) Department of Agriculture, Environment and Rural Affairs (DAERA), (NI) Health and Safety Executive Northern Ireland (HSENI), (NI) Safefood. Base= 3764, all online respondents. N.B. All consumers taking part in the survey had received an invitation to take part in the survey from Ipsos MORI which mentioned the FSA. An absence of response indicates the organisation had not been heard of by the respondent or a non-response.

[9] Question: How much do you trust or distrust the Food Standards Agency to do its job? That is to make sure that food is safe and what it says it is. Responses (Additional differences): I trust it a lot, I trust it, I neither trust nor distrust it (19%), I distrust it (1%), I distrust it a lot (<1%), Don't know (2%). Base=3309, all respondents who know a lot or a little about the FSA and what it does. N.B. 'I trust it a lot' and 'I trust it' referred to as trust.

had little or no knowledge of the FSA; 38% had heard of the FSA but knew nothing about it, 5% had not heard of the FSA before being contacted to take part in Food and You 2, and 5% had not heard of the FSA[10].

Knowledge of the FSA varied between different types of people in the following ways:

- Age group: respondents aged between 35 and 74 years (for example, 60% of those aged 55-64 years) were more likely to report knowledge of the FSA compared to the younger respondents (39% of those aged 16-24 years; 48% of those aged 25-34) or oldest respondents (47% of those aged 75 years and over).
- Annual household income: respondents with an income of £64,000-£95,999 (62%) were more likely to report knowledge of the FSA compared to those in the lowest (46% of those with an income of less than £19,000) or highest income band (47% of those with an income of more than £96,000).
- NS-SEC: respondents in managerial, administrative, and professional occupations (56%) were more likely to report knowledge of the FSA than those who were long term unemployed and/or never worked (37%) or full-time students (35%).
- Ethnic group: white respondents (54%) were more likely to report knowledge of the FSA compared to Asian or Asian British respondents (43%).
- Responsibility of cooking: respondents who were responsible for cooking (54%) were more likely to report knowledge of the FSA compared to respondents who do not cook (31%).

Over 8 in 10 (84%) respondents reported that they were confident that the FSA (or the government agency responsible for food safety) can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food), 79% were confident that the FSA is committed to communicating openly with the public about

[10] Question: How much, if anything, do you know about the Food Standards Agency, also known as the FSA? Response: I know a lot about the FSA and what it does, I know a little about the FSA and what it does, I've heard of the FSA but know nothing about it, I hadn't heard of the FSA until I was contacted to take part in this survey, I've never heard of the FSA. Base = 5900, all respondents. N.B. All consumers taking part in the survey had received an invitation to take part in the survey which mentioned the FSA.

food-related risks, and 84% were confident that the FSA takes appropriate action if a food-related risk is identified[11].

Trust in science

The work of the FSA is underpinned by the latest science and evidence, including independent expert advice[12].

To measure trust in science, respondents were asked how confident they were that scientific research produces accurate conclusions. More than 8 in 10 (83%) respondents reported that they were confident that scientific research produces accurate conclusions[13].

Confidence in scientific research varied between different types of people in the following ways:

- Annual household income: respondents with an income of over £19,000 (for example, 96% of those with an income of £64,000-£95,999) were more likely to be confident that scientific research produces accurate conclusions compared to those with an income below £19,000 (74%).

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[11] Question: How confident are you that the Food standards Agency / the government agency responsible for food safety in England, Wales and Northern Ireland...A) Can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food). B) Is committed to communicating openly with the public about food-related risks. C) Takes appropriate action if a food related risk is identified? Responses: Very confident, Fairly confident, Not very confident, Not at all confident, Don't know. Base = 5900, all respondents. N.B. 'Very confident' and 'Fairly confident' referred to as confident. Respondents little or no knowledge of the FSA were asked about 'the government agency responsible for food safety', those with at least some knowledge of the FSA were asked about the FSA.

[12] Food we can trust, FSA.

[13] Question: How confident are you that scientific research produces accurate conclusions? Responses: Very confident, Fairly confident, Not very confident, Not at all confident, Don't know. Base = 3764, all online respondents. N.B. 'Very confident' and 'Fairly confident' referred to as confident.

- Employment status: respondents who were working (85%) or retired (86%) were more likely to be confident that scientific research produces accurate conclusions than those who were not working (73%).
- NS-SEC: respondents in occupational groups (for example, 87% of those in managerial, administrative and professional occupations) and full-time students (79%) were more likely to be confident that scientific research produces accurate conclusions than those who were long term unemployed and/or had never worked (43%).
- Food security: respondents with high food security (87%) were more likely to be confident that scientific research produces accurate conclusions compared to those with very low food security (72%).
- Ethnic group: white respondents (86%) were more likely to be confident that scientific research produces accurate conclusions compared to Asian or British Asian respondents (73%).
- Responsibility for cooking: respondents who were responsible for cooking (85%) were more likely to be confident that scientific research produces accurate conclusions compared to those who do not cook (60%).

Respondents were asked if they would trust an organisation more or less if it were to base their decision making and advice on scientific evidence. Over three quarters (77%) of respondents reported that they would trust an organisation more if it were to base decisions and advice on scientific evidence[14].

Respondents were asked if they would trust an organisation more or less if it were to make the scientific evidence underpinning any decisions openly available. Over three

[14] Question: If an organisation were to base their decision-making and advice on scientific evidence, would this make you...? Responses: Trust the organisation a lot more, Trust the organisation slightly more, Trust the organisation a lot less, Trust the organisation slightly less, It would make no difference, Don't know. Base = 3764, all online respondents. N.B. ‘Trust the organisation a lot more’ and ‘Trust the organisation slightly more’ referred to as would trust more.

quarters (79%) of respondents reported that they would trust an organisation more if it were to make the scientific evidence underpinning any decisions openly available[15].

Respondents were asked if they would trust an organisation more or less if it were to use independent expert advice to inform any decisions. Almost three quarters (71%) of respondents reported that they would trust an organisation more if it were to use independent expert advice to inform any decisions[16].

[15] Question: If an organisation were to make the scientific evidence underpinning any decisions openly available, would this make you...? Responses: Trust the organisation a lot more, Trust the organisation slightly more, Trust the organisation a lot less, Trust the organisation slightly less, It would make no difference, Don't know. Base = 3764, all online respondents. N.B. ‘Trust the organisation a lot more’ and ‘Trust the organisation slightly more’ referred to as would trust more.

[16] Question: If an organisation were to use independent expert advice to inform any decisions, would this make you...? Responses: Trust the organisation a lot more, Trust the organisation slightly more, Trust the organisation a lot less, Trust the organisation slightly less, It would make no difference, Don't know. Base = 3764, all online respondents. N.B. ‘Trust the organisation a lot more’ and ‘Trust the organisation slightly more’ referred to as would trust more.

Chapter 2: Concerns about food

Introduction

The Food Standards Agency's (FSA) overarching mission is 'food we can trust'. The FSA's goal and vision is to ensure that food is safe to eat and food is what it says it is. The aim of the FSA is to ensure that consumers can make informed choices about what to eat, trust that the food they buy is safe to eat, and have access to an affordable diet, now and in the future[17].

This chapter provides an overview of respondents' concerns about food and how these vary between different types of people.

Common concerns

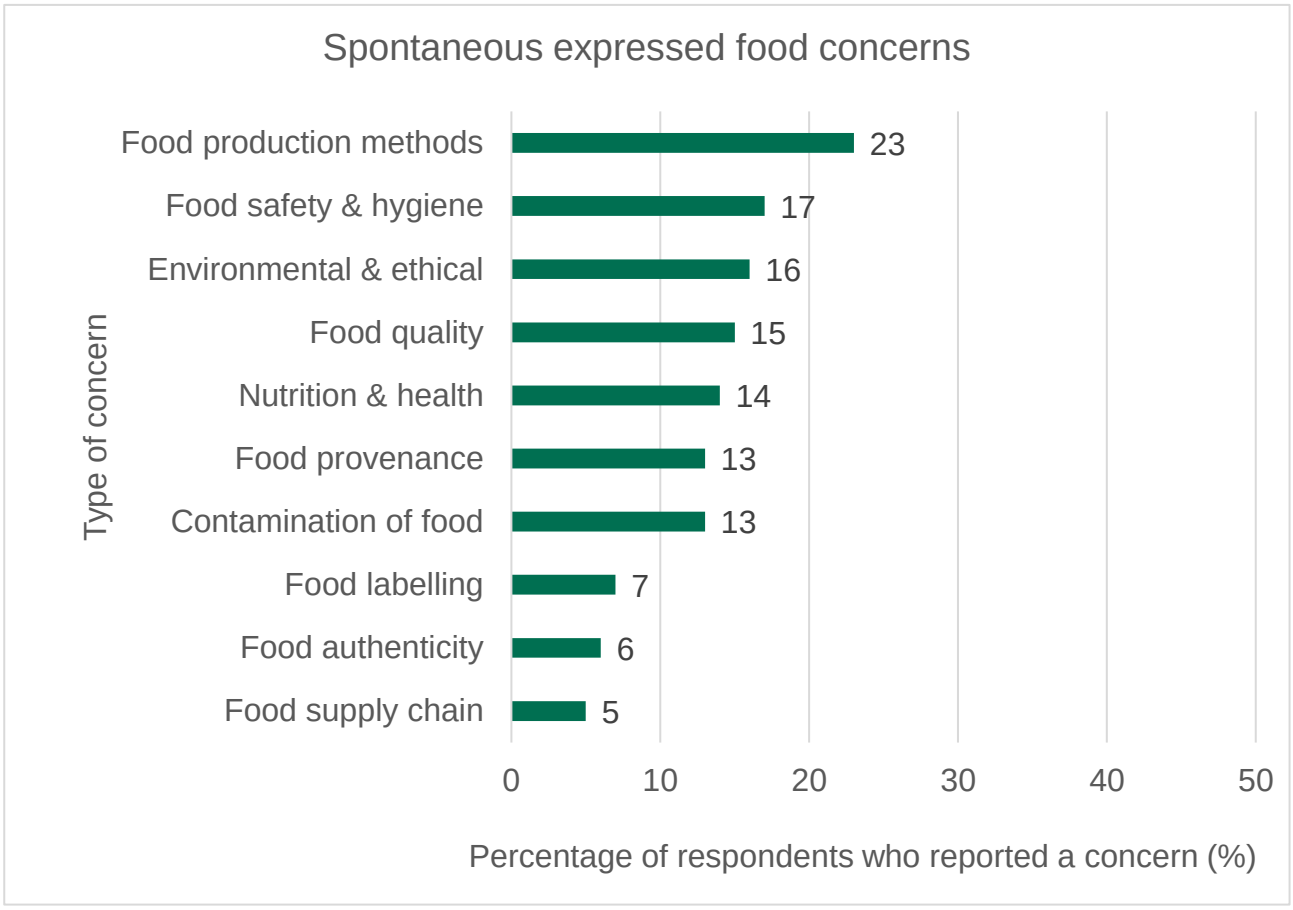
Respondents were asked to report whether they had any concerns about the food they eat. Most respondents (88%) had no concerns about the food they eat, and only 12% of respondents reported that they had a concern[18].

Concern about food varied between different types of people in the following ways:

- NS-SEC: respondents who were full-time students (3%) were less likely to report that they had concerns about the food they eat compared to those in managerial, administrative and professional occupations (13%) or small employers and own account workers (18%).
- Ethnic group: white respondents (11%) were less likely to report that they had concerns about the food they eat compared to Asian or British Asian respondents (22%).

[17] The FSA is not responsible for nutrition policy in England and Wales, only in Northern Ireland.
[18] Question: Do you have any concerns about the food you eat? Responses: Yes, No. Base= 3764, all online respondents.

Figure 2. Ten most common spontaneous expressed concerns about food.

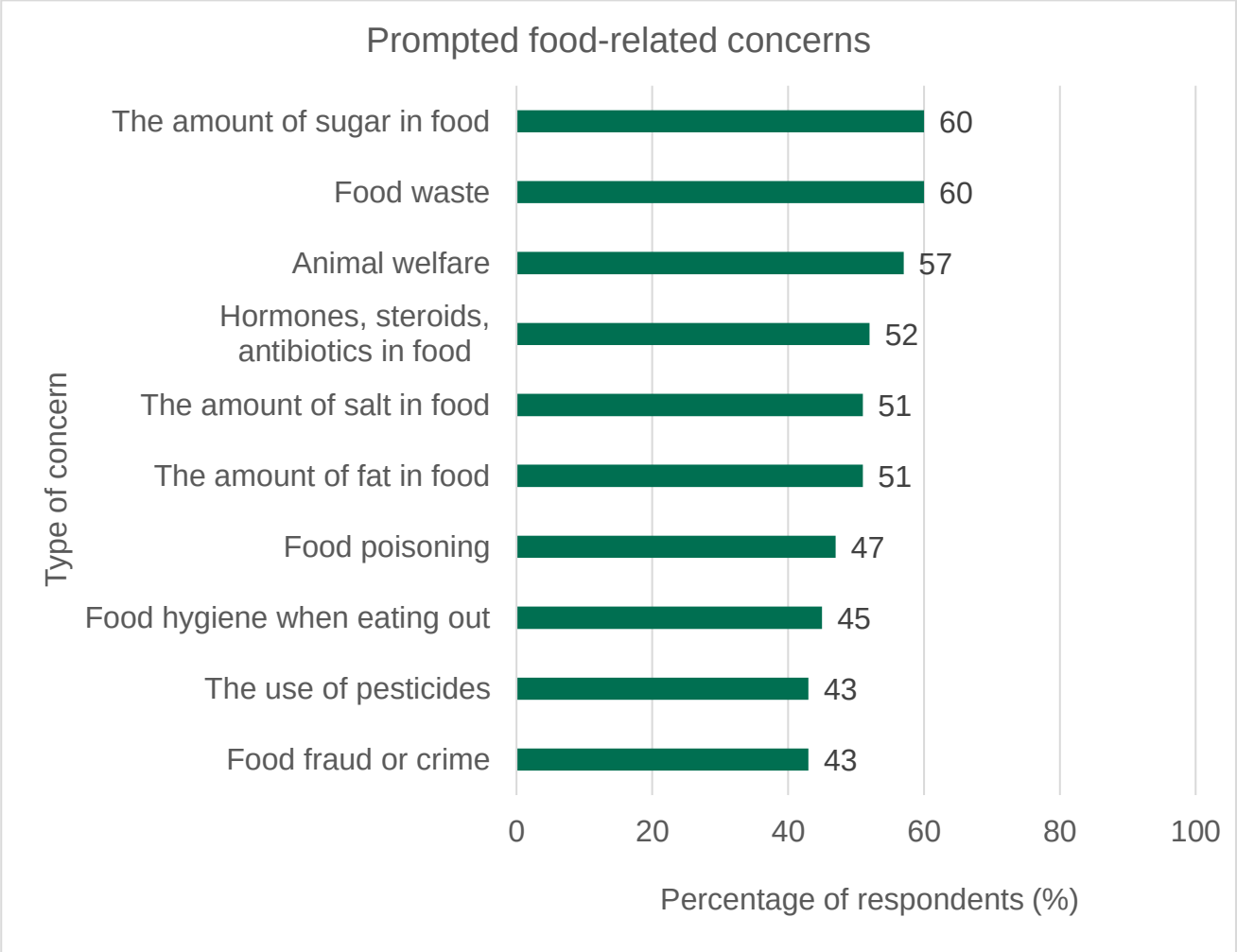


Source: Food and You 2: Wave 2

Respondents were asked to briefly explain what their concerns were about the food they eat. The most common area of concern related to food production methods (23%), which included the use of additives (such as preservatives and colouring) in food products (11%), the use of pesticides / fertiliser to grow food (7%) and the use of hormones, steroids or antibiotics in food (4%).

The second most common concern related to food safety and hygiene (17%), which included food being cooked or prepared properly (6%) and general food hygiene (5%). Only 5% of respondents reported concerns relating to the food supply chain (Figure 2)[19].

Figure 3. Ten most common prompted food-related concerns.



Source: Food and You 2: Wave 2

Respondents were asked to indicate if they had concerns about a number of food-related issues, from a list of given options. The most common concerns related to the amount of

[19] Question: What are your concerns about the food you eat? Responses: [Open text]. Base= 1495, all with concerns about the food they eat. N.B. additional responses are available in the data tables and data file, responses were coded by Ipsos MORI, see Technical Report for further details.

sugar in food (60%), food waste (60%) and animal welfare (57%). Fewer than half of respondents reported concern about food fraud or crime (43%) (Figure 3)[20].

