

# Wave 5: 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. The FSA gives practical guidance and recommendations to consumers on [food safety and hygiene](#) in the home.

Since people are responsible for the safe preparation and storage of food in their home, Food and You 2 asks respondents about their food-related behaviours in the home, including whether specific foods are eaten, and knowledge and reported behaviour in relation to five important aspects of food safety: cleaning, cooking, chilling, avoiding cross-contamination and use-by dates. Food and You 2 also asks respondents about the frequency they prepare or consume certain types of food.

Two versions of the 'Eating at home' module have been created; the brief module which includes a limited number of key questions which are fielded annually, and a full version which includes additional questions and is fielded every 2 years. The full 'Eating at home' module is reported in this chapter ([footnote 1](#)).

This chapter provides an overview of respondent knowledge, attitudes and behaviours relating to food safety, diet, and other food-related behaviours.

## Cleaning

### Handwashing in the home

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.

Around half (49%) of respondents reported that they always wash their hands before eating. However, 48% of respondents reported that they do not always (for example, most of the time or less often) wash their hands before preparing or cooking food and 2% never do this ([footnote 2](#)).

Around three-quarters (74%) of respondents reported that they always wash their hands before preparing or cooking food. However, 25% of respondents reported that they do not always (for example, most of the time or less often) wash their hands before preparing or cooking food ([footnote 3](#)).

Most respondents (92%) reported that they always wash their hands immediately after handling raw meat, poultry, or fish. However, 7% of respondents reported that they do not always (for example, most of the time or less often) wash their hands immediately after handling raw meat, poultry or fish ([footnote 4](#)).

### Handwashing when eating out

Respondents were asked, how often, if at all, they washed their hands or used hand sanitising gel or wipes before eating when they ate outside of their home. Around a third (34%) of respondents reported that they always washed their hands, used hand sanitising gel or wipes when they ate

outside of their home, 58% did this less often (for example, most of the time or less often) and 7% never did this [\(footnote 5\)](#).

## 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, 59% of respondents reported that it should be between 0-5 degrees Celsius, [as recommended by the FSA](#). A fifth (20%) of respondents reported that the temperature should be above 5 degrees, 3% reported that the temperature should be below 0 degrees, and 18% of respondents did not know what temperature the inside of their fridge should be [\(footnote 6\)](#).

Over half of respondents who have a fridge reported that they monitored the temperature, either manually (48%) or via an internal temperature alarm (11%) [\(footnote 7\)](#). Of the respondents who monitor the temperature of their fridge, 80% reported that they check the temperature of their fridge at least once a month, [as recommended by the FSA \(footnote 8\)](#).

## Defrosting

The FSA recommends that [food is defrosted in the fridge, or, if this is not possible to use a microwave on the defrost setting](#). Respondents are advised not to defrost foods at room temperature.

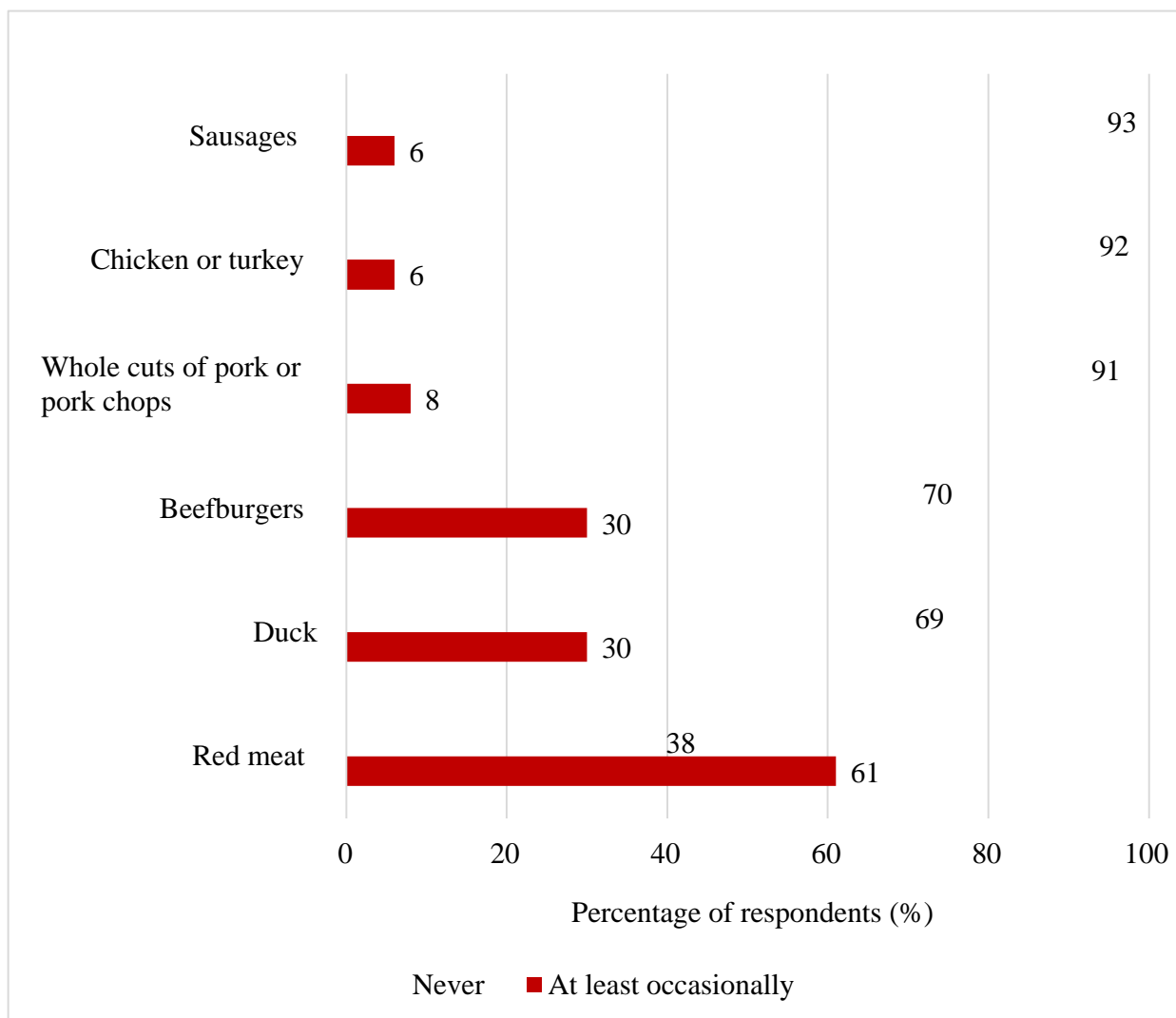
Respondents were asked which method they typically use to defrost meat and fish. Around 4 in 10 (41%) respondents reported that they defrost meat or fish in the fridge and 6% reported that they use a microwave. Less than half of respondents (45%) reported that they leave the meat or fish at room temperature and 6% leave the meat or fish in water [\(footnote 9\)](#).

