



*The Bayer
Food Focus
Project* 2019



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Background

The Bayer Food Focus Project brings together Bayer and the New Zealand Nutrition Foundation (NZNF) with expert help from the Foundation's board members, Elaine Rush, Scientific Director and Emeritus Professor of Nutrition at Auckland University of Technology (AUT), and Niki Bezzant, nutrition writer and commentator.

The project aims to support New Zealanders in making more positive food choices and encouraging people to take more consideration of their diet for the betterment of their overall health. Although the Bayer Food Focus Project does not profess to be an update on the decade old Adult Nutrition Survey carried out by the Ministry of Health in 2008-09, it does hope to plug some of the gaps felt by the industry.

The project consisted of two key parts: the first Australasian pilot study conducted by AUT, using the new innovative Veggie Meter device to establish a benchmark of Kiwis' vegetable and fruit consumption via a fingertip scan; and an online questionnaire to understand which foods New Zealanders are most commonly consuming and why.



About the *Veggie meter*[™]



AUT

The Bayer Food Focus Project is the first Australasian study to utilise the Veggie Meter[™]. The pilot study consisted of 200 participants aged 16 years and over who volunteered to be part of the assessment. Findings from this research are preliminary and provide direction for more research questions.

The Veggie Meter allows a measure of Vitamin A status by measuring the amount of orange light reflected from the fat pad at the finger-tip. A single reading on the device takes around 10 seconds and each participant is measured three times.

The amount of orange light reflected is determined from the intake of carotenoids - plant chemicals that in the body, help

form Vitamin A. The Veggie Meter 'score' is an objective measure of vegetable and fruit intake over the last few months. The more coloured vegetables and fruit consumed, the higher the score.

Each participant is given a score between 0 - 800 to determine what is a low score, what is considered a healthy range and what is high.

The Veggie Meter field work is carried out by PhD students specialising in food and nutrition from the Auckland University of Technology's (AUT) Faculty of Health and Environmental Science.

The study is ongoing with a peer reviewed paper expected to be released in 2020.

Veggie meter

Preliminary findings

- One in five participants have a low Vitamin A status.
- Those with higher body weight have lower scores.
- Men appear to have higher measures than women. This is opposite to the published observation in Americans, however, this may be because carotenoids are fat-soluble and women normally have more fat than men.
- Asian participants have higher scores than European.
- Reported consumption of vegetables and fruit, especially dark green leafy vegetables was associated with a higher score.
- There is no association of age with the score – younger and older people do not have different scores.
- Overall Veggie Meter scores are tracking that we eat more vegetables than people in the United States but about the same as Japan (where the Veggie Meter data has been used and the scores published).



These preliminary observations are being investigated further and Auckland University of Technology hope to present the findings at the Nutrition Society meeting in Napier at the end of November and submit for publication in the peer reviewed literature soon after this.



About the *Survey*

Methodology

The Bayer Food Focus Survey addressed a range of questions concerning food sourcing, perceptions and consumption to a national cross section of New Zealanders aged 15 years and over. The sample consisted of 1,346 respondents, who self-completed a structured questionnaire online. Weighting was applied to balance the sample profile to reflect the New Zealand population - specifically by age, gender, ethnicity and region. This report provides a summary of the findings. The survey was carried out by the National Research Bureau, using Dynata's consumer panel.

Topics we asked about

- Ways of eating and dieting
- Food allergies and intolerances
- Food preparation perceptions
- Sources of vegetables and fruit
- Sources of main meal of the day
- 'Eat more' and 'eat less' foods
- Protein foods eaten
- Vegetables and fruits eaten per day
- Fill-up foods – main meal of the day
- Comfort eating
- Food choice criteria – buying
- Food choice criteria – eating
- Supplements taken

Demographics of weighted sample

Gender	Female	686
	Male	660
Ethnicity	European	687
	Māori	226
	Pasifika	114
	Asian	210
	Others	109

Area	Large city	713
	Provincial centre	267
	Country town / rural	366
Age group	15-34 years	412
	35-54 years	463
	55+ years	471

Findings are presented for all respondents. Additional insights are provided based on how findings vary by different types of demographic groups such as age, race, gender and area.