[20] Question: Do you have concerns about any of the following? Responses (Additional differences): The amount of sugar in food, Food waste, Animal welfare, Hormones, steroids or antibiotics in food, The amount of salt in food, The amount of fat in food, Food poisoning, Food hygiene when eating out, The use of pesticides, Food fraud or crime, The use of additives (for example, preservatives and colouring) (40%), Food prices (38%), Genetically modified (GM) foods (38%), Chemical contamination from the environment (37%), Food miles (35%), The number of calories in food (34%), Food allergen information (21%), Cooking safely at home (12%), None of these (6%), Don't know (2%). Base= 3764, all online respondents.

Chapter 3: Food security

Introduction

This chapter reports the level of food security in England, Wales, and Northern Ireland, and how food security varied between different types of people.

> "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." *World Food Summit, 1996.*

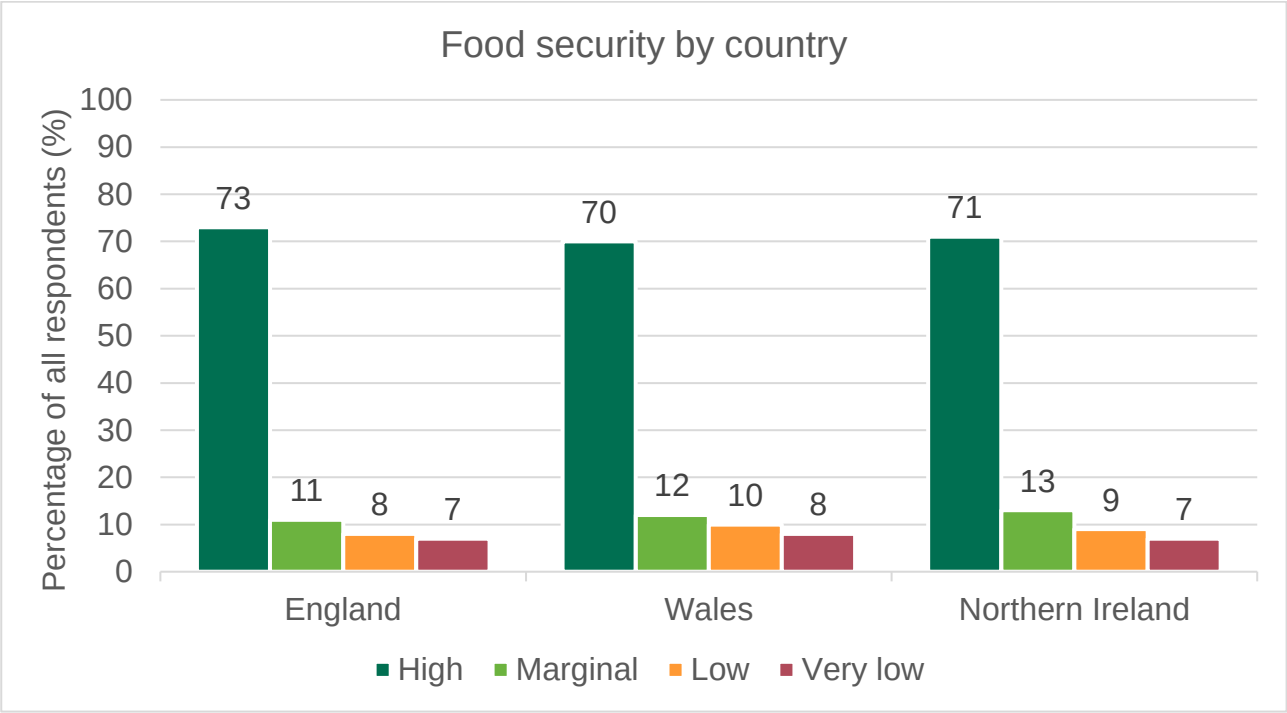
Food and You 2 uses the U.S. Adult Food Security Survey Module developed by the United States Department of Agriculture (USDA) to measure food security at the level of consumers. More information on how food security is measured can be found in Annex A.

Food security

Across England, Wales, and Northern Ireland, 84% of respondents were classified as food secure (73% high, 11% marginal) and 16% of respondents were classified as food insecure (8% low, 7% very low)[21].

[21] Question/Responses: Derived variable, see USDA Food Security guidance and Technical Report. Base= 5900, all respondents.

Figure 4. Food security is comparable across England, Wales, and Northern Ireland.

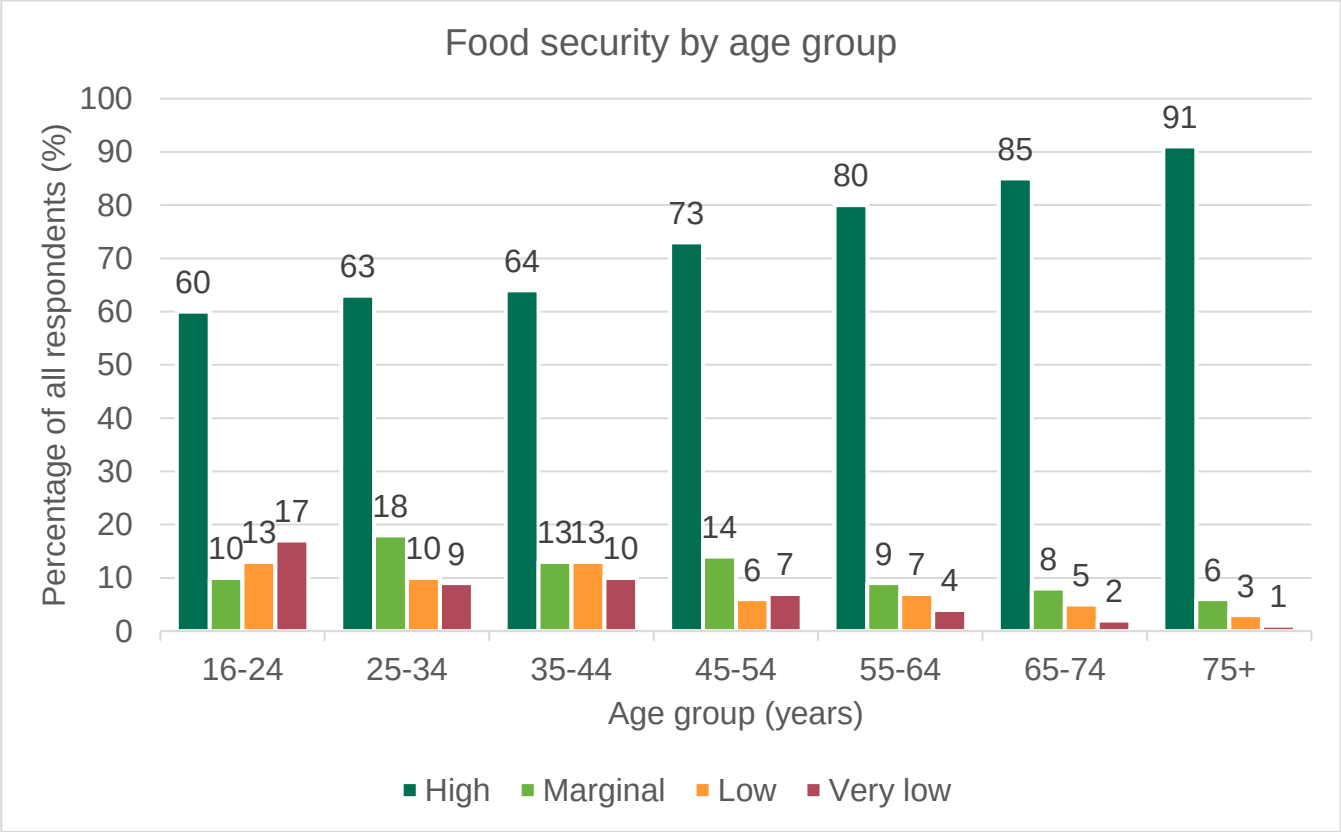


Source: Food and You 2: Wave 2

Food security levels were comparable across England, Wales, and Northern Ireland**. Over three quarters of respondents were food secure (i.e. had high or marginal food security) in England (85%), Wales (82%) and Northern Ireland (84%). Approximately 1 in 6 respondents were food insecure (i.e. had low or very low food security) in England (15%), Wales (18%) and Northern Ireland (16%) (Figure 4).

Food security varied between different types of people.

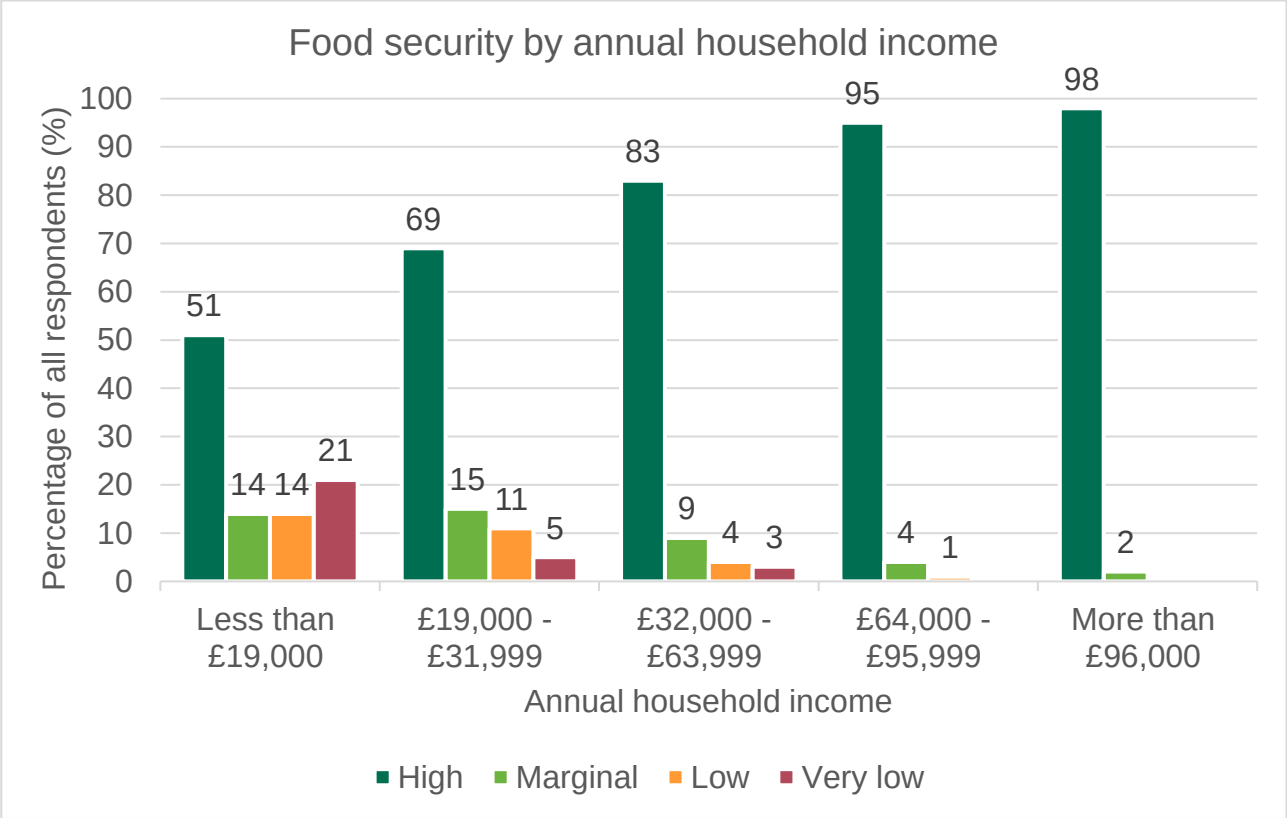
Figure 5. Food security was more common in older adults.



Source: Food and You 2: Wave 2

Food security varied by age group with older adults being more likely to report that they were food secure and less likely to report that they were food insecure than younger adults (Figure 5).

Figure 6. Food security was more common in households with a higher income.



Source: Food and You 2: Wave 2

As expected, food security was associated with household income. Respondents with a higher income were more likely to report food security than those with a lower income. For example, 98% of respondents with an income over £96,000 reported high food security, compared to 51% of those with an income below £19,000, (Figure 6).

The reported level of food security varied between different types of people:

- Household size: food security was more likely to be reported by respondents in 1-person (86%) and 3-person (81%) households compared to those in 5+ person households (76%).
- Children (under 16 years) in household: households without children under 16 years (88%) were more likely to report that they were food secure compared to households with children under 16 years (76%).
- Employment status: retired respondents (97%) were more likely to report that they were food secure compared to those who were working (86%) and those who were not working (67%).
- NS-SEC: food security was more likely to be reported by respondents in occupational groups (for example, 89% of those in managerial, administrative and professional

occupations) and full-time students (78%) compared to those who were long term unemployed and/or had never worked (57%).

- Relationship status: respondents who were married or in a civil partnership (89%) were more likely to report being food secure compared to those who were single and not living as a couple (77%).
- Long term health condition: respondents who did not have a long-term health condition (89%) were more likely to report being food secure compared to those who had a long-term health condition (75%).

Changes in eating habits

Respondents were asked to indicate if and how their eating habits had changed over the last 12 months. Due to the outbreak of the COVID-19 pandemic and the impact this has had on the day-to-day lives of consumers, it is expected that eating habits changed more in the last 12 months than in a typical 12-month period.

Figure 7. Ten most common changes in eating habits in the last 12 months.

Source: Food and You 2: Wave 2

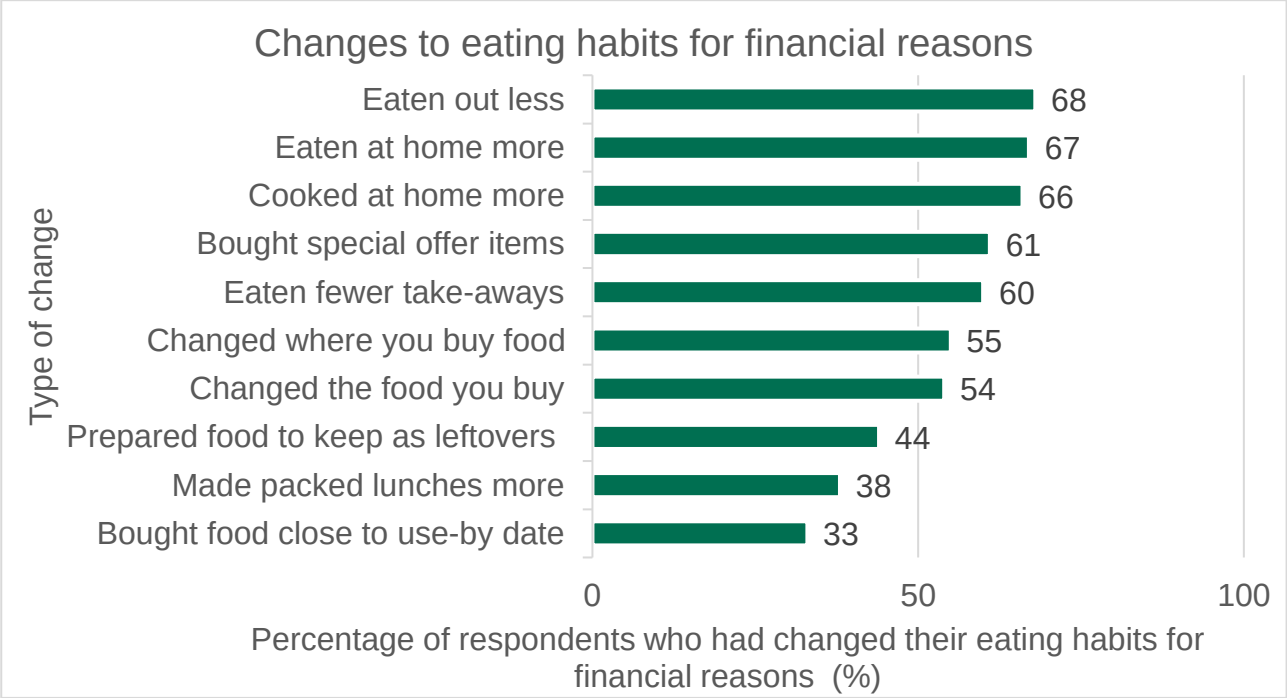
Eating habits had changed for most respondents with only 17% of respondents indicating that there had been no change in their eating habits in the last 12 months. The most common changes related to what and where respondents ate (57% eaten out less, 56%

eaten at home more, 52% cooked more at home, 40% eaten fewer takeaways), reducing food costs (32% bought items on special offer, 24% changed where you buy food for cheaper alternatives, 22% changed the food you buy for cheaper alternatives) and increased food management behaviours (24% prepared food that could be kept as leftovers, 21% made more packed lunches). In addition, 16% of respondents reported that they had bought food close to its use-by date more, 9% kept leftovers for longer before eating and 8% had eaten food past its use-by date more (Figure 7)[22, 23].