## 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, 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.

The majority (78%) of respondents reported that they always cook food until it is steaming hot and cooked all the way through, however 22% reported that they do not always do this [\(footnote 10\)](#).

**Figure 16. How often respondents eat different types of meat when it is pink or has pink juices**



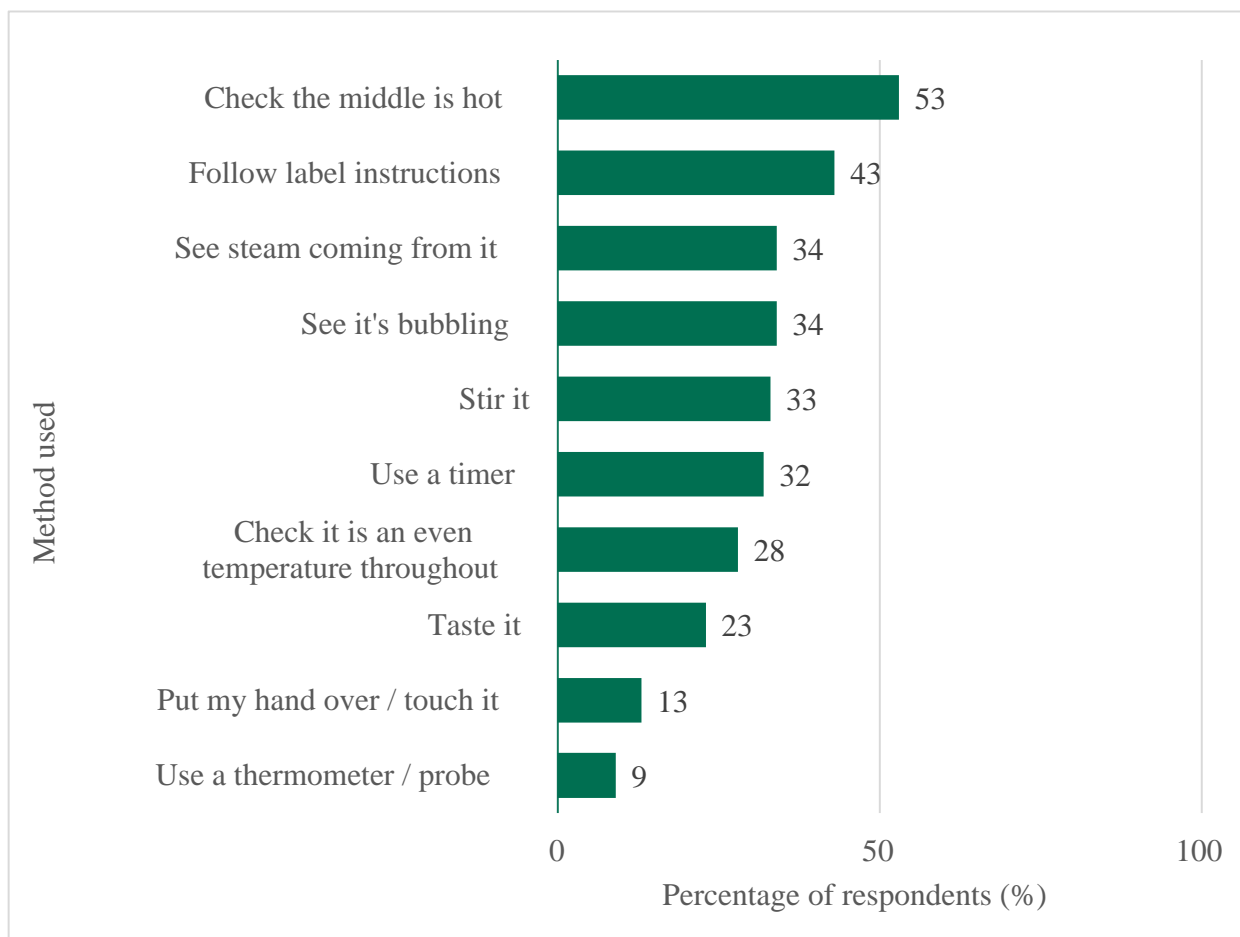
Source: Food and You 2 Wave 5.

Respondents were asked to indicate how often they eat different types of meat when the meat is pink or has pink juices ([footnote 11](#)). Around 9 in 10 respondents reported that they never eat sausages (93%), chicken or turkey (92%), or whole cuts of pork or pork chops (91%) when it is pink or has pink juices. Most respondents reported that they never eat beef burgers (70%) or duck (69%) when it is pink or has pink juices. However, 61% of respondents reported eating (for example, at least occasionally) red meat when it is pink or has pink juices (Figure 16) ([footnote 12](#)).