Note: Percentage totals will add to over 100% where respondents were permitted to give more than one answer or select more than one option in responding to a question. Questions where only one answer was permitted will add to 100%, allowing 1%-2% either side of 100% due to the effects of rounding and/or weighting.

Executive summary

Main findings

Ways of eating and dieting

- Weight loss plan was the most commonly followed diet in the last 12 months. Almost 1 in 4 (23%) respondents had recently followed a weight loss diet showing there is still significant interest in this way of eating. This was followed closely by the vegetarian diet (alongside the low-carb diet) with 20% of respondents having followed this way of eating in the last 12 months.
- 2 in 5 respondents had never heard of the term flexitarian. This was the least recognised diet among the 11 different ways of eating.

Food allergies and intolerances

- 40% identified that they or someone in their household believed they have food they are allergic to or can't tolerate. A further 23% identified that they or someone in their household had been told by a doctor that they have an allergy or immune response to food
- Cow's milk was most likely to cause a reaction. Other common food triggering allergies or intolerances were gluten, wheat, peanuts, and seafood.

Source of main meal of the day

- Preparing and cooking the main meal at home is still the most common, although younger participants were more likely to find alternative ways to source their main meal of the day. 70% of respondents aged 15-34 identified that they were likely to purchase a take-out meal between one and six days per week, comparative to only 30% of those aged 55+ .
- A third of participants acknowledged being too busy to prepare meals regularly. This was particularly acute among 15-34 year olds (47%). Over half the respondents (52%) identified that healthy foods are too expensive, again most acute among 15 to 34 year olds (67%) but also elevated relative to the average among Pasifika (83%), Asian (68%) and Māori (65%) households.

Vegetables and fruits eaten per day

- The five plus a day vegetables and fruit consumption has long served as a guideline for healthy eating, and New Zealanders are not meeting the target. Only 2 in 5 respondents identified eating the recommended three or more serves of vegetables (excluding root / starchy vegetables) per day, with the recommended two or more serves of fruit per day only slightly higher at 46%. This rose to 58% of respondents when all three categories (vegetables, fruit, root / starchy vegetables - including potatoes / kumara) were aggregated.

Executive summary

Main findings

Comfort eating

- Eating when feeling down, stressed or gloomy as a pick-me-up was something 77% of respondents said was very or fairly true of themselves. This was highest among younger respondents (15-34) with 90% indicating this to be very or fairly true of themselves. Women were also more likely to agree with 82% acknowledging it was very or fairly true of themselves versus 72% of men.

Food choice criteria - eating

- Taste was the most important factor, overriding price and healthfulness. 81% considered taste to be extremely or very important, with only 2% considering it unimportant. Price was rated second with 67% rating it extremely or very important, followed by healthfulness in third (50%).

Food choice criteria - buying

- Knowing food is natural and minimising the use of plastic wrapping were the most important factors when making food purchasing decisions. 2 in 5 respondents identified these as the top two factors when purchasing food and each attracted twice as many important ratings as unimportant.

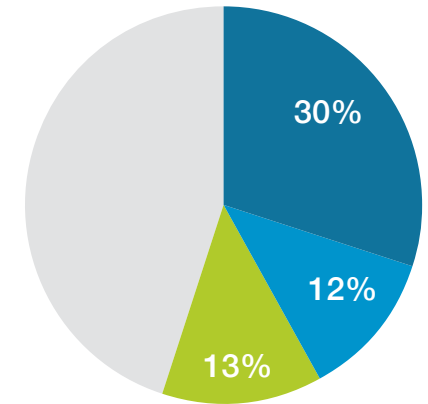