Respondents who reported a change in their eating habits in the last 12 months were asked to indicate why their eating habits had changed. The main causes of reported changes in eating habits were COVID-19 and lockdown (74%), health reasons (41%) and financial reasons (35%)[24].

[22] Question: Have you, or has anyone in your household, made any of these changes to your eating habits in the last 12 months? Responses (Additional differences): Eaten at home more, Eaten fewer takeaways, Eaten out less, Made packed lunches more, Bought items that were on special offer, Changed where you buy food for cheaper alternatives, Changed the food you buy to cheaper alternatives, Prepared food that could be kept as leftovers more, Kept leftovers for longer before eating, Eaten food past its use-by date more, Bought food close to its use-by date more, Used a food bank/emergency food (3%), Other (1%), No, I/we haven't made any changes. Base= 5900, all respondents.
[23] Life under Covid-19: Food waste, attitudes, and behaviours in 2020 (2021). WRAP.
[24] Question: Thinking about the changes to eating habits that you have made in the last 12 months, why did you make these changes? Responses (additional differences): Financial reasons, Health reasons, Food safety reasons (7%), Due to the bad or unpleasant physical reaction that certain foods cause (3%), Because of lockdown/covid-19, Other (4%), Prefer not to say (2%). Base= 4887, all respondents who have changed their eating habits in the last 12 months.

Figure 8. Ten most common changes in eating habits for financial reasons.



Source: Food and You 2: Wave 2

Of the respondents who had changed their eating habits in the last 12 months for financial reasons, the most common changes related to what and where respondents ate (68% eaten out less, 67% eaten at home more, 66% cooked more at home, 61% eaten fewer takeaways) and reducing food costs (61% bought items on special offer, 55% changed where you buy food, 54% changed the food you buy for cheaper alternatives) (Figure 8). In addition, 21% of respondents reported that they had kept leftovers for longer before eating, 17% had eaten food past its use-by date more, and 7% reported that they had used a food bank or emergency food (Figure 8)[25].

[25] Question: Have you, or has anyone in your household, made any of these changes to your eating habits in the last 12 months? Responses (additional differences): Eaten at home more, Eaten fewer takeaways, Eaten out less, Made packed lunches more, Bought items that were on special offer, Changed where you buy food for cheaper alternatives, Changed the food you buy to cheaper alternatives, Prepared food that could be kept as leftovers more, Kept leftovers for longer before eating (21%), Eaten food past its use-by date more (17%), Bought food close to its use-by date more, Used a food bank/emergency food (7%), Other (1%). Base= 1531, all respondents who have changed their eating habits in the last 12 months for financial reasons.

Food bank use

Respondents were asked if they or anyone else in their household had received a free parcel of food from a food bank or other emergency food provider in the last 12 months. Most respondents (90%) reported that they had not used a food bank or other emergency food provider in the last 12 months, with fewer than one in ten respondents (7%) reporting that they had[26].

Respondents who had received a food parcel from a food bank or other provider were asked to indicate how often they had received this in the last 12 months. Of these respondents, over a quarter (26%) had received a food parcel on only one occasion in the last 12 months, 41% had received a food parcel on more than one occasion but less often than every month, and 6% had received a food parcel every month or more often[27].

School meals, meal clubs and Healthy Start vouchers

Respondents with children aged 7-15 years in their household were asked whether these children receive free school meals. Most respondents (80%) who had a child(ren) aged 7-15 years in their household reported that the child(ren) do not receive free school

[26] Question: In the last 12 months, have you, or anyone else in your household, received a free parcel of food from a food bank or other emergency food provider? Responses (Additional differences): Yes, No, Prefer not to say (2%). Base = 5900, all respondents.
[27] Question: How often in the past 12 months have you, or anyone else in your household, received a free food parcel from a food bank or other emergency food provider? Responses (additional differences): Only once in the last year, Two or three times in the last year (21%), Four to six times in the last year (10%), More than six times but not every month (10%), Every month or more often, Don't know (11%), Prefer not to say (16%). Base=418, all respondents where anyone in household has used a food bank or emergency food or received a free food parcel from a food bank or other emergency food provider in the last 12 months.

meals. Fewer than one in five (17%) respondents reported that the child or children do receive free school meals[28].

Respondents with children aged 5-15 years in their household were asked whether these children had attended a school club where a meal was provided in the last 12 months. Most respondents (77%) reported that the child(ren) in their household had not attended one of these clubs in the last 12 months. Over 1 in 10 (13%) respondents reported that the child(ren) in their household had attended a breakfast club before school; 6% reported that the child(ren) had attended an after-school club where they received a meal; and 3% reported that the child(ren) had attended a lunch and activity club held during the school holidays[29].

Respondents who had children aged 0-4 years in their household or who were pregnant were asked whether they receive Healthy Start vouchers. Most respondents (79%) reported that they do not receive Healthy Start vouchers, with 9% of respondents reporting that they do[30].

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[28] Question: Does any child receive free school meals? Responses (additional differences): Yes, No, Don't know (1%), Prefer not to say (2%). Base= 1001, all respondents who had child(ren) aged 7 - 15 living in the household. N.B. Data were collected between 20th November 2020 and 21st January 2021, partly within the Christmas school holiday period and during the COVID-19 pandemic which may have influenced responses.

[29] Question: Did your child/any of the children in your household attend any of the following in the past 12 months? Responses (additional differences): A breakfast club before school, An after-school club where they also received a meal (tea/dinner), A lunch and activity club that ran only during school holidays, None of these, Don't know (6%). Base= 1121, all respondents with child(ren) aged 5 - 15 in the household.

[30] Question: Do you receive Healthy Start vouchers for yourself or your children? Responses (additional differences): Yes, No, Don't know (10%), Prefer not to say (2%). Base= 499, all online respondents who are pregnant or have child(ren) aged 0 - 4 in household, and all those who completed the paper questionnaire and have child(ren) aged 0 - 4 years living in the household.

Chapter 4: Eating out and takeaways

Introduction

The Food Hygiene Rating Scheme (FHRS) helps people make informed choices about where to eat out or shop for food by giving clear information about the businesses' hygiene standards. Ratings are typically given to places where food is supplied, sold or consumed, including restaurants, pubs, cafés, takeaways, food vans and stalls.

The Food Standards Agency runs the scheme in partnership with local authorities in England, Wales and Northern Ireland. A food safety officer from the local authority inspects a business to check that it follows food hygiene law so that the food is safe to eat. Businesses are given a rating from 0 to 5. A rating of 5 indicates that hygiene standards are very good and a rating of 0 indicates that urgent improvement is required.

Food businesses are provided with a sticker which shows their FHRS rating. In England businesses are encouraged to display their FHRS rating, however in Wales and Northern Ireland food businesses are legally required to display their FHRS rating[31]. FHRS ratings are also available on the FSA website.

This chapter provides an overview of respondents' eating out and takeaway ordering habits, the factors that are considered when deciding where to order a takeaway from, and recognition and use of the FHRS.

[31] Legislation for the mandatory display of FHRS ratings was introduced in November 2013 in Wales and October 2016 in Northern Ireland.

Prevalence of eating out and ordering takeaways

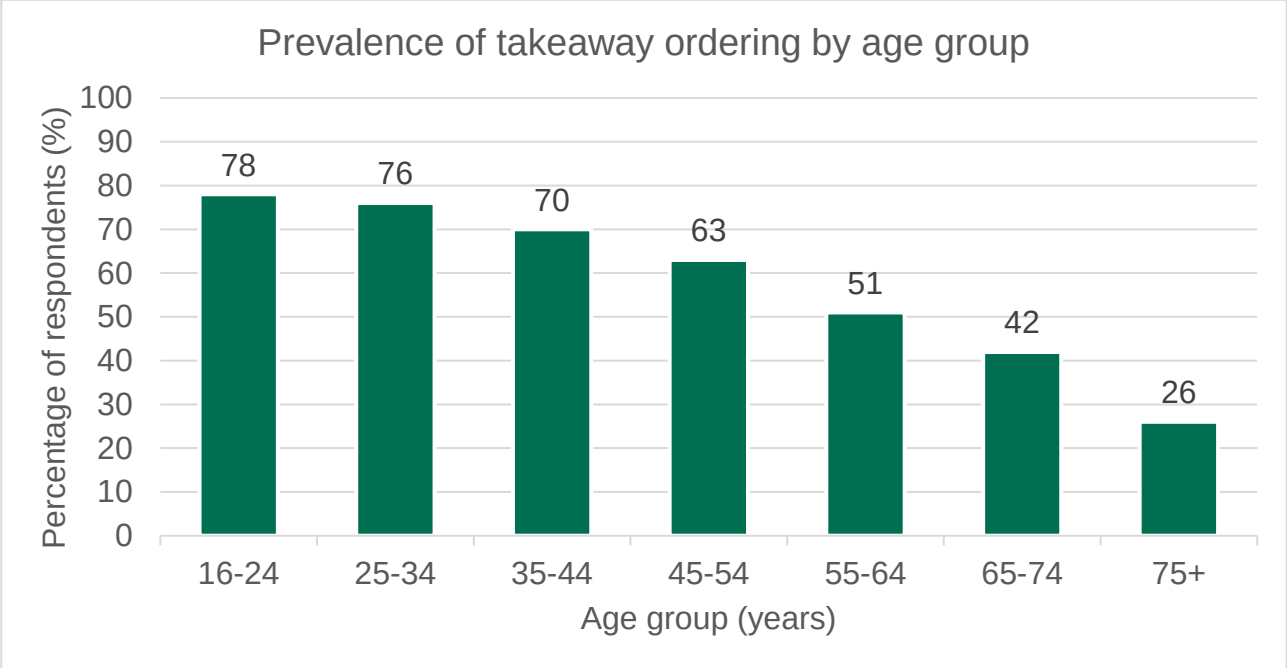
Figure 9. Almost half of respondents had eaten takeaway food ordered directly from a takeaway or restaurant in the previous 4 weeks.

Source: Food & You 2: Wave 2

Respondents were asked where they had eaten out or ordered food from in the previous 4 weeks. Three fifths (60%) of respondents had eaten food which was ordered from a takeaway either ordered directly (47%) or via an online delivery company (for example, Just Eat, Deliveroo, Uber Eats etc.) (32%) in the previous 4 weeks. Almost a third (32%) of respondents had eaten food from a café, coffee shop or sandwich shop (either to eat in or take away) and approximately 1 in 5 (21%) respondents had eaten out at a restaurant, pub or bar in the previous 4 weeks.

Almost a quarter (23%) of respondents had not eaten at any of the listed food outlets in the previous 4 weeks (Figure 9)[32].

Figure 10. Younger adults were more likely to have ordered a takeaway than older adults.



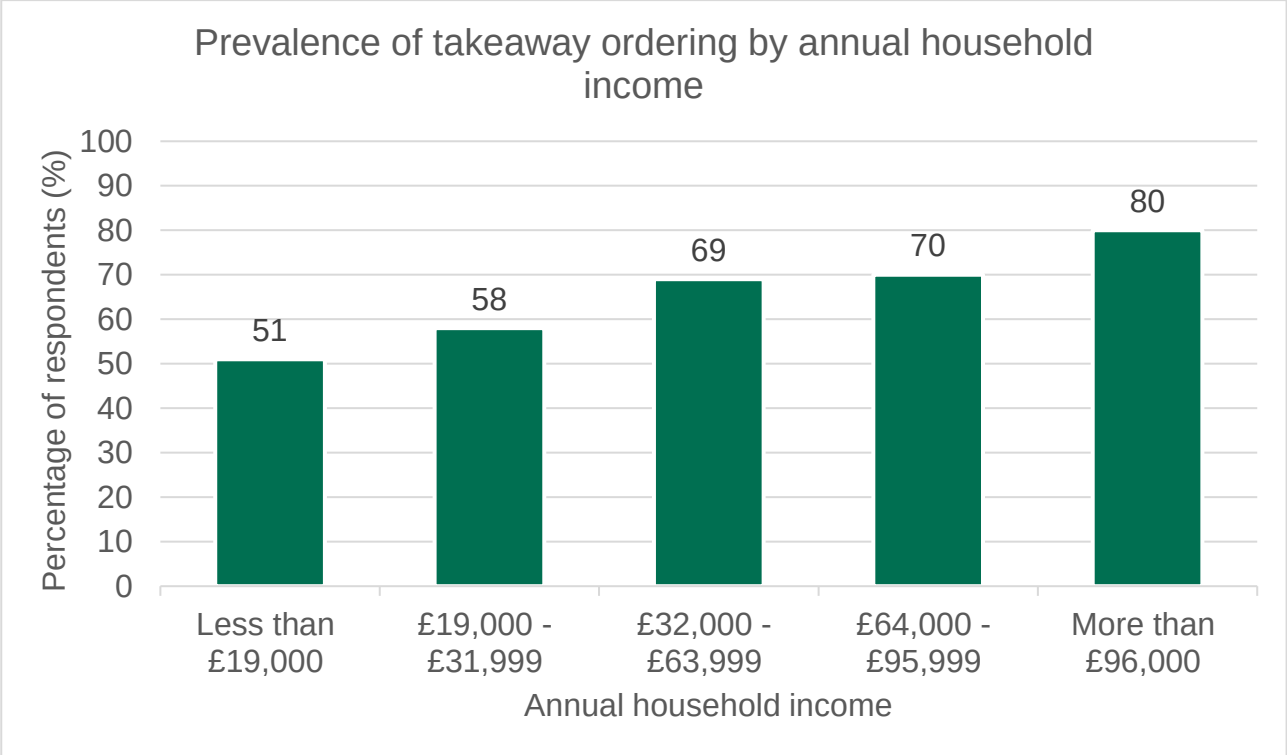
Source: Food and You 2: Wave 2

Younger adults were more likely to have eaten food which was ordered from a takeaway, either ordered directly or via an online delivery company, in the previous 4 weeks than older adults. For example, 78% of respondents aged 16-24 years had eaten food from a

[32] Question: In the last 4 weeks, have you eaten food... ? (Select all the apply) Responses (additional differences): Ordered a takeaway directly from a takeaway shop or restaurant, From a café, coffee shop or sandwich shop (either to eat in or take out), Ordered a takeaway from an online food delivery company (for example, Just Eat, Deliveroo, Uber Eats), From a fast food outlet (either to eat in or take out), In a restaurant, In a pub/ bar, From a canteen (for example, at work, school, university, or hospital), From a mobile food van or stall, In a hotel, B&B or guesthouse (2%), From an entertainment venue (for example, cinema, bowling alley, sports club) (1%), From a food-sharing app (for example, Olio or Too Good To Go) (1%), From Facebook Marketplace (for example, pre-prepared food or meals) (1%), None of these. Base= 4850, all online respondents and those answering the Eating Out postal questionnaire. N.B. Percentages show do not add up to 100% as multiple responses could be selected.

takeaway in the previous 4 weeks, compared to 26% of those aged 75 years or over (Figure 10).

Figure 11. Households with a higher annual income were more likely to have ordered a takeaway than older adults.



Source: Food and You 2: Wave 2

Respondents with a higher household income were more likely to have eaten food from a takeaway than those with a lower income. For example, 80% of those with an annual household income of more than £96,000 had eaten food ordered from a takeaway in the previous 4 weeks, compared to 51% of those with an income below £19,000 (Figure 11).