Respondents were asked how often, if at all, they consume raw oysters or raw (unpasteurised) milk. Most respondents reported that they never eat raw oysters (87%) or raw milk (91%) ([footnote 13](#)).

## Reheating

**Figure 17. How respondents check whether reheated food is ready to eat.**



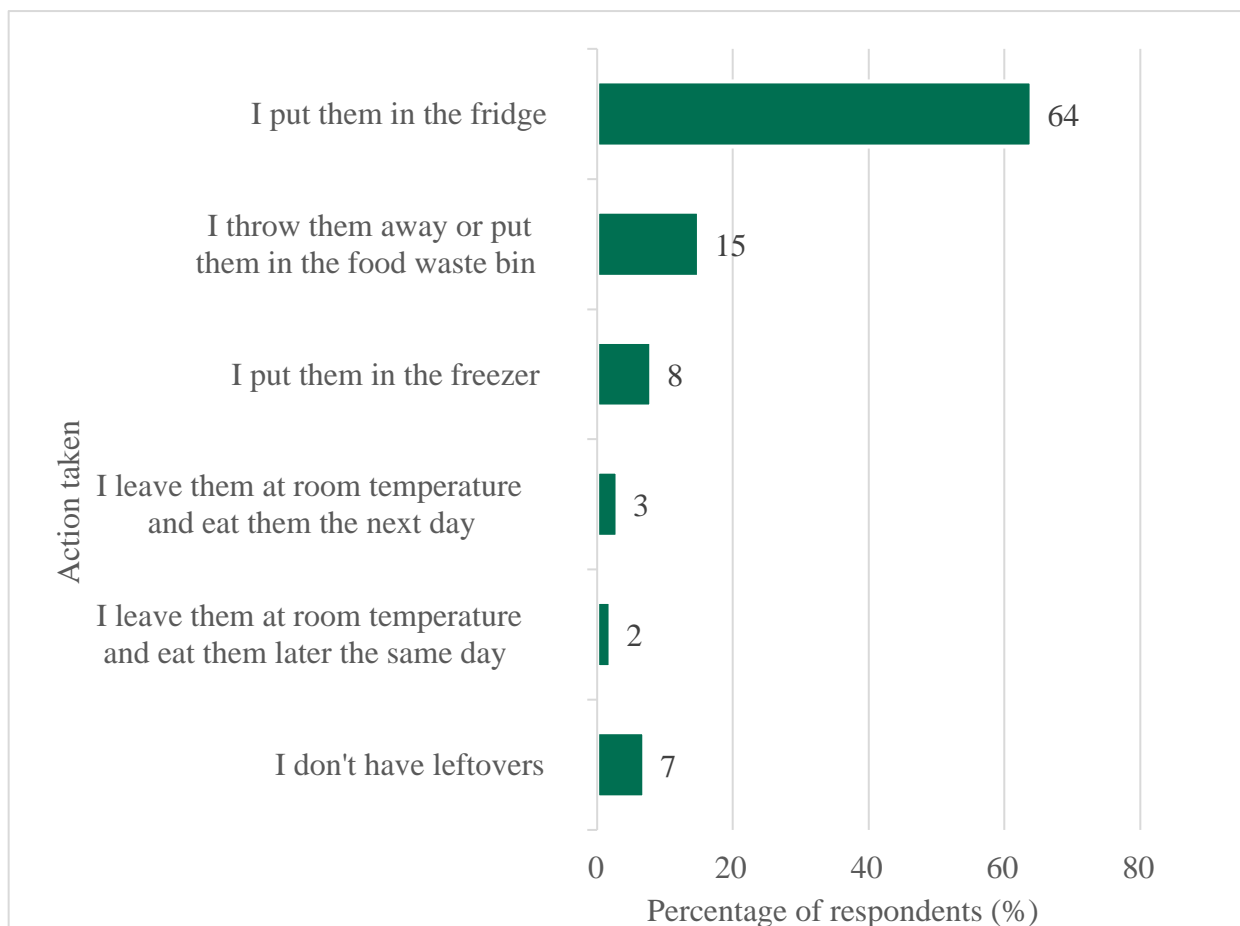
Source: Food & You 2: Wave 5

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 (53%), and the least common method was to use a thermometer or probe (9%) (Figure 17) [\(footnote 14\)](#).

The FSA recommends that [food is only reheat once](#). When respondents were asked how many times they would reheat food, the majority reported that they would only reheat food once (83%), 9% would reheat food twice, and 3% would reheat food more than twice [\(footnote 15\)](#).

## Leftovers

**Figure 18. What respondents do with leftovers following a meal**



Respondents were asked what they generally do with leftovers after a meal. Most respondents reported that they put leftovers in the fridge (64%). Some respondents reported throwing leftovers away or putting them in a food bin (15%). A small proportion of respondents said they left any leftovers at room temperature and ate them either the same day (2%) or the next day (3%) (Figure 18) ([footnote 16](#)).