The prevalence of ordering takeaways also varied between different types of people in the following ways:

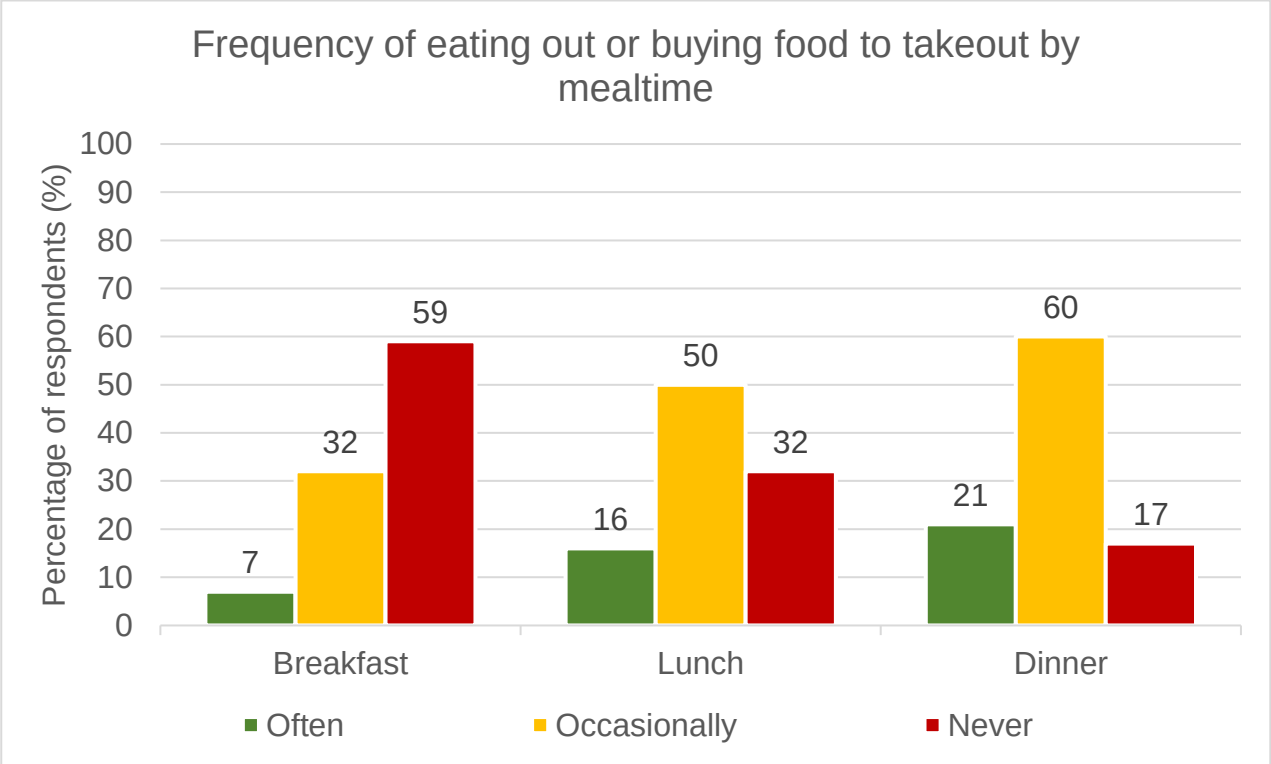
- Household size: respondents in larger households were more likely to have eaten food from a takeaway than those in smaller households. For example, 74% of respondents in 4-person households had eaten a takeaway in the previous 4 weeks, compared to 43% of those in 1-person households.
- Children (under 16 years) in the household: 70% of respondents with children under 16 years in the household had eaten food from a takeaway in the previous

4 weeks, compared to 57% of those with no children under 16 years in the household.

- Employment status: respondents who were working (70%) or not working (62%) were more likely to have eaten food from a takeaway in the previous 4 weeks, compared to those who were retired (35%).
- NS-SEC: full-time students (85%) were more likely to have eaten food from a takeaway in the previous 4 weeks than those in any occupational group (for example, 62% of those in managerial, administrative and professional occupations) and those who were long term unemployed and/or had never worked (51%).

Eating out and takeaways by mealtime

Figure 12. Most respondents never ate out or bought takeout food for breakfast.



Source: Food & You 2: Wave 2

Respondents were asked how often they ate out or bought food to take out for breakfast, lunch and dinner, at the moment. Respondents were least likely to eat out or buy food to take out for breakfast, with 59% of respondents never doing this. Half of respondents (50%) reported that they occasionally (i.e. 2-3 times a month or less often) ate out or bought takeout food for lunch. Respondents were most likely to eat out or buy food to

take out for dinner, with 60% doing this occasionally (i.e. 2-3 times a month or less often) and 21% doing this often (i.e. several times a week or about once a week) (Figure 12)[33].

Factors considered when ordering a takeaway

Respondents were asked which factors, from a given list, they generally considered when deciding where to order a takeaway[34].

Figure 13. Previous experience of the takeaway and quality of food were most often considered when deciding where to order a takeaway from.

Source: Food & You 2: Wave 2

[33] Question: At the moment, how often, if at all, do you eat out or buy food to take out for…? A) Breakfast, B) Lunch, C) Dinner. Responses (additional differences): Several times a week, About once a week, About 2-3 times a month, About once a month, Less than once a month, Never, Can't remember (A=2%, B=2%, C=2%). Base= 4850, all online respondents and those answering the Eating Out postal questionnaire. N.B. 'Several times a week', 'About once a week' referred to as often; '2-3 times a month', 'About once a month' and 'Less than once a month' referred to as occasional.

[34] Including takeaway ordered directly from a takeaway shop or restaurant or via an online food delivery company.

Of those who had ordered food from a takeaway, the factors most commonly considered when deciding where to order from were the respondents' previous experience of the takeaway (80%) and the quality of food (80%). Forty-three percent of respondents considered the Food Hygiene Rating when deciding where to order a takeaway from (Figure 13)[35].

Awareness and recognition of the FHRS

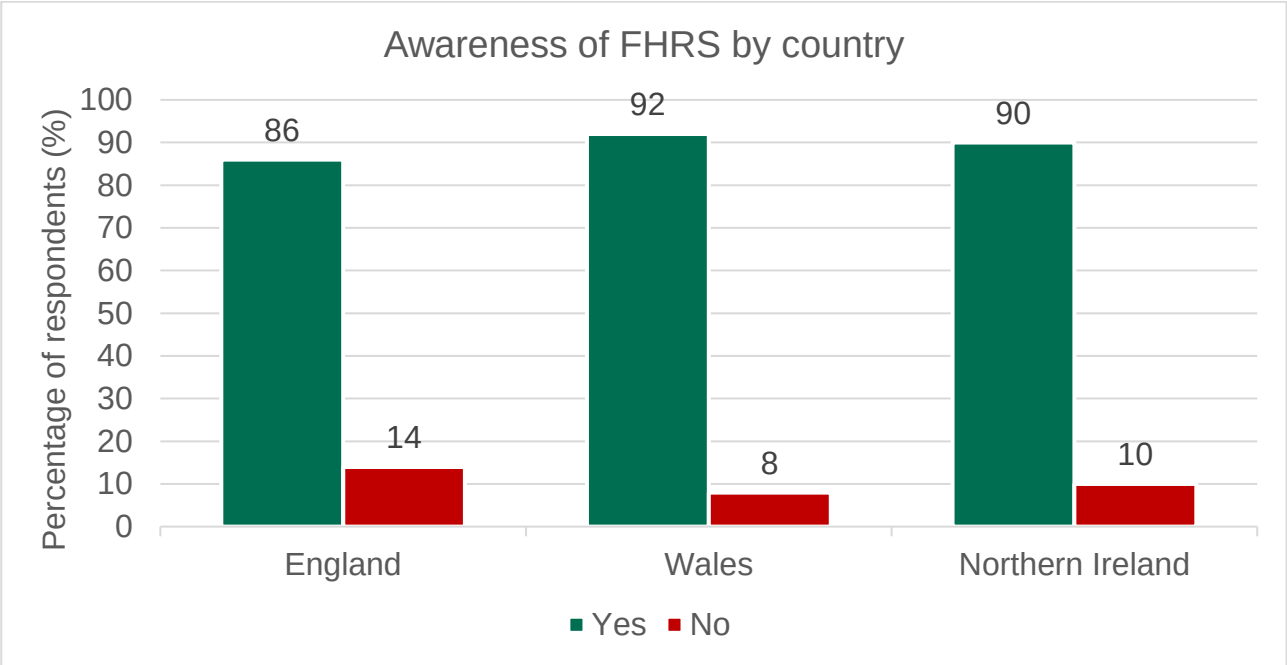
Most respondents (87%) reported that they had heard of the FHRS. Almost half of respondents (47%) reported that they had heard of the FHRS and had at least some knowledge of the FHRS[36, 37].

[35] Question: Generally, when ordering food from takeaways (either directly from a takeaway shop or restaurant or from an online food delivery company like Just Eat, Uber Eats or Deliveroo) what do you consider when deciding where to order from? Responses (additional differences): My previous experience of the takeaway, Quality of food, Price (including cost of delivery), Type of food (for example, cuisine or vegetarian/vegan options), Recommendations from family or friends, Food Hygiene Rating, Location of takeaway, Whether there is a delivery or collection option, Offers, deals or discount available, Delivery/ collection times, Whether food can be ordered online for example, through a website or app (31%), Reviews for example, on TripAdvisor, Google, social media, or in newspapers and magazines (26%), Whether it is an independent business or part of a chain (12%), Whether healthier options are provided (8%), Whether allergen information is provided (8%), Whether information about calories is provided (3%), None of these (1%), Don't know (1%). Base= 4101, all online respondents and those answering the Eating Out postal questionnaire, who order takeaways.

[36] Question: Have you heard of the Food Hygiene Rating Scheme? Responses (additional differences): Yes, I've heard of it and know quite a lot about it, Yes, I've heard of it and know a bit about it, Yes, I've heard of it but don't know much about it, Yes, I've heard of it but don't know anything about it, No, I've never heard of it (13%). Base = 4850, all online respondents and those answering the Eating Out postal questionnaire. N.B. 'Yes, I've heard of it and know quite a lot about it', 'Yes, I've heard of it and know a bit about it' and 'Yes, I've heard of it but don't know much about' it referred to as having knowledge of FHRS.

[37] A more detailed FHRS report is expected to be released 2021-2022.

Figure 14. Awareness of the FHRS is comparable across England, Wales, and Northern Ireland.



Source: Food and You 2: Wave 2

Awareness of the FHRS was comparable across England (86%), Wales (92%), and Northern Ireland (90%) (Figure 14)**.

When shown an image of the FHRS sticker, most (90%) respondents reported that they had seen the FHRS sticker before. Recognition of the FHRS sticker was comparable across England (89%), Wales (96%) and Northern Ireland (96%)[38]**.

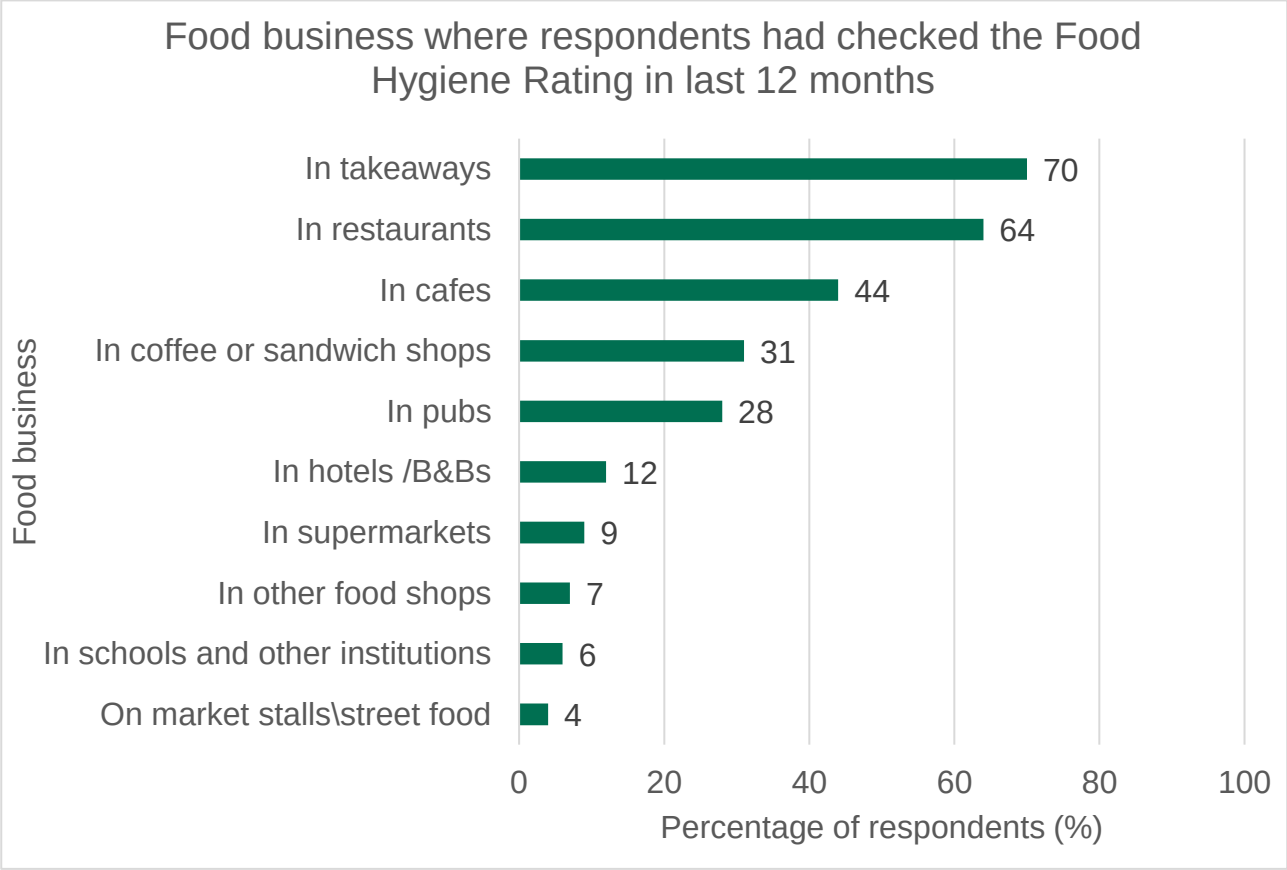
FHRS usage

[38] Question: Have you ever seen this sticker before? Responses (additional differences): Yes, No (5%), Don't know/ Not sure (5%). Base = 4850, all online respondents and those answering the Eating Out postal questionnaire.

Respondents who were aware of the FHRS were asked if they had checked the Food Hygiene Rating of a food business in the last 12 months. Over half (51%) of respondents had checked the Food Hygiene Rating of a food business in the previous 12 months[39].

Of the respondents who had heard of the FHRS, those living in Wales (64%) and Northern Ireland (60%) were more likely to have checked the Food Hygiene Rating of a food business in the last 12 months compared to respondents in England (50%).

Figure 15. Most respondents had checked the Food Hygiene Rating of takeaways in the last 12 months.



Source: Food & You 2: Wave 2

[39] Question: In the last 12 months, have you checked the hygiene rating of a food business? You may have checked a rating at the business premises, online, in leaflets or menus whether or not you decided to purchase food from there. Responses (additional differences): Yes, I have checked the Food Hygiene Rating of a food business, No, I have not checked the Food Hygiene Rating of a food business (46%), Don't know (2%). Base = 4376, all online respondents and those answering the Eating Out postal questionnaire who had heard of the FHRS.

Respondents who had checked the Food Hygiene Rating of a food business were asked what kinds of food businesses they had checked the hygiene ratings of in the last 12 months. Most respondents had checked the rating of takeaways (70%) or restaurants (64%) in the last 12 months (Figure 15)[40].

[40] Question: In which of the following kinds of food businesses have you checked the hygiene ratings in the last 12 months? Responses (additional differences): In takeaways, In restaurants, In cafés, In coffee or sandwich shops, In pubs, In hotels & B&Bs, In supermarkets, In other food shops, In schools and other institutions, On market stalls\street food, Manufacturers (Business-to-Business traders) (<1%), Somewhere else (1%), Don’t know (3%). Base = 2346, all online respondents and those answering the Eating Out postal questionnaire who have checked the Food Hygiene Rating of a food business.

Chapter 5: Food Hypersensitivities

Introduction

Food hypersensitivity is a term that refers to a bad or unpleasant physical reaction which occurs as a result of consuming a specific food. There are different types of food hypersensitivity including, food allergy, food intolerance and coeliac disease[41].

- A **food allergy** occurs when the immune system (the body's defence) mistakes the proteins in food as a threat. Symptoms of a food allergy can vary from mild to very serious symptoms, and can include itching, hives, vomiting, swollen eyes and airways, or anaphylaxis which can be life threatening.

- **Food intolerance** is difficulty in digesting specific foods which causes unpleasant reactions such as stomach pain, bloating, diarrhoea, skin rashes or itching. Food intolerance is not an immune condition and is not life threatening.

- **Coeliac disease** is an autoimmune condition caused by gluten, a protein found in wheat, barley and rye and products using these as ingredients. The immune system attacks the small intestine which damages the gut and reduces the ability to absorb nutrients. Symptoms of coeliac disease can include diarrhoea, abdominal pain and bloating.

The FSA is responsible for allergen labelling and providing guidance to people with food hypersensitivities. By law[42], food businesses in the UK must inform customers if they use any of the 14 most potent and prevalent allergens[43] in the food and drink they provide.

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[41] FSA Explains: Food hypersensitivities. Overview: Food Allergy, NHS. Food Intolerance, NHS. Overview: Coeliac disease, NHS.
42 Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011.
[43] Allergens: celery, cereals containing gluten (such as barley and oats), crustaceans (such as prawns, crabs and lobsters), eggs, fish, lupin, milk, molluscs (such as mussels and oysters), mustard, peanuts, sesame, soybeans, sulphur dioxide and sulphites and

This chapter provides an overview of respondents' understanding of food allergies and intolerances, the self-reported prevalence and diagnosis of food hypersensitivities, and experiences of eating out or ordering a takeaway with a hypersensitivity[44].

Understanding of food allergies and intolerances

All respondents (regardless of whether they had a food hypersensitivity or not) were asked how well they understood the difference between a food allergy and food intolerance. Most respondents (68%) reported that they understood the difference between a food allergy and food intolerance well (i.e. understood the difference very well or fairly well).

Approximately 1 in 5 (22%) respondents reported that they did not understand the difference between a food allergy and food intolerance very well or at all ('I don't understand the difference very well' and 'I don't understand the difference at all well'), and 5% of respondents did not know that there was a difference between the two[45].

How well respondents understood the difference between a food allergy and a food intolerance varied between different groups of people:

- Gender: females (75%) were more likely to report that they understood the difference between a food allergy and food intolerance well compared to males (62%).
- Age group: younger adults were more likely to report that they understood the difference between a food allergy and food intolerance well compared to older adults. For example, 72% of 16–24-year-olds reported that they understood the

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tree nuts (such as almonds, hazelnuts, walnuts, brazil nuts, cashews, pecans, pistachios and macadamia nuts).

[44] A more detailed Food Hypersensitivities report is expected to be released 2021-2022.

[45] Question: How well do you think you understand the difference between a food allergy and a food intolerance? Responses (Additional differences): I understand the difference very well, I understand the difference fairly well, I don't understand the difference very well, I don't understand the difference at all well, I didn't know there was a difference between food allergies and food intolerances, Don't know (4%). Base=4814, all online respondents and those answering the Eating at Home postal questionnaire.

difference between a food allergy and food intolerance compared to 59% of 75+ year olds.

- Annual household income: respondents with an income over £64,000 were more likely to report that they understood the difference between a food allergy and food intolerance well compared to those with an income below £31,999. For example, 78% of respondents with an annual income of more than £96,000 reported that they understood the difference between a food allergy and food intolerance compared to 64% of those with an annual income of fewer than £19,000.
- NS-SEC: respondents in most occupational groups (for example, 71% of those in managerial, administrative and professional occupations) and full-time students (75%) were more likely to report that they understood the difference between a food allergy and food intolerance well compared to those who were long term unemployed and/or had never worked (50%).
- Ethnic group: white respondents (70%) were more likely to report that they understood the difference between a food allergy and food intolerance well compared to Asian or British Asian respondents (56%).
- Responsibility for cooking: respondents who were responsible for cooking (70%) were more likely to report that they understood the difference between a food allergy and food intolerance well, compared to those who did not cook (48%).
- Dietary need and shopping: respondents who considered a dietary need when shopping (80%) were more likely to report that they understood the difference between a food allergy and food intolerance well, compared to those who did not consider a dietary need when shopping (65%).

Understanding of food allergen regulation

Respondents were asked which organisations, if any, from a given list, they thought were responsible for regulating the information that restaurants and takeaways provide on allergens and intolerances.

Most respondents (77%) thought that the FSA is responsible for regulating the information that restaurants and takeaways provide on allergens and intolerances. Over a third (35%) of respondents reported that Defra is responsible for regulating this information, and 34% of respondents reported that local authorities are responsible for

regulating the information that restaurants and takeaways provide on allergens and intolerances[46].

Prevalence and diagnosis of food hypersensitivities

Most respondents (85%) reported that they did not have a food hypersensitivity. Fewer than 1 in 10 (9%) respondents reported that they had a food intolerance, 3% had a food allergy, 1% had coeliac disease and 1% had multiple food hypersensitivities[47].

Almost a quarter of respondents (23%) reported that they had suffered from a bad or unpleasant physical reaction after consuming certain foods or avoided certain foods because of the bad or unpleasant physical reaction they might cause[48].

The prevalence of bad or unpleasant physical reactions to food varied between different groups of people:

- Age group: respondents aged 75 years or over (30%) were more likely to report a bad or unpleasant physical reaction to food than those aged 16-24 years (20%) or aged 45-54 years (20%).
- NS-SEC: respondents who were long-term unemployed and/or had never worked (36%) were more likely to report a bad or unpleasant physical reaction to food, compared to respondents in occupational groups (for example, 21% of those in managerial, administrative, and professional occupations) and full-time students (20%).

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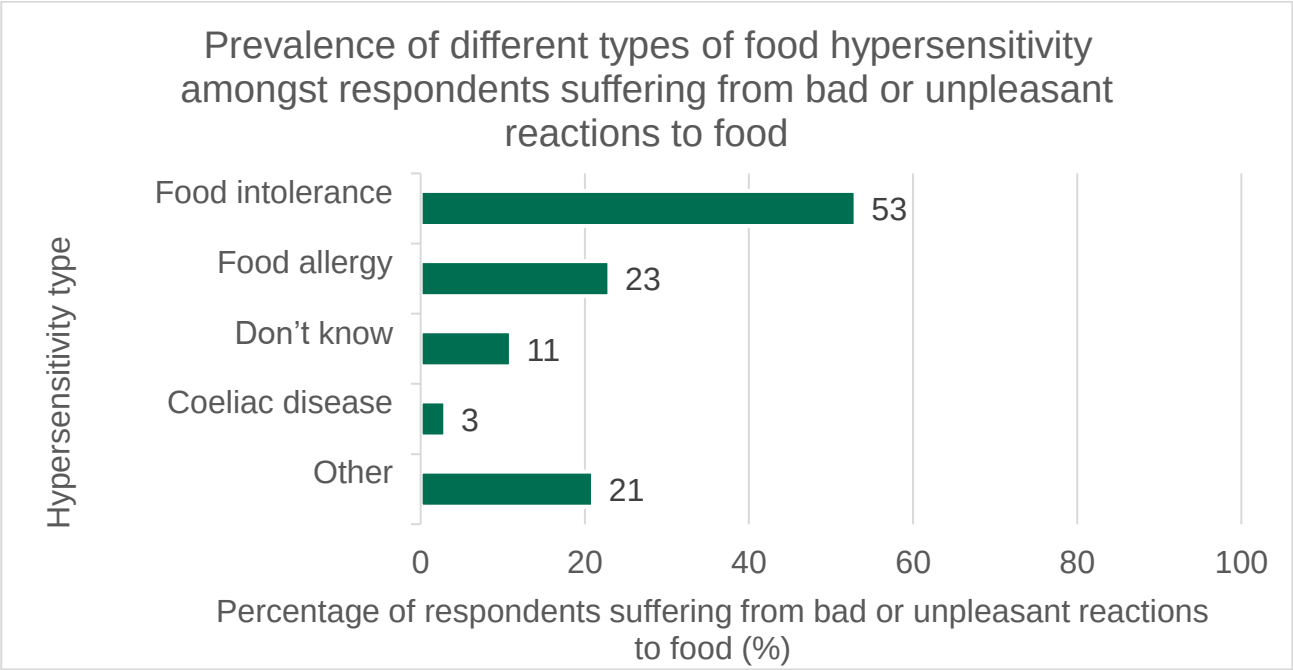
[46] Question: Which of the following organisations, if any, do you think is responsible for regulating the information that restaurants and takeaways provide on allergies and intolerances? Responses (Additional differences): Food Standards Agency, The Department for Environment, Food and Rural Affairs (Defra), Local Authorities, Allergy charities for example, Allergy UK (10%), They aren't regulated (2%), Some other organisation (1%), Don’t know (12%). Base=4814, all online respondents and those answering the Eating at Home postal questionnaire.
[47] Questions/Respondents: Derived variable, see data tables (FOOD_HS) and Technical Report. Base= 5900, all respondents.
[48] Question: Do you suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause? Responses (Additional differences): Yes, No (74%), Don’t know (2%), Prefer not to say (1%). Base=5900, all respondents.

Figure 16. Food intolerance was the most common type of food hypersensitivity reported.



Source: Food and You 2: Wave 2

Respondents who suffered from a bad or unpleasant physical reaction after consuming certain foods or avoided certain foods because of the bad or unpleasant physical reaction they might cause were asked how they would describe their reaction. Over half (53%) of those respondents reported that they had a food intolerance, 23% reported that they had a food allergy and 3% reported that they had coeliac disease. Over 1 in 5 (21%) respondents reported that they had another type of hypersensitivity (Figure 16)[49].

Respondents who reported having a food hypersensitivity were asked how they had found out about their condition. A quarter (25%) of respondents who had a food hypersensitivity had been diagnosed by an NHS or private medical practitioner and 4% had been diagnosed by alternative or complementary therapist but not NHS/private

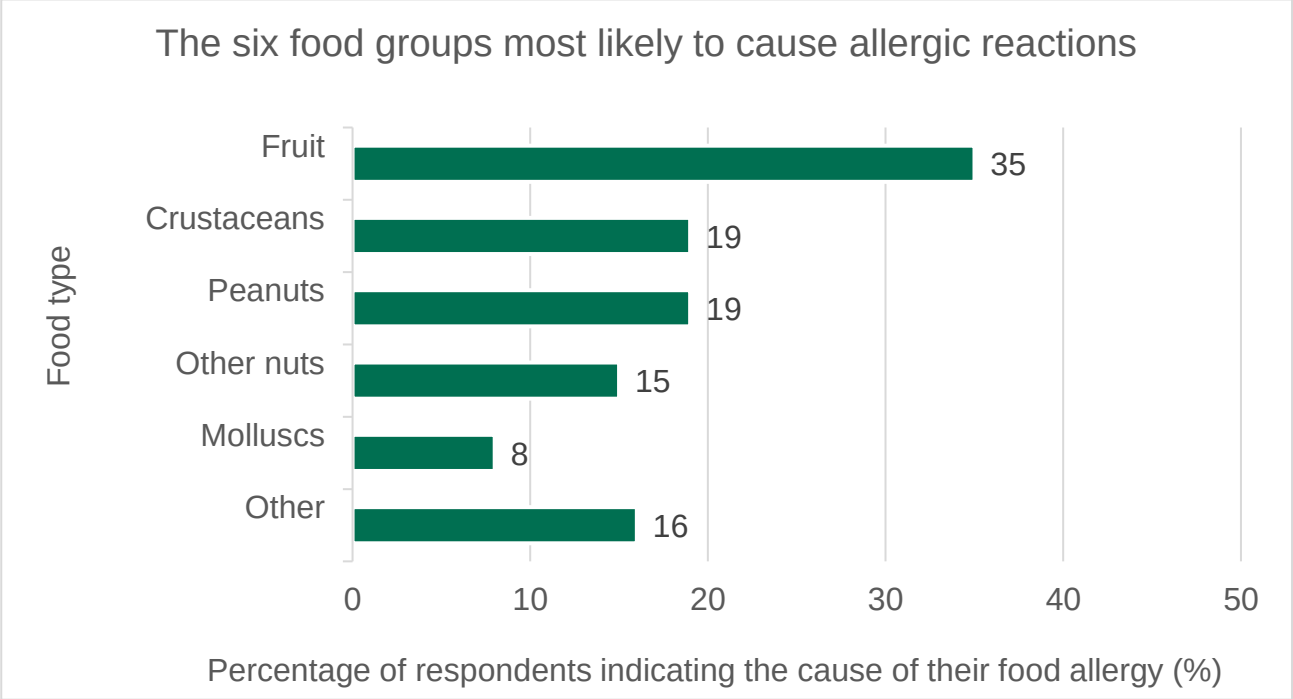
[49] Questions/Respondents: Derived variable, see data tables (REACTYPE_1 to REACTYPE_18 combined) and Technical Report. Base= 1380, all respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause.

medical practitioner. However, most respondents (71%) had not received any diagnosis[50].

Foods most likely to cause unpleasant reactions

Respondents who reported that they suffered from a bad or unpleasant physical reaction after consuming certain foods or avoided certain foods because of the bad or unpleasant physical reaction it might cause were asked which foods they experienced reactions to.

Figure 17. Fruit was the most common cause of allergic reactions.

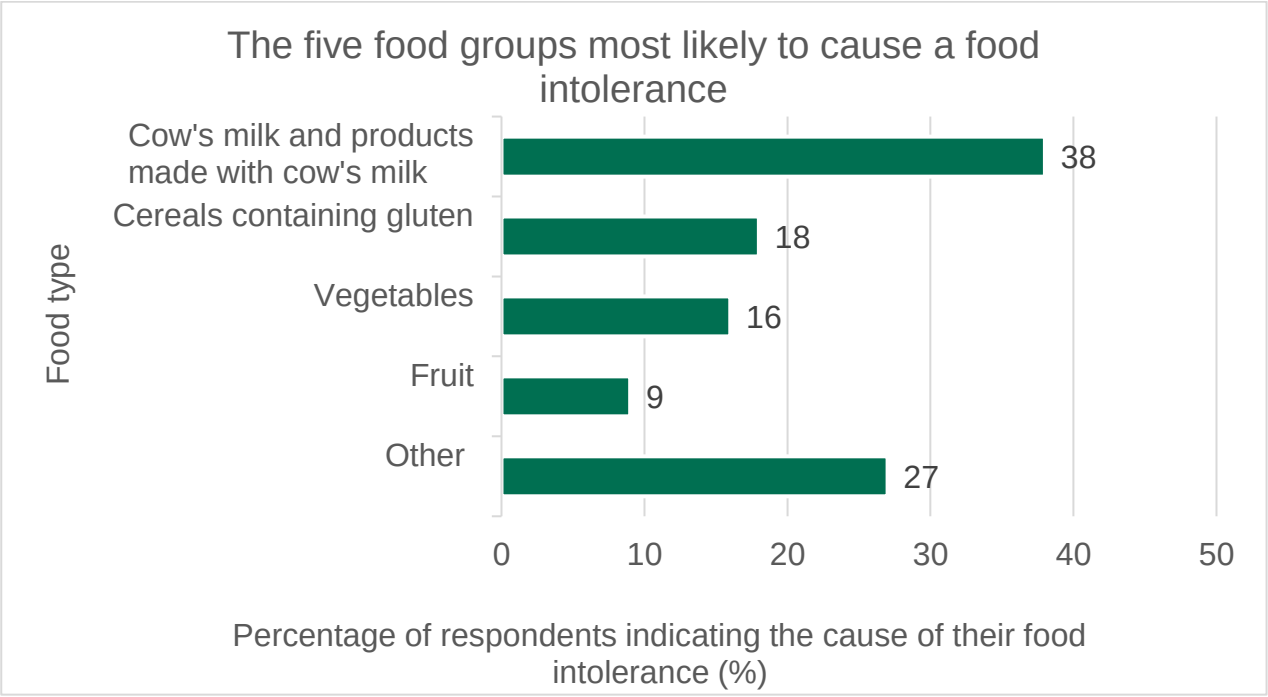


Source: Food and You 2: Wave 2

Of the respondents who reported having a food allergy, 35% reported having an allergy to fruit. Almost 1 in 5 (19%) reported that they had an allergy to crustaceans, and 19% reported that they had an allergy to peanuts (Figure 17)[51].

[50] Questions/Respondents: Derived variable, see data tables (DIAG_HS) and Technical Report. Base= 5900, all respondents.
[51] Questions/Respondents: Derived variable, see data tables (REACSOURCAL) and Technical Report. Base= 142. N.B. 'Other' indicates any type of food which was not given as a response option.

Figure 18. Cow's milk and products made with cow's milk were the most common cause of food intolerance.



Source: Food and You 2: Wave 2

Of the respondents who reported having a food intolerance, 38% reported an intolerance to cow's milk and products made with cow's milk. Over a quarter (27%) reported an intolerance to 'other' foods, which were not listed in the questionnaire. Almost 1 in 5 (18%) respondents reported an intolerance to cereals containing gluten (Figure 18)[52].