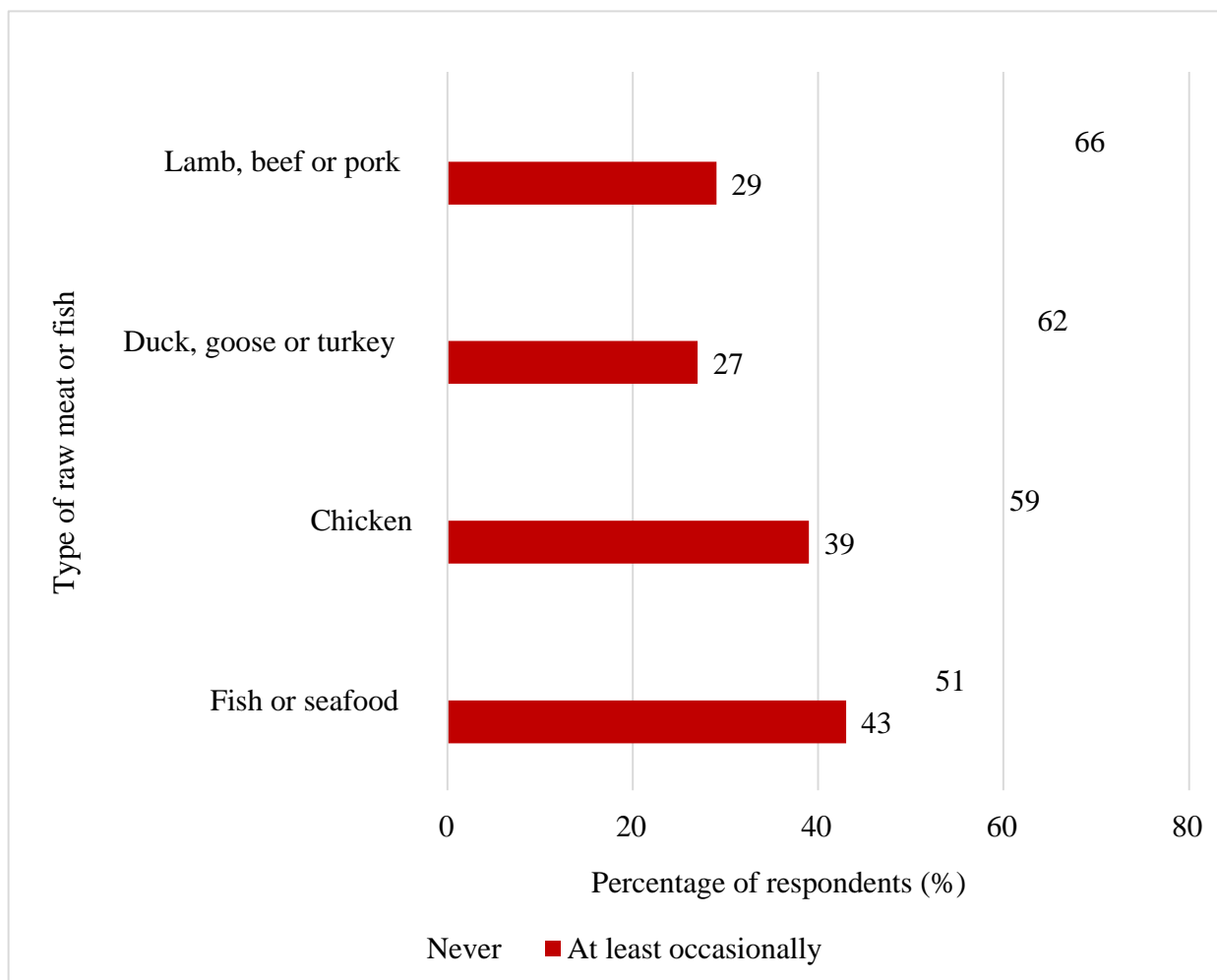
Respondents who reported that they put leftovers in the fridge or freezer were asked to indicate how soon after cooking they would typically put leftovers into the fridge or freezer. Many respondents reported that they typically placed leftovers in the fridge or freezer within 1 hour (33%) or 1-2 hours of cooking (41%). Around a fifth (19%) of respondents put leftovers in the fridge or freezer after more than two hours, and 5% would put leftovers in the fridge or freezer straight away ([footnote 17](#)).

Respondents were asked how long they would keep leftovers in the fridge for. Around two-thirds (68%) of respondents reported that they would eat leftovers within 2 days, around a quarter (23%) of respondents reported that they would eat leftovers within 3-5 days and 1% would eat leftovers after 5 days or longer ([footnote 18](#)).

## 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.

**Figure 19. How often respondents wash different types of raw meat or fish**



Source: Food and You 2: Wave 5

Around 4 in 10 respondents reported that they wash (for example, at least occasionally or more often) fish or seafood (43%) or raw chicken (39%), 29% of respondents reported that they wash lamb, beef or pork, and 27% of respondents reported that they wash raw duck, goose or turkey (Figure 19) [\(footnote 19\)](#).

### Chopping board use

Respondents were asked how they use chopping boards when they prepare raw meat and other foods. Around half of respondents (53%) reported that they use different chopping boards for raw meat and other foods and 34% of respondents reported that they wash the chopping board between preparing raw meat and other foods. Fewer respondents reported using the same chopping board (without washing) (9%) or turning the chopping board over between preparing raw meat and other foods (4%) [\(footnote 20\)](#).

Respondents who use the same chopping board to prepare raw meat and other foods were asked in which order they prepare the foods. Around two-thirds (64%) of respondents reported that they prepare other foods before raw meat. Fewer respondents reported that they prepare raw meat before other foods (20%) and 14% of respondents reported that they don't think about the order in which they prepare foods [\(footnote 21\)](#).

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

The FSA recommends that [refrigerated raw meat and poultry are 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 (65%) or away from cooked foods (43%). Around a third of respondents reported storing raw meat and poultry in a sealed container (33%) or covered with film/foil (32%), with fewer keeping the product on a plate (14%) [\(footnote 22\)](#).

Most (63%) respondents reported [storing raw meat and poultry at the bottom of the fridge](#), as recommended by the FSA. However, 23% of respondents reported storing raw meat and poultry wherever there is space in the fridge, 12% of respondents reported storing raw meat and poultry in the middle of the fridge, and 6% at the top of the fridge [\(footnote 23\)](#).

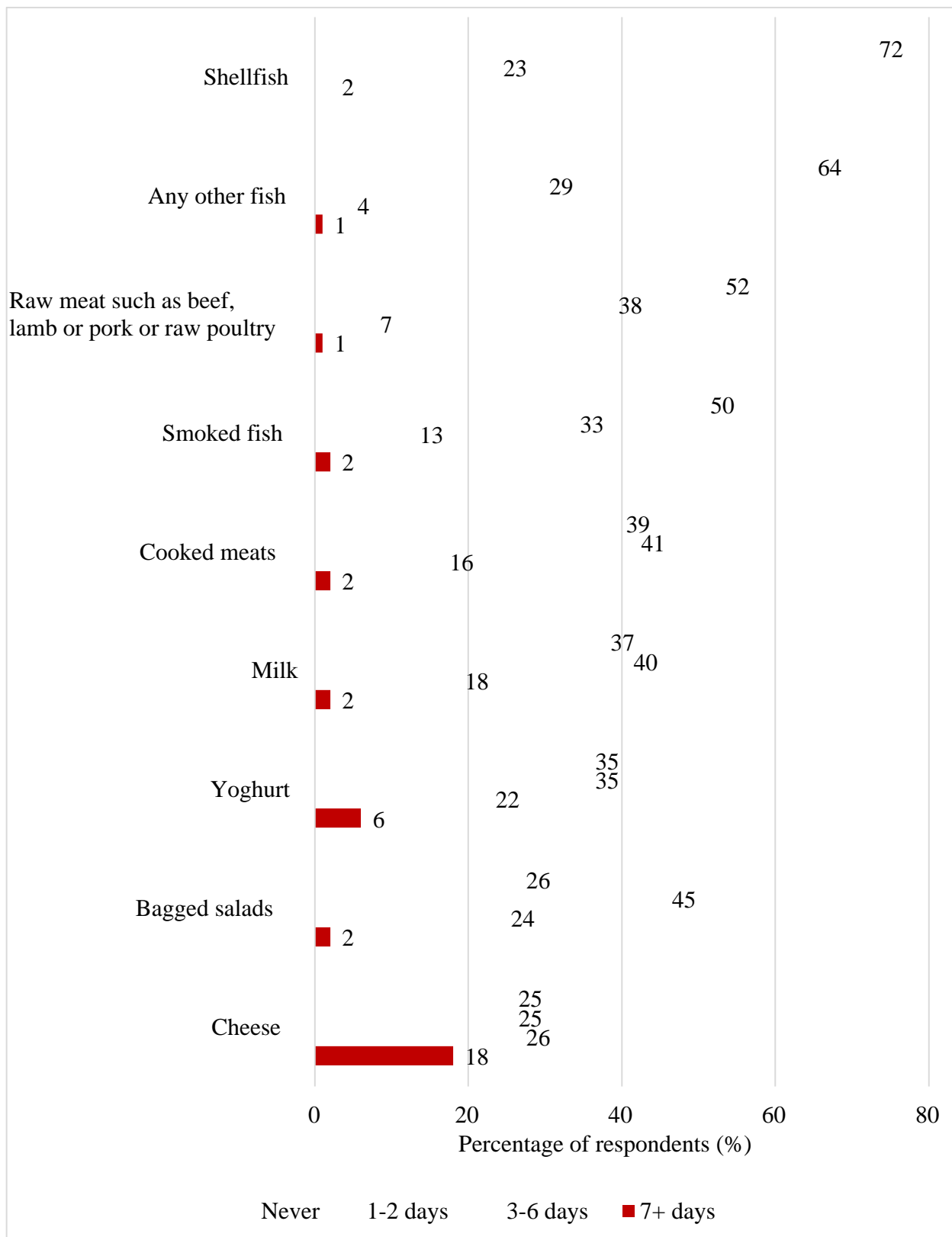
## Use-by and best before dates

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.

Respondents were asked to indicate which date shows that food is no longer safe to eat. Two-thirds (66%) of respondents correctly identified the use-by date as the information which shows that food is no longer safe to eat. However, some respondents identified the best before date (9%) as the date which shows food is no longer safe to eat [\(footnote 24\)](#).

Around two-thirds (65%) of respondents reported that they always check use-by dates before they cook or prepare food. Around a third (32%) of respondents reported checking use-by less often (for example, most of the time or less often), and just 1% reported never checking use-by dates [\(footnote 25\)](#).