Eating out with a food hypersensitivity

The FSA provides guidance for food businesses on providing allergen information. Food businesses in the retail and catering sector are required by law to provide allergen information and to follow labelling rules. The type of allergen information which must be provided depends on the type of food business. However, all food business operators must provide allergen information for prepacked and non-prepacked food and drink[53].

[52] Questions/Respondents: Derived variable, see data tables (REACSOURCIN) and Technical Report. Base= 457.
[53] Allergen guidance for food businesses, FSA.

How often people check allergen information in advance when eating somewhere new

Respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods were asked how often, if at all, they checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction when they ate out or ordered a takeaway from somewhere new.

Approximately 1 in 5 (19%) respondents always checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction, and over a third (36%) checked this information was available less often. However, many respondents (41%) never checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction[54].

Availability and confidence in allergen information when eating out or ordering takeaways

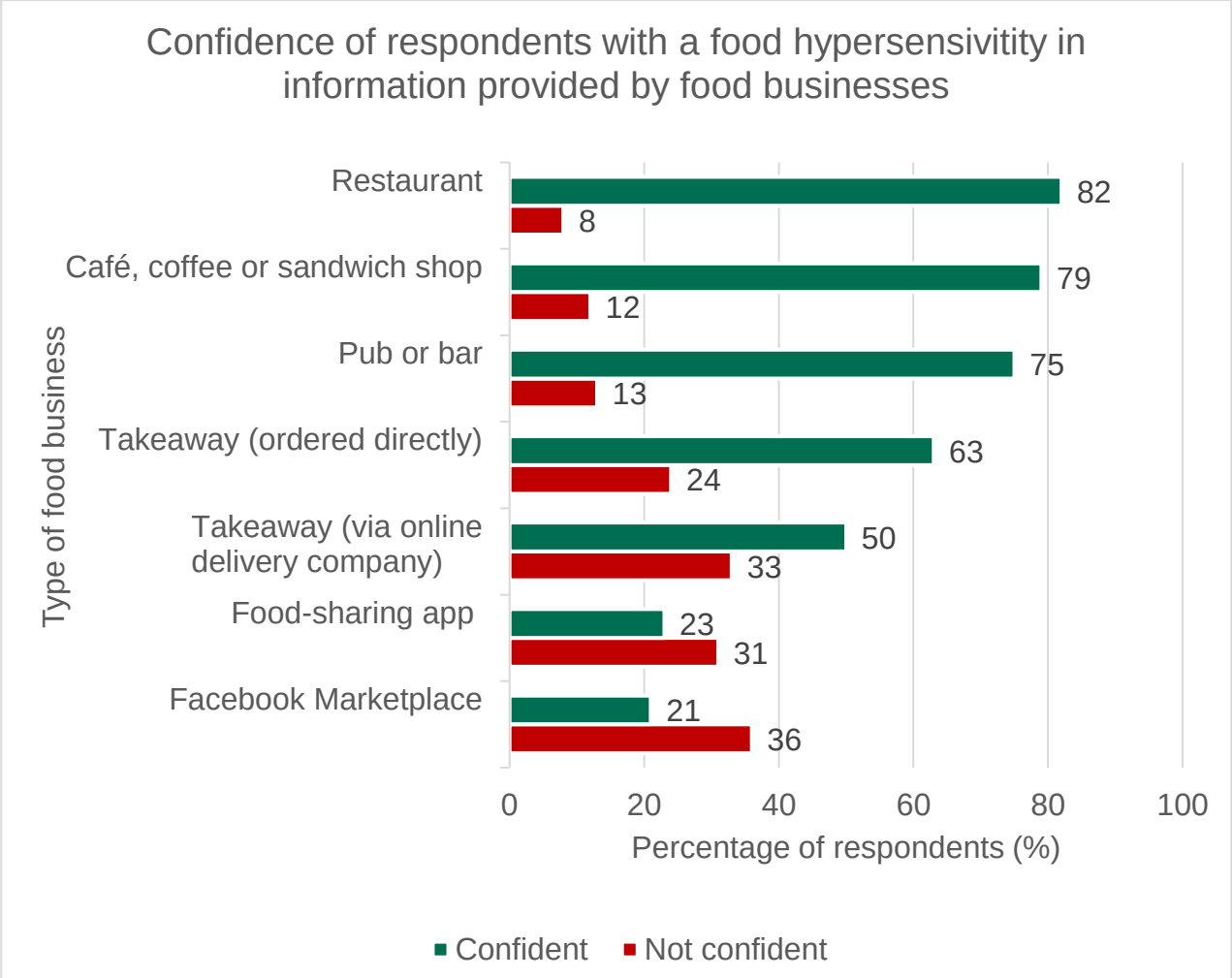
Respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods were asked how often information which allowed them to identify food that might cause them a bad or unpleasant reaction was readily available when eating out or buying food to take out.

While more than 1 in 10 (13%) respondents reported that this information was always readily available, almost two-thirds (61%) of respondents reported that this information

[54] Question: When eating out or ordering food from somewhere new, how often, if at all, do you check in advance that information is available allowing you to identify food that might cause you a bad or unpleasant physical reaction? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (4%). Base=1270, all online respondents who eat out or buy food to take away, and all respondents who answered the postal questionnaire, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoids certain foods because of the bad or unpleasant physical reaction they might cause who eat out or order takeaways. N.B. 'Most of the time', 'About half of the time' and 'Occasionally' referred to as 'less often'.

was available less often. However, 14% of respondents reported that this information was never readily available when they ate out or bought food to take away[55].

Figure 19. Most respondents were confident in the allergen information provided by restaurants, cafés and pubs.



Source: Food and You 2: Wave 2

[55] Question: When eating out or buying food to take out, how often, if at all, is the information you need to help you identify food that might cause you a bad or unpleasant physical reaction readily available? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (13%). Base=1328, all online respondents who eat out or buy food to take away, and all respondents who answered the postal questionnaire, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoids certain foods because of the bad or unpleasant physical reaction they might cause. N.B. 'Most of the time', 'About half of the time' and 'Occasionally' referred to as less often.

Respondents were asked how confident they were that the information provided at different types of food businesses would allow them to identify and avoid food that might cause a bad or unpleasant physical reaction. Respondents were more likely to report confidence in the information provided by restaurants (82%), cafés, coffee or sandwich shops (79%), and pubs or bars (75%) compared to the information provided by takeaways when ordering directly from a takeaway shop or restaurant (63%) or when ordering through an online ordering and delivery company (for example, JustEat, Deliveroo, UberEats) (50%). Respondents were least likely to report confidence in the information provided by food-sharing apps (for example, Olio or Too Good To Go) (23%) or Facebook Marketplace (21%) (Figure 19)[56].

[56] Question: How confident are you that the information provided will allow you to identify and avoid food that might cause you a bad or unpleasant physical reaction when eating food... ?A) from a café / coffee shop / sandwich shop. B) In a pub / bar. C) From a takeaway, ordered directly from a takeaway shop or restaurant. D) From a takeaway, ordered through an online ordering and delivery company (for example, JustEat, Deliveroo, UberEats). E) In a restaurant. F) Ordered through Facebook Marketplace (for example, pre-prepared food or meals) G) Ordered through a food-sharing app (for example, Olio or Too Good To Go). Responses (Additional differences): Very confident, Fairly confident, Not very confident, Not at all confident, It varies from place to place, Don't know
Base A=1168, B= 1090, C= 1237, D= 951, E= 1160, F= 638, G= 647, all online respondents who eat food A/B/C/D/E/F/G, and all respondents who answered the paper questionnaire, who suffer from a bad or unpleasant physical reaction after consuming certain foods or avoids certain foods because of the bad or unpleasant physical reaction they might cause. N.B. Percentages may not add up to 100% as ‘It varies from place to place’ and ‘Don't know’ responses are not included in the figure, see data tables for additional differences. ‘Very confident’ and ‘Fairly confident’ referred to as ‘confident’. ‘Not very confident’ and ‘Not at all confident’ referred to as ‘not confident’.

Most respondents were confident that the information provided in writing (83%) or verbally by a member of staff (71%) would allow them to identify and avoid food that might cause a bad or unpleasant physical reaction[57].

[57] Question: How confident are you that the information provided will allow you to identify and avoid food that might cause you a bad or unpleasant physical reaction?... A) when the information is provided in writing (for example, on the main menu or a separate allergen menu). B) when the information is provided verbally by a member of staff. Responses (Additional differences): Very confident, Fairly confident, Not very confident, Not at all confident, It varies from place to place (A=4%, B=5%), Don't know (A=6%, B=6). Base= 1328, all online respondents who eat out or buy food to take away, and all respondents who answered the paper questionnaire, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoids certain foods because of the bad or unpleasant physical reaction they might cause. N.B. 'Very confident' and 'Fairly confident' referred to as 'confident'. 'Not very confident' and 'Not at all confident' referred to as 'not confident'.

Chapter 6: Eating at home

Introduction

The FSA is responsible for protecting the public from foodborne diseases. This involves working with farmers, food producers and processors, and the retail and hospitality sectors to ensure that the food people buy is safe. Since consumers are responsible for the safe preparation and storage of food in their home, the FSA gives practical guidance and recommendations to consumers on food safety and hygiene in the home.

Food and You 2 asks respondents a series of questions about their knowledge and reported behaviour in relation to five important aspects of food safety: cleaning, cooking, chilling, avoiding cross-contamination and use-by dates.

Two versions of the Eating at Home module have been created, a brief version which includes a limited number of questions, and a full version which includes all related questions. Food and You 2: Wave 2 included the brief Eating at home module. The full Eating at home was reported in the Food and You 2: Wave 1 Key Findings report.

Cleaning

The FSA recommends that everyone should wash their hands before they prepare, cook or eat food and after touching raw food, before handling ready-to-eat food.

The majority (77%) of respondents reported that they always wash their hands before preparing or cooking food. However, 23% of respondents reported that they do not always (i.e. most of the time or less often) wash their hands before preparing or cooking food[58]. Most respondents (93%) reported that they always wash their hands immediately

[58] Question: When you are at home, how often, if at all, do you wash your hands before starting to prepare or cook food. Responses: Always, Most of the time, About half the time, Occasionally, Never, I don't cook, Don't know (1%). Base= 4537, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook / prepare food and not stated.

after handling raw meat, poultry or fish. However, 6% of respondents reported that they do not always (i.e. most of the time or less often) wash their hands immediately after handling raw meat, poultry or fish[59].

Chilling

The FSA provides guidance on how to chill food properly to help stop harmful bacteria growing.

If and how respondents check fridge temperature

When asked what temperature the inside of a fridge should be, 60% of respondents reported that it should be below 5 degrees Celsius, in line with FSA recommendations. More than 1 in 5 (20%) respondents reported that the temperature should be above 5 degrees and 16% of respondents did not know what temperature the inside of their fridge should be[60].

Over half of respondents who have a fridge reported that they monitored the temperature, either manually (51%) or via an internal temperature alarm (12%)[61]. Of the

[59] Question: When you are at home, how often, if at all, do you wash your hands before starting to prepare or cook food. Responses: Always, Most of the time, About half the time, Occasionally, Never, Don't know. Base= 4364, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook meat, poultry or fish, I don't cook / prepare food and not stated.
[60] Question: What do you think the temperature inside your fridge should be? Responses (Additional differences): Less than 0 degrees C (less than 32 degrees F) (3%), Between 0 and 5 degrees C (32 to 41 degrees F), More than 5 but less than 8 degrees C (42 to 46 degrees F) (18%), 8 to 10 degrees C (47 to 50 degrees F) (2%), More than 10 degrees C (over 50 degrees F) (<1%), Other (1%), Don't know. Base=4801, all online respondents and those answering the Eating at Home postal questionnaire who have a fridge.
[61] Question: Do you, or anyone else in your household, ever check your fridge temperature? Responses: Yes, No, I don't need to - it has an alarm if it is too hot or cold, Don't know (8%). Base= 4798, all online respondents and those answering the Eating at Home postal questionnaire, excluding those who don't have a fridge.

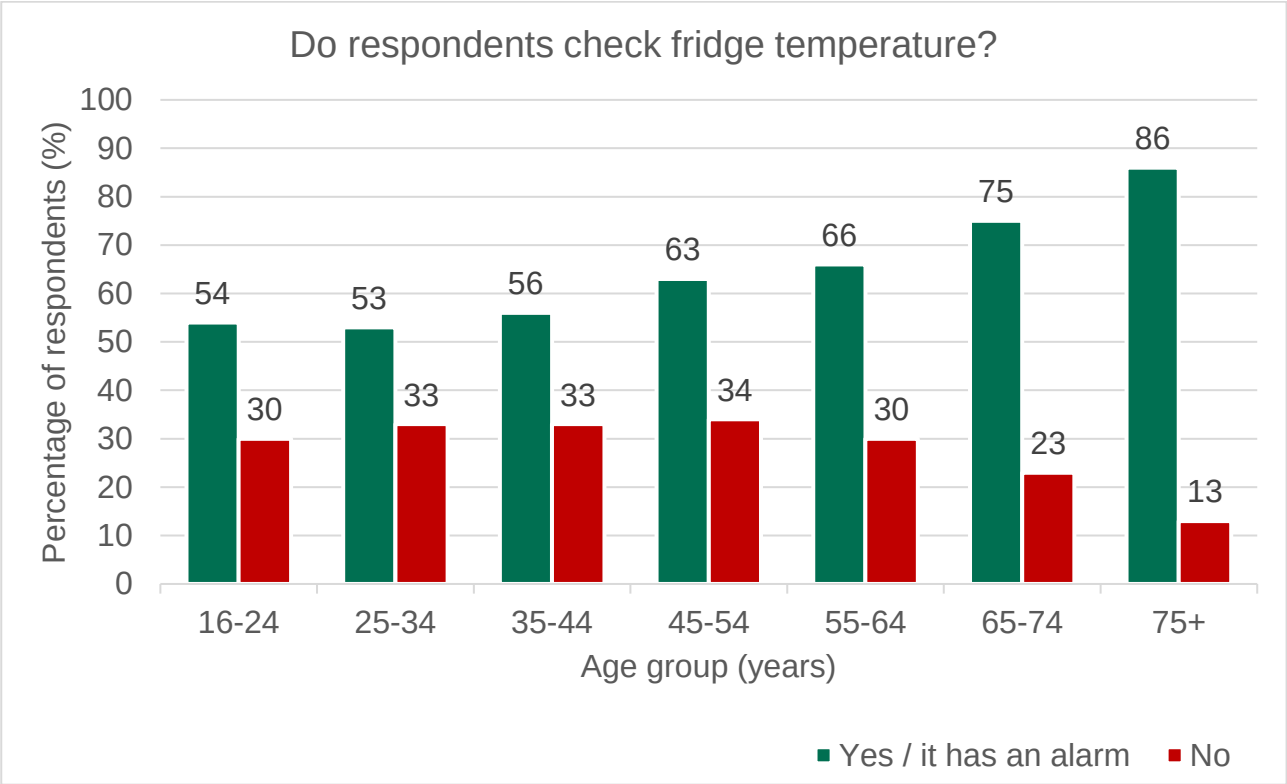
respondents who monitor the temperature of their fridge, 77% reported that they check the temperature of their fridge at least once a month, as recommended by the FSA[62].

The likelihood of respondents checking the temperature of their fridge, either manually or via an internal alarm, varied between different types of people in the following ways:

- Employment status: retired respondents (78%) were more likely to check the temperature of their fridge than those who were working (57%) or not working (61%).
- NS-SEC: respondents in occupational groups (for example, 72% of those in lower supervisory and technical occupations) and those who were long term unemployed and/or had never worked (68%) were more likely to check the temperature of their fridge than full-time students (48%).
- Food security: respondents with high food security (65%) were more likely to check the temperature of their fridge than those with very low food security (55%).
- Relationship status: respondents who were married or in a civil partnership (68%) or separated, widowed or divorced (70%) were more likely to check the temperature of their fridge than those who were single, living as a couple (53%) or single, not living as a couple (52%).

[62] Question: How often, if at all, do you or someone else in your household check the temperature of the fridge? Responses (Additional differences): At least daily, 2-3 times a week, Once a week, Less than once a week but more than once a month, Once a month, four times a year (5%), 1-2 times a year (8%), Never (7%), Don't know (3%).
Base= 2459, all online respondents where someone in household checks fridge temperature, and all who completed the Eating at Home postal questionnaire.