**Figure 20. How long after the use-by date respondents would consume different foods**



Source: Food & You 2: Wave 5

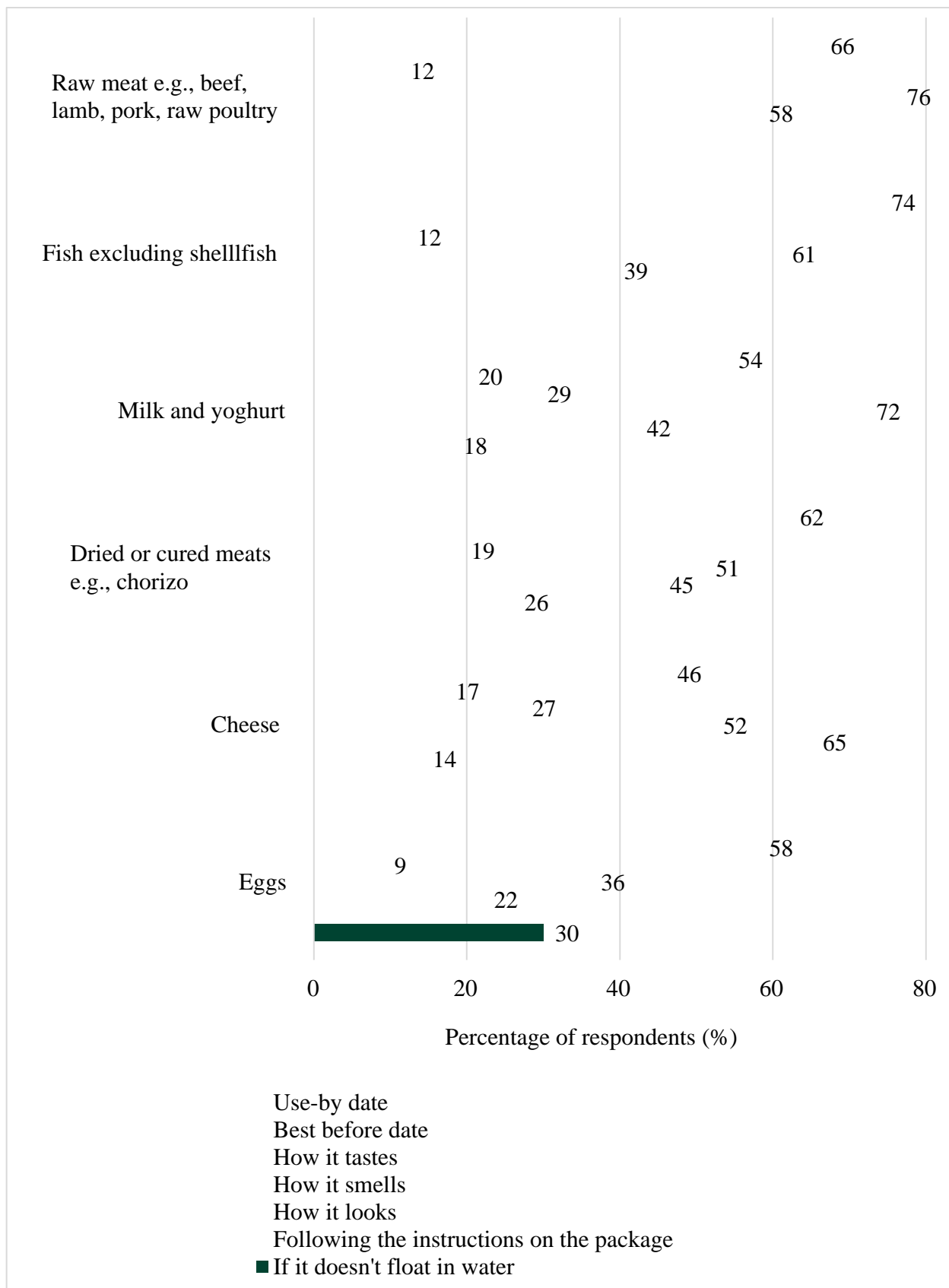
Respondents who eat certain foods were asked when, if at all, is the latest that they would eat the type of food after the use-by date. Of these respondents, most reported that they would not eat shellfish (72%), or other fish (64%) past the use-by date. Around half of respondents would not eat raw meat (52%) or smoked fish (50%) past the use-by date. When foods are eaten past the use-by date, they are typically eaten 1-2 days after the use-by date (for example, 45% of respondents would eat bagged salads 1-2 days after the use-by date). Of the specified foods,



respondents reported that they would be most likely to eat bagged salad (71%) and cheese (69%) after the use-by date. Around 6 in 10 respondents would eat yoghurt (63%), milk (59%) and cooked meats (59%) after the use-by date. Around 2 in 10 (18%) respondents would eat cheese 1 week or more after the use-by date (Figure 20) [\(footnote 26\)](#).

Respondents were asked what they usually do with food they have bought which is about to go out of date. Around a third of respondents would eat the food (36%) or freeze it by the use-by date (29%). Fewer respondents would throw away the food after the use-by date (11%) or keep it and eat it after the use-by date (7%), however, 15% of respondents reported that it varies too much to say [\(footnote 27\)](#).

**Figure 21. How respondents tell whether different foods are safe to eat or cook with**



Respondents were asked to indicate how they tell whether different foods are safe to eat or cook with. The method which respondents used to assess whether food is safe to eat or cook varied by food type. Smell was most often used to assess raw meat (76%) and milk and yoghurt (72%). Respondents most often relied on the use-by date to assess fish (74%) and dried or cured meats (62%). Eggs were typically assessed using the best before date (58%) and cheese was most often assessed by how it looks (65%) (Figure 21) [\(footnote 28\)](#).

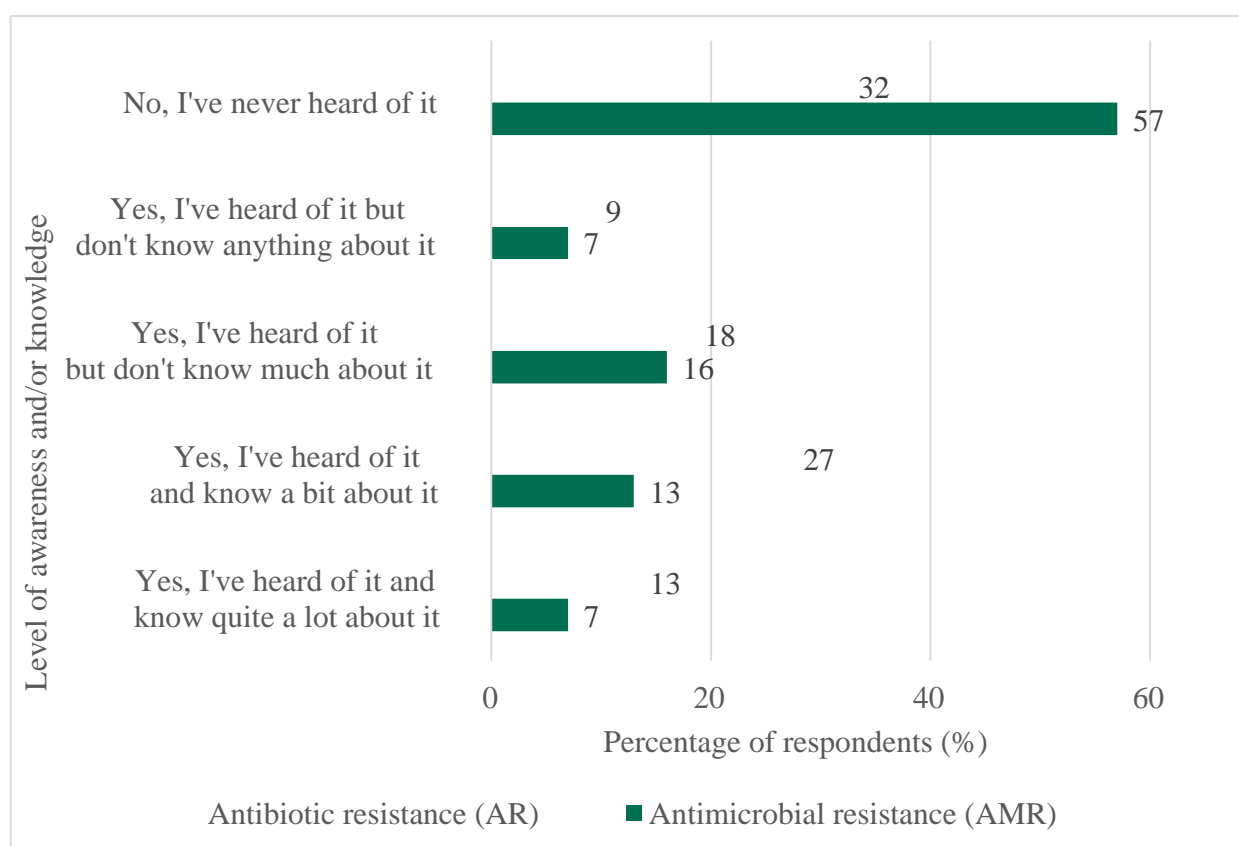
## 'Eat within' information

Some foods have instructions on the label which advise that the food should be eaten within a few days of opening. Respondents were asked to indicate how often they follow this recommendation. Around a quarter (26%) of respondents reported that they always follow the on-pack instruction. However, most respondents (68%) reported that they do not always (for example, most of the time or less often) follow the on-pack instructions and 5% reported that they never do this [\(footnote 29\)](#).

## Awareness of antimicrobial resistance (AMR) and antibiotic resistance

Antimicrobial resistance (AMR) is when antimicrobial drugs, such as antibiotics, stop working effectively on the bacteria they are designed to kill. Bacteria which are resistant to antimicrobial drugs can be spread to humans in the food chain in various ways including cross-contamination when food is handled without the right food hygiene practices.

**Figure 22. Awareness and knowledge of antimicrobial resistance and antibiotic resistance**



Source: Food and You 2: Wave 5

Respondents were asked if they had ever heard of antimicrobial resistance (AMR) or antibiotic resistance. Respondents were more likely to report awareness and knowledge of antibiotic resistance than antimicrobial resistance (AMR). For example, 57% of respondents had never heard of AMR and 32% of respondents had never heard of antibiotic resistance (Figure 22) [\(footnote 30\)](#).

The full 'Eating at home' module was last reported in the [Food and You 2: Wave 1 Key Findings report](#). The brief module was last reported in the [Food and You 2: Wave 2 Key Findings report](#).

2. Question: When you are at home, how often, if at all, do you wash your hands before eating. Responses: always, most of the time, about half the time, occasionally, never, i don't cook, don't know. Base= 6770, all respondents.
3. 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. Base= 6246, all respondents who ever do some food preparation or cooking for their household.
4. Question: When you are at home, how often, if at all, do you wash your hands immediately after handling raw meat, poultry or fish. Responses: always, most of the time, About half the time, Occasionally, Never, I don't cook meat, poultry or fish, Don't know. Base= 6031, all online respondents and those who completed the version B postal questionnaire who ever do some food preparation or cooking for their household, excluding 'I don't cook meat, poultry or fish' and 'not stated'.
5. Question: When eating outside of the home, how often, if at all, do you wash your hands, or use hand sanitising gel or wipes before eating? Responses: always, most of the time, about half the time, occasionally, never, don't know. Base= 6770, all respondents.
6. Question: What do you think the temperature inside your fridge should be? Responses: less than 0 degrees C (less than 32 degrees F), 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), 8 to 10 degrees C (47 to 50 degrees F), more than 10 degrees C (over 50 degrees F), other, don't know. Base=6763, all respondents excluding those who don't have a fridge.
7. 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. Base= 6760, all respondents excluding those who don't have a fridge.
8. Question: How often, if at all, do you or someone else in your household check the temperature of the fridge? Responses: 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, 1-2 times a year, never/less often, don't know. Base= 3394, all respondents where someone in household checks fridge temperature.
9. Question: Typically, how do you defrost frozen meat or fish? Responses: place the meat or fish in water, leave the meat or fish at room temperature (e.g. on the worktop on a plate, in a container or in its packaging), leave the meat or fish in the fridge, defrost the meat or fish in the microwave oven, some other way, don't know. Base= 4482, all online respondents and those who answered the version B postal questionnaire who ever do some food preparation or cooking for their household, excluding those who never defrost meat or fish.
- 10.

Question: How often, if at all, do you cook food until it is steaming hot and cooked all the way through? Responses: always, most of the time, about half of the time, occasionally, never, don't know. Base= 6246, all respondents who ever do some food preparation or cooking for their household.