Figure 20. Older adults were more likely to check the temperature of their fridge.



Source: Food and You 2: Wave 2

Older adults were more likely to check the temperature of their fridge than younger adults. For example, 54% of respondents aged 16-24 years reported that they check the temperature of their fridge, compared to 86% of those aged 75 years or over (Figure 20)[63].

In addition, older adults were more likely to know if someone in their household checked the temperature of their fridge than younger adults. For example, 16% of respondents aged 16-24 years did not know if someone in their household checked the temperature of their fridge, compared to 1% of those aged 75 years or over.

Cooking

The FSA recommends that cooking food at the right temperature and for the correct length of time will ensure that any harmful bacteria are killed. When cooking pork,

[63] Percentages show may not add up to 100% as Don't know responses are not shown.

poultry, and minced meat products the FSA recommends that the meat is steaming hot and cooked all the way through, that none of the meat is pink and that any juices run clear.

Respondents were asked to indicate how often they cook food until it is steaming hot and cooked all the way through. The majority (80%) of respondents reported that they always cook food until it is steaming hot and cooked all the way through, however 19% reported that they do not always do this[64].

When respondents were asked to indicate how often they eat chicken or turkey when the meat is pink or has pink juices[65], the majority reported that they never eat chicken or turkey (91%) when it is pink or has pink juices. However, 6% of respondents reported eating chicken or turkey at least occasionally when it is pink[66].

Following a review of scientific evidence[67], the FSA advises that infants, children, pregnant women, elderly adults can now eat British Lion marked hen eggs safely. However, people with a severely weakened immune system should cook eggs thoroughly. This recommendation does not apply to eggs which are from outside the UK, not hen eggs or British Lion marked[68].

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[64] Question: How often, if at all, do you cook food until it is steaming hot and cooked all the way through? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (1%). Base= 4524, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook food and not stated.

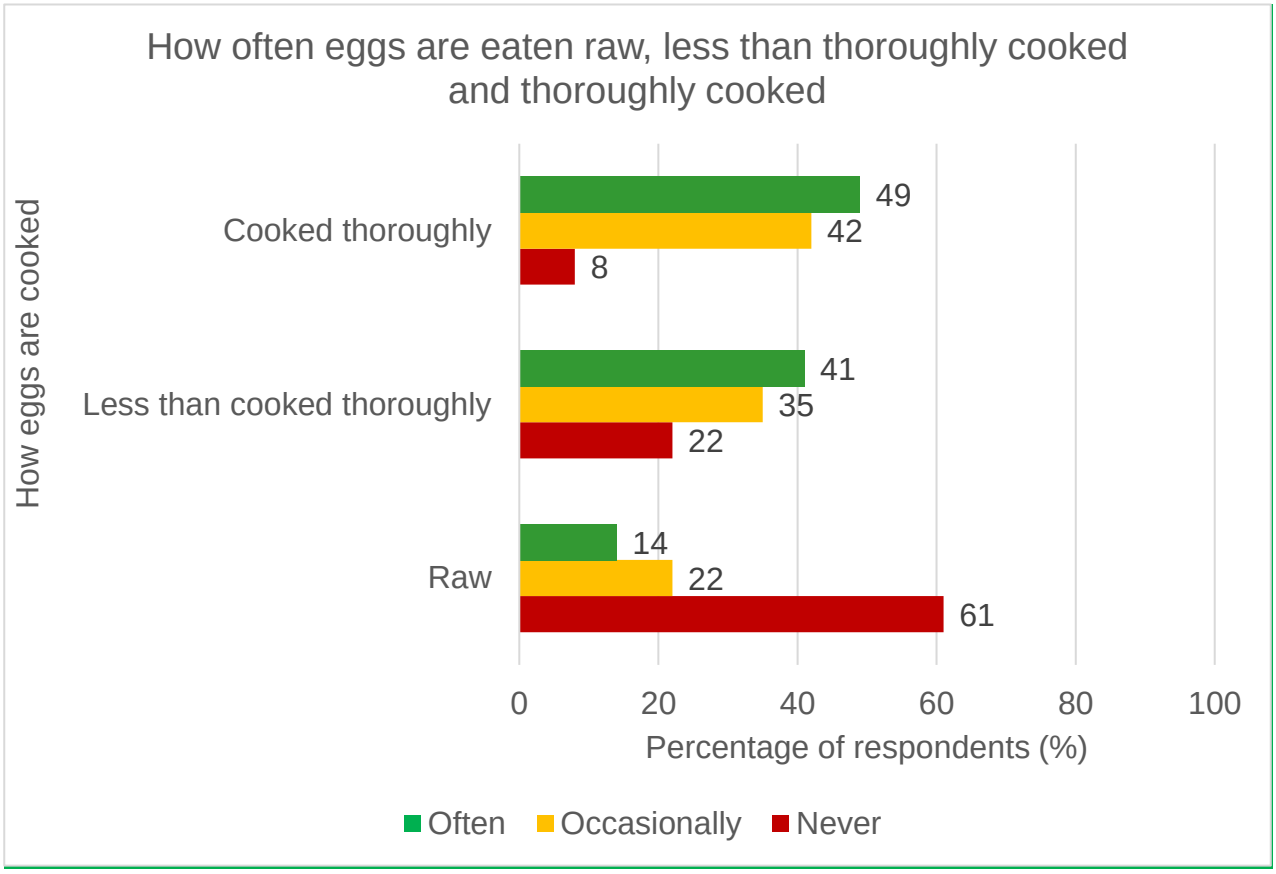
[65] Data on the consumption of red meat, duck, beefburgers, sausages and pork when the meat is pink or has pink or red juices is available from Food and You 2: Wave 1.

[66] Question: How often, if at all, do you eat chicken or turkey when the meat is pink or has pink or red juices? Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know (2%). Base =4434, all online respondents who are not vegan, pescatarian or vegetarian, and who do eat chicken/turkey and all those who completed the Eating at Home postal questionnaire and eat chicken and turkey.

[67] Ad Hoc Group on Eggs. An update on the microbiological risk from shell eggs and their products (2017). Advisory Committee on the Microbiological Safety of Food (ACMSF).

[68] The healthy way to eat eggs (2021). NHS.

Figure 21. Most respondents have never eaten raw eggs.



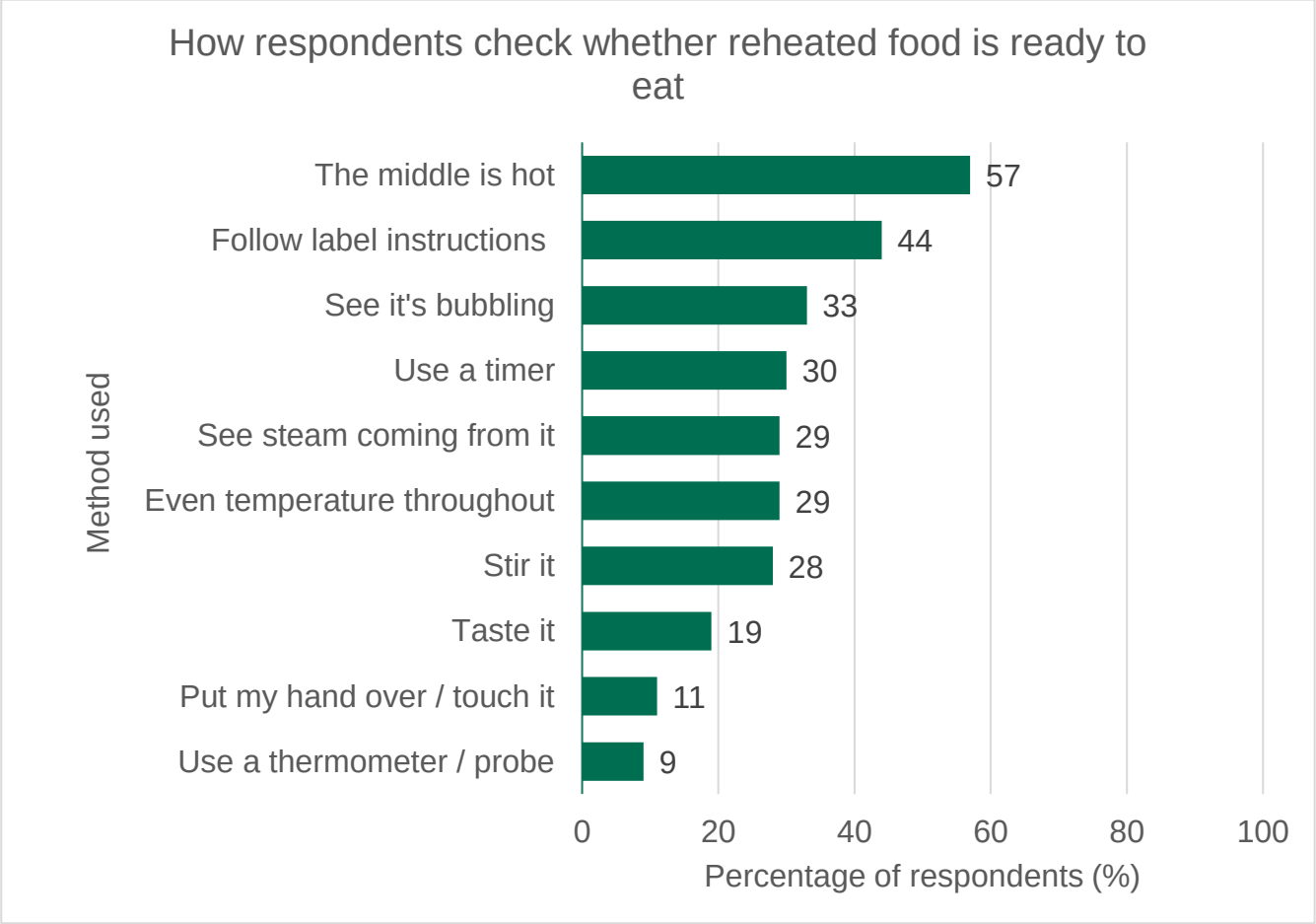
Source: Food & You 2: Wave 2

Respondents who eat eggs at home were asked to indicate how often they eat eggs that are thoroughly cooked, 'less than thoroughly cooked' (have a runny yolk for example, soft boiled) and raw (uncooked for example, in homemade mayonnaise or homemade desserts like mousse or soft meringues). Thoroughly cooked eggs (49%) were eaten

more often than ‘less than thoroughly cooked’ (41%) or raw eggs (14%). Most respondents (61%) reported that they have never eaten raw eggs (Figure 21)[69].

Reheating

Figure 22. Checking that the middle is hot is the most common method to check food is reheated and ready to eat.



[69] Question: At home, how often, if at all, do you eat eggs that are….A) raw (eggs that are uncooked for example, in homemade mayonnaise or homemade desserts like mousse or soft meringues) B) less than thoroughly cooked (eggs that have a runny yolk for example, soft boiled) C) cooked thoroughly (eggs that have a firm yolk for example, hard boiled). Responses (Additional differences): Everyday, Most days, 2-3 times a week, About once a week, 2-3 times a month, About once a month, Less than once a month, Never, Can’t remember (A=3%, B=1%, C=1%). Base A/B/C=5533, all online respondents and those who completed the postal questionnaires, who eat eggs at home. N.B. ‘Everyday’, ‘Most days’, ‘2-3 times a week’ and ‘About once a week’ referred to as often; ‘2-3 times a month’, ‘About once a month’ and ‘Less than once a month’ referred to as occasional.

Source: Food & You 2: Wave 2

Respondents were asked to indicate how they check food is ready to eat when they reheat it. The most common method was to check the middle is hot (57%), and the least common method was to use a thermometer or probe (9%) (Figure 22)[70].

When respondents were asked how many times they would reheat food, the majority reported that they would only reheat food once (80%), 10% would reheat food twice, only 3% would reheat food more than twice, and 5% would not reheat leftovers[71].

Leftovers

Respondents were asked how long they would keep leftovers in the fridge for. Most respondents said they would eat leftovers within 2 days (64%), or within 3-5 days (27%) and only 2% would eat leftovers after 5 days or longer[72].

Avoiding cross-contamination

The FSA provides guidelines on how to avoid cross-contamination. The FSA recommends that people do not wash raw meat. Washing raw meat can spread harmful bacteria onto your hands, clothes, utensils, and worktops.

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[70] Question: When reheating food, how do you know when it is ready to eat? (Select all that apply). Responses (Additional differences): I check the middle is hot, I follow the instructions on the label, I can see its bubbling, I use a timer to ensure it has been cooked for a certain amount of time, I check it's an even temperature throughout, I can see steam coming from it, I can see steam coming from it, I taste it, I stir it, I put my hand over it/touch it, I use a thermometer/probe, None of the above (1%), I don't check(<1%). Base= 4348, all online respondents who ever do some food preparation or cooking for their household, and all those who completed a postal questionnaire excluding those who do not reheat food.

[71] Question: How many times would you consider reheating food after it was cooked for the first time? Responses (Additional differences): Not at all, Once, Twice, More than twice, Don't know (2%). Base=4402, all online respondents who reheat food using one of the methods in the previous question, and all those who completed the Eating at Home postal questionnaire.

[72] Question: When is the latest you would consume any leftovers stored in the fridge? Responses (Additional differences): The same day, Within 1-2 days, Within 3-5 days, More than 5 days later, It varies too much (4%), Don't know (3%). Base=4814, all online respondents and those answering the Eating at Home postal questionnaire.

Over half of respondents (60%) reported that they never wash raw chicken, whilst 36% of respondents wash raw chicken at least occasionally (i.e. 'occasionally' of more often)[73].

How and where respondents store raw meat and poultry in the fridge

The FSA recommends that refrigerated raw meat and poultry is kept covered, separately from ready-to-eat foods and stored at the bottom of the fridge to avoid cross-contamination.

Respondents were asked to indicate, from a range of responses, how they store meat and poultry in the fridge. Respondents were most likely to report storing raw meat and poultry in its original packaging (69%) or away from cooked foods (56%). Over a third of respondents reported storing raw meat and poultry covered with film/foil (35%) or in a sealed container (37%), with fewer keeping the product on a plate (16%)[74].

Two-thirds (66%) of respondents reported storing raw meat and poultry at the bottom of the fridge, as recommended by the FSA. However, 13% of respondents reported storing raw meat and poultry in the middle of the fridge, 6% at the top of the fridge, and 19% of

[73] Question: How often, if at all, do you do the following? Wash raw chicken. Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, Don't know (3%). Base=4525, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook / prepare food and not stated.
[74] Question: How do you store raw meat and poultry in the fridge? Please select all the apply. Responses: Away from cooked foods, Covered with film/foil, In a sealed container, In its original packaging, On a plate, I don't store raw meat/poultry in the fridge, I don't have a fridge*, Don't know. Base=4345, All respondents except those who don't buy/store meat/poultry, don't store raw meat/poultry in the fridge, do not have a fridge or don't know. N.B. Details about how different types of people store raw meat and poultry in the fridge is available in the Food and You 2: Wave 1 Key Findings report and Food and You 2: Wave 2 data and tables.

respondents reported storing raw meat and poultry wherever there is space in the fridge[75].

Use-by and best before dates

Respondents were asked about their understanding of the different types of date labels and instructions on food packaging, as storing food for too long or at the wrong temperature can cause food poisoning. Use-by dates relate to food safety. Best before (BBE) dates relate to food quality, not safety.

Respondents were asked to indicate which date shows that food is no longer safe to eat. In accordance with FSA recommendations, 67% of respondents identified the use-by date as the information which shows that food is no longer safe to eat. However, 12% of respondents identified the best before date as the date which shows food is no longer safe to eat[76].

More than 6 in 10 (62%) respondents reported that they always check use-by dates before they cook or prepare food. Over a third (35%) of respondents reported checking use-by dates at least occasionally (i.e. most of the time, about half of the time, or occasionally) and just 1% reported never checking use-by dates[77].