11. 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](#) .
12. Question: How often, if at all, do you eat...a=chicken or turkey, b=red meat, c=duck, d=beefburgers, e=sausages, f=whole cuts of pork or pork chops... 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. Base A=6261, B=3637, C= 2815, D=3465, E=3590, F=3355, all respondents who are not vegan, pescatarian or vegetarian, and who do eat A/B/C/D/E/F
13. Question: How often, if at all, do you eat...b = raw oysters/ c= raw (that is, unpasteurised) milk? Responses: about once a week or more often, about once a fortnight, about once a month, about once every 3 months, about once a year, less than once a year, never, don't know. Base B=6512, C= 6717, all online respondents who are not...B= vegan or vegetarian / C = vegan...and all those who answered the postal questionnaires.
14. Question: When reheating food, how do you know when it is ready to eat? Select all that apply. Responses: 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 taste it, I stir it, I put my hand over it/touch it, I use a thermometer/probe, None of the above, I don't check. Base= 5907, all respondents who ever do some food preparation or cooking for their household, excluding 'I don't reheat food' and 'not stated'.
15. Question: How many times would you consider reheating food after it was cooked for the first time? Responses: not at all, once, twice, more than twice, don't know. Base= 5918, all respondents who reheat food.
16. Question: Generally, what do you do with any leftovers following a meal? Responses: I throw them away or put them in the food waste bin, I leave them at room temperature and eat them later the same day, I leave them at room temperature and eat them the next day, I put them in the fridge, I put them in the freezer, I don't have leftovers. Base= 5513, all online respondents, and those answering the version A postal questionnaire.
17. Question: Typically, how soon after cooking do you put any leftovers in the fridge or freezer? Responses: straight away, within 1 hour of cooking, 1 - 2 hours after cooking, more than 2 hours after cooking, don't know. Base= 3897, all online respondents. and all those who completed the version A postal questionnaire, who leave leftovers in a fridge or freezer.
18. Question: When is the latest you would consume any leftovers stored in the fridge? Responses: the same day, within 1-2 days, within 3-5 days, more than 5 days later, it varies too much, don't know. Base= 6770, all respondents.

19. Question: How often, if at all, do you do the following? a=wash raw chicken, b= wash raw duck, goose or turkey, c= wash raw lamb, beef or pork, d= wash raw fish or seafood. Responses: always, most of the time, about half of the time, occasionally, never, don't know. Base = 6246, all respondents who ever do some food preparation or cooking for their household.
20. Question: Typically, how do you use chopping boards when preparing a meal with raw meat? Responses: I use a different chopping board for raw meat and other foods, I wash the chopping board between preparing raw meat and other foods, I turn the chopping board over between preparing raw meat and other foods, I use the same chopping board for preparing raw meat and other foods (without washing the board), I don't use chopping boards, I don't cook with raw meat. Base= 4348, all online respondents, and those who answered the version B postal questionnaire, who ever do some food preparation or cooking for their household, excluding those who don't use chopping boards or those who don't cook with raw meat.
21. Question: When you use the same chopping board to prepare raw meat and other foods, in which order do you prepare food? Responses: I prepare raw meat before other foods, I prepare other foods before raw meat, I don't think about the order I prepare foods, Don't know. Base=312, all online respondents and all those who completed the version B postal questionnaire who do some food preparation or cooking and use the same chopping board to prepare meat and other foods without washing the board.
22. Question: How do you store raw meat and poultry in the fridge? Please select all that apply. Responses: away from cooked foods, covered with film/foil, in a sealed container, in its original packaging, on a plate. Base= 6069, 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.
23. Question: Where in the fridge do you store raw meat and poultry? Responses: wherever there is space, at the top of the fridge, in the middle of the fridge, at the bottom of the fridge. Base= 5984, all respondents who store raw meat/poultry in the fridge except those who don't buy/store meat/poultry, don't have a fridge, or don't know.
24. Question: Which of these shows when food is no longer safe to eat? Responses: use-by date, best before date, sell by date, display until date, all of these, it depends, none of these, don't know. Base= 6770, all respondents.
25. Question: How often, if at all, do you check use-by dates when you are about to cook or prepare food? Responses: always, most of the time, about half of the time, occasionally, never, it varies too much to say, don't know. Base= 6246, all respondents who ever do some food preparation or cooking for their household.
26. Question: When, if at all, is the latest you would eat or drink the following items after their use-by date? a= cooked meats, b=smoked fish, c=bagged salads, d=cheese, e=milk, f= raw meat such as beef/pork/lamb/raw poultry, g=shellfish, h=any other fish, i=yoghurt. Responses: 1-2 days after the use-by date, 3-4 days after the use-by date, 5-6 days after the use-by date, 1-2 weeks after the use-by date, more than 2 weeks after the use-by date, I don't eat/drink this after its use-by date, don't know/I don't ever check the use-by date of

this. Base A= 4793, B=3744, C=4788, D=5033, E=4976, F= 4686, G=3248, H=4229, I=4798, all online respondents and those who completed the version B postal questionnaire, who eat A/B/C/D/F/F/G/H/I.

27. Question: When food you have bought is about to go past its use-by date, which of the following do you usually do? Responses: I eat it by the use-by date, I freeze it by the use-by date, I throw it away (after the use-by date), I keep it and eat it after the use-by date, it varies too much to say, I don't check use-by dates. Base = 6770, all respondents.
28. Question: How do you tell whether it is safe to eat or cook with...? a) raw meat like beef, lamb, pork or poultry, b) milk and yoghurt, c) cheese, d) eggs, e) fish (excluding shellfish), f) dried or cured meats. responses: how it looks; how it smells; how it tastes; use-by date; best before date; b/c/f) follow pack instructions e.g. with within 3 days of opening; d) it doesn't float in water. Base A=4922, B=5068, C= 5091, D=5026, E=4136, F=4234, all online respondents who completed version B of the postal questionnaire, excluding those who don't eat/cook...A/B/C/D/E/F.
29. Question: Some foods have an instruction to eat the food within a few days of opening on the label (for example, 'consume within 3 days of opening'). How often, if at all, do you follow instructions on food packaging which tell you how long food should be stored once opened? Responses: always, most of the time, about half of the time, occasionally, never, don't know. Base=6246, all respondents who ever do some food preparation or cooking for their household.
30. Question: Have you ever heard of...A/B? A) Antimicrobial resistance (AMR)? B) Antibiotic resistance? Responses: 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. Base= 5298, all online respondents, and those answering the version B postal questionnaire.