Checking of use-by dates varied between different types of people in the following ways:

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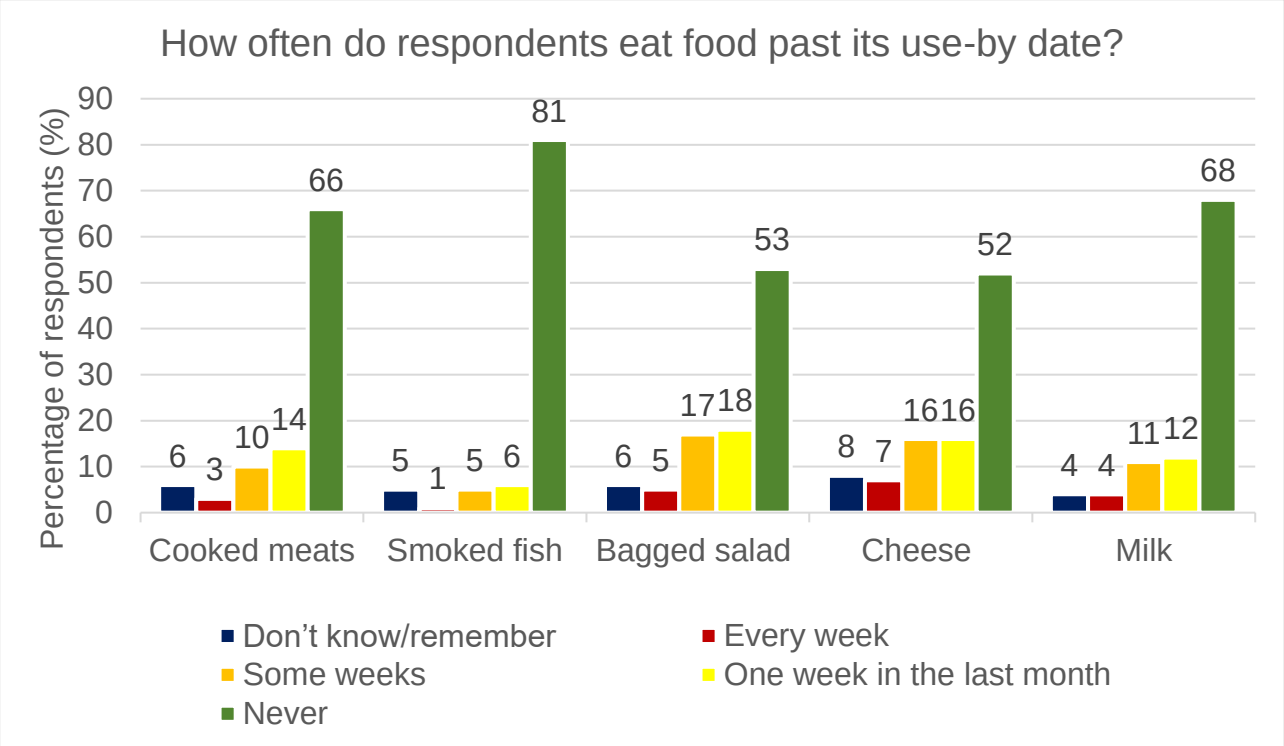
[75] Question: Where in the fridge do you store raw meat and poultry? Responses (Additional differences): Wherever there is space, At the top of the fridge, In the middle of the fridge, At the bottom of the fridge. Base= 4303, all respondents who store raw meat/poultry in the fridge, except those who don't buy meat/poultry, don't store it in the fridge, don't have a fridge or don't know.

[76] Question: Which of these shows when food is no longer safe to eat? Responses (Additional differences): Sell by date (2%), Display until date (1%), All of these (4%), It depends (9%), None of these (2%), Don't know (2%). Base=4814, all online respondents and those answering the Eating at Home postal questionnaire. N.B. Details of how use-by date knowledge varies between different groups of people available in the Food and You 2: Wave 1 Key Findings report and Food and You 2: Wave 2 data and tables.

[77] Question: How often, if at all, do you check use-by dates when you are about to cook or prepare food? Responses (Additional differences): Always, Most of the time, About half of the time, Occasionally, Never, It varies too much (2%), Don't know (1%). Base=4528, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook / prepare food.

- Age group: respondents aged 45 to 74 years (for example, 66% of those aged 55-64 years) were more likely to report that they always check use-by dates before they cooked or prepared food, compared to those aged 16-24 years (53%).
- NS-SEC: respondents in most occupational groups (for example, 66% of those in semi-routine and routine occupations) and those who were long term unemployed and/or had never worked (67%) were more likely to report that they always check use-by dates before they cooked or prepared food, compared to full-time students (49%).
- Ethnic group: 64% of white respondents reported that they always check use-by dates before they cooked or prepared food, compared to 47% of Asian or British Asian respondents.

Figure 23. Most respondents do not eat food past its use-by date.



Source: Food & You 2: Wave 2

Respondents who had eaten certain foods in the last month were asked to indicate how often, if at all, they ate the food past the use-by date. Most respondents reported that they never ate smoked fish (81%), milk (68%), cooked meats (66%), bagged salads (53%) or cheese (52%) past the use-by date. Conversely, some respondents reported that they had eaten those foods past the use-by date. For example, almost half of

respondents had eaten bagged salad past the use-by date (5% every week, 17% some weeks and 18% just one week in the last month) (Figure 23)[78].

Respondents who had eaten eggs in the last month were asked to indicate how often, if at all, they ate eggs past the best before date in the last month. Most respondents (63%) reported that they had not eaten eggs past the best before date in the last month. One quarter (25%) of respondents reported that they had eaten eggs past the best before date in the last month[79].

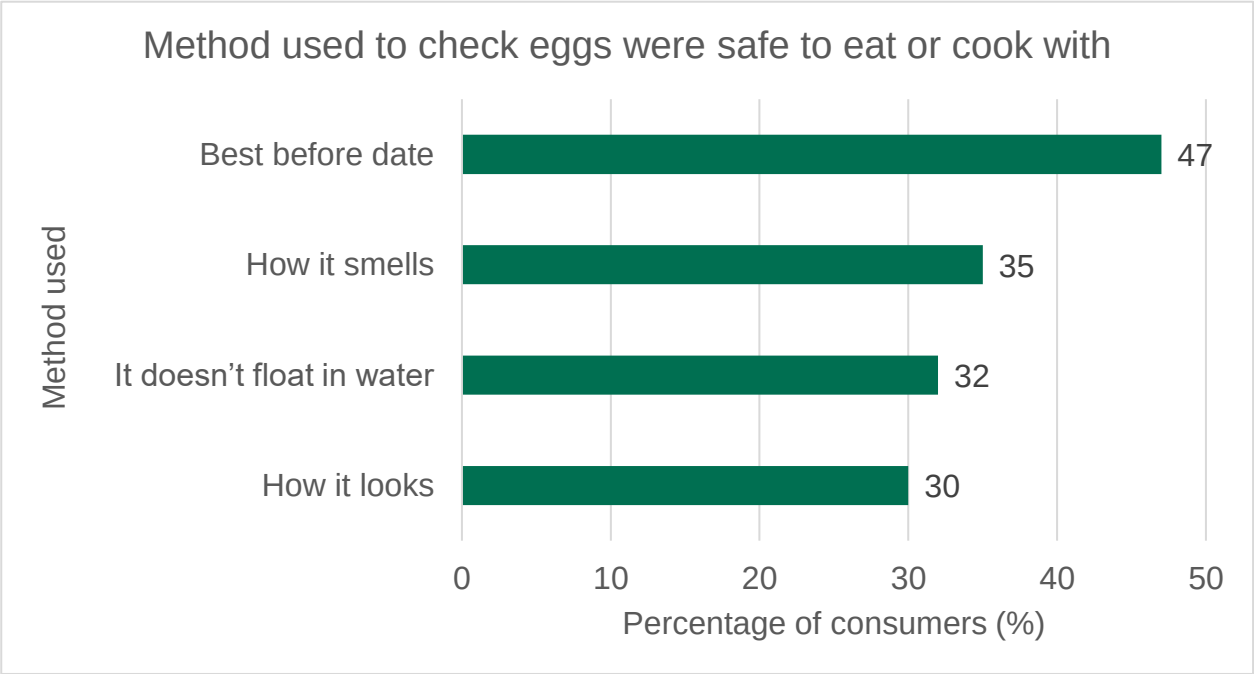
Respondents who ate eggs were asked how long after the best before date they would eat eggs. Almost half (48%) of respondents stated they would eat eggs 1-2 days after the best before date, 29% would eat eggs between 3 and 7 days after the best before date and 10% of respondents would eat eggs 1 week or more after the best before date[80].

[78] Question: In the last month have you eaten any of the following foods that has gone past its use-by date? A) Cooked meats B) Smoked fish C) Bagged salads D) Cheese E) Milk. Responses: Yes, this happened every week. Yes, this happened some weeks but not every week. Yes, this happened just one week in the last month. No, never. Don't know. Prefer not to say. Base A= 4296, B=3586, C=4159, D=4550, E=4572, all online respondents (A/B=who are not vegan, vegetarian or pescatarian; D/E= who are not vegan), and all those who completed the Eating at Home postal questionnaire, who had eaten the food in the last month.

[79] Question: In the last month have you eaten any eggs that have gone past their best before date? Responses: Yes, this happened every week. Yes, this happened some weeks but not every week. Yes, this happened just one week in the last month. No, this has not happened in the last month. Don't know/I don't check the best before date on eggs (11%), Prefer not to say (1%). Base= 5252, all online respondents who eat eggs at home and all respondents who completed the paper questionnaire, excluding those who haven't eaten eggs in the last month.

[80] Question: When is the latest you would eat eggs after their best before date? Responses: 1-2 days after the best before date, 3-4 days after the best before date, 5-7 days after the best before date (13%), 1-2 weeks after the best before date (7%), More than 2 weeks after the best before date (3%), Don't know/ I don't check the best before date on eggs (14%). Base= 5533, all online respondents and those who completed the paper questionnaires, who eat eggs at home.

Figure 24. Most respondents used the best before date to check whether eggs were safe to eat or cook with.



Source: Food & You 2: Wave 2

Respondents were asked to indicate how they tell whether eggs are safe to eat or cook with. Almost half (47%) of respondents used the best before date to check whether eggs were safe to eat or cook with. Smell (35%), checking the egg doesn't float in water (32%)[81] and appearance (30%) were also used to check whether eggs were safe to eat or cook with (Figure 24)[82].

[81] The FSA do not recommend using the float test to check if eggs are safe to eat.
[82] Question: How do you tell whether an egg is safe to eat or cook with? (Select all that apply). Responses: How it looks; how it smells; best before date, It doesn't float in water, Some other way (2%), Don't know (5%). Base= 4447, all online respondents who eat eggs at home and those who completed the Eating at Home postal questionnaire.

Annex A: Food and You 2: Wave 2

Background

In 2018 the Advisory Committee for Social Science (ACSS) established a new Food and You Working Group to review the methodology, scope and focus of the Food and You survey. The Food and You Working Group provided a series of recommendations on the future direction of the Food and You survey to the FSA and ACSS in April 2019. Food and You 2 was developed from the recommendations.

The Food and You 2 survey has replaced the biennial Food and You survey (2010-2018), biannual Public Attitudes Tracker (2010-2019) and annual Food Hygiene Rating Scheme (FHRS) Consumer Attitudes Tracker (2014-2019). The Food and You survey has been an Official Statistic since 2014.

The Food and You 2: Wave 1 Key Findings report was published in March 2021.

Methodology

The Food and You 2 survey is commissioned by the Food Standards Agency (FSA). The fieldwork is conducted by Ipsos MORI. Food and You 2 is a biannual survey. Fieldwork for Wave 2 was conducted from 20th November 2020 to 21st January 2021.

Food and You 2 is a sequential mixed-mode 'push-to-web' survey. A random sample of addresses (selected from the Royal Mail's Postcode Address File) received a letter inviting up to two adults (aged 16 or over) in the household to complete the online survey. A first reminder letter was sent to households that had not responded to the initial invitation. A postal version of the survey accompanied the second reminder letter for those who did not have access to the internet or preferred to complete a postal version of the survey. This helps to reduce the response bias that otherwise occurs with online-only surveys. This method is accepted for government surveys and national statistics, including the 2021 Census and 2019/2020 Community Life Survey. A third and final reminder was sent to households if the online survey had not been completed. Respondents were given a gift voucher for completing the survey. Further details about the methodology are available in the Technical Report. Due to the difference in

methodology between the Public Attitudes Tracker, FHRS Consumer Attitudes Tracker and Food and You survey (2010-2018) it is not possible to compare the data collected in Food and You 2 (2020 onward) with these earlier data. Comparisons can be made between the different waves of Food and You 2.

The sample of main and reserve addresses[83] was stratified by region (with Wales and Northern Ireland being treated as separate regions), and within region (or country) by local authority (district in Northern Ireland) to ensure that the issued sample was spread proportionately across the local authorities. National deprivation scores were used as the final level of stratification within the local authorities - in England the Index of Multiple Deprivation (IMD), in Wales the Welsh Index of Multiple Deprivation (WIMD) and in Northern Ireland, the Northern Ireland Multiple Deprivation Measure (NIMDM).

Due to the length and complexity of the online questionnaire it was not possible to include all questions in the postal version of the questionnaire. The postal version of the questionnaire needed to be shorter and less complex to encourage a high response rate. To make the postal version of the questionnaire shorter and less complex, two versions were produced.All data collected by Food and You 2 are self-reported. The data are the respondents own reported attitudes, knowledge and behaviour relating to food safety and food issues. As a social research survey, Food and You 2 cannot report observed behaviours. Observed behaviour in kitchens has been reported in Kitchen Life, an ethnographic study which used a combination of observation, video observation and interviews to gain insight into domestic kitchen practices. This study will be updated through Kitchen Life 2, which is in progress now and due to report in 2023.

The minimum target sample size for the survey is 4,000 households (2,000 in England, 1,000 in Wales, 1,000 in Northern Ireland), with up to two adults in each household invited to take part as mentioned above. For Wave 2 a total of 5,900 adults from 3,955households across England (2,968 adults), Northern Ireland (1,566 adults), and Wales (1,366 adults), completed the survey. An overall response rate of 28% was achieved (England 30%, Wales 29%, Northern Ireland 25%). Sixty-four per cent of respondents completed the survey online and 36% completed the postal version of the

[83] A reserve sample of addresses was created to use if the target number of respondents was not achieved from the main sample of addresses.

survey. The postal responses from 156 respondents were removed from the data set as the respondent had completed both the online and postal survey. Further details about the response rates are available in the Technical Report.

Weighting was applied to ensure the data are as close as possible to being representative of the socio-demographic and sub-groups in the population, as is usual practice in government surveys. The weighting applied to the Food and You 2 data helps to compensate for variations in within-household individual selection, for response bias, and for the fact that some questions were only asked in one of the postal surveys. Further details about weighting approach used and the weights applied to the Food and You 2: Wave 2 data are available in the Technical Report.

The data have been checked and verified by six members of Ipsos MORI and two members of the FSA Statistics branch. Descriptive analysis and statistical tests have been performed by Ipsos MORI. Quantum (statistical software) was used by Ipsos MORI to calculate the descriptive analysis and statistical tests (t-tests).

The p-values that test for statistical significance are based on t-tests comparing the weighted proportions for a given response within that socio-demographic and sub-group breakdown. An adjustment has been made for the effective sample size after weighting, but no correction is made for multiple comparisons.

Reported differences between socio-demographic and sub-groups typically have a minimum difference of 10 percentage points between groups and are statistically significant at the 5% level ($p<0.05$). However, some differences between respondent groups are included where the difference is fewer than 10 percentage points when the finding is notable or of interest. Percentage calculations are based only on respondents who provided a response. Reported values and calculations are based on weighted totals.

Technical terms and definitions

1. Statistical significance is indicated at the 5% level ($p<0.05$). This means that where a significant difference is reported, there is reasonable confidence that the reported difference is reflective of a real difference at the population level.

2. Food security means that all people always have access to enough food for a healthy and active lifestyle (World Food Summit, 1996). The United States Department of Agriculture (USDA) has created a series of questions which indicate a respondent's level of food security. Food and You 2 incorporates the 10 item U.S. Adult Food Security Survey Module and uses a 12 month time reference period. Respondents are classified as having high food security, marginal food security, low food security and very low food security.

3. NS-SEC (The National Statistics Socio-economic classification) is a classification system which provides an indication of socio-economic position based on occupation and employment status.

4. Index of Multiple Deprivation (IMD) / Welsh Index of Multiple Deprivation (WIMD) / Northern Ireland Multiple Deprivation Measure (NIMDM) is the official measure of relative deprivation of a geographical area. IMD/WIMD/NIMDM classification is assigned by postcode or place name. IMD/WIMD/NIMDM is a multidimensional calculation which is intended to represent the living conditions in the area, including income, employment, health, education, access to services, housing, community safety and physical environment. Small areas are ranked by IMD/WIMD/NIMDM; this is done separately for England, Wales and Northern Ireland.

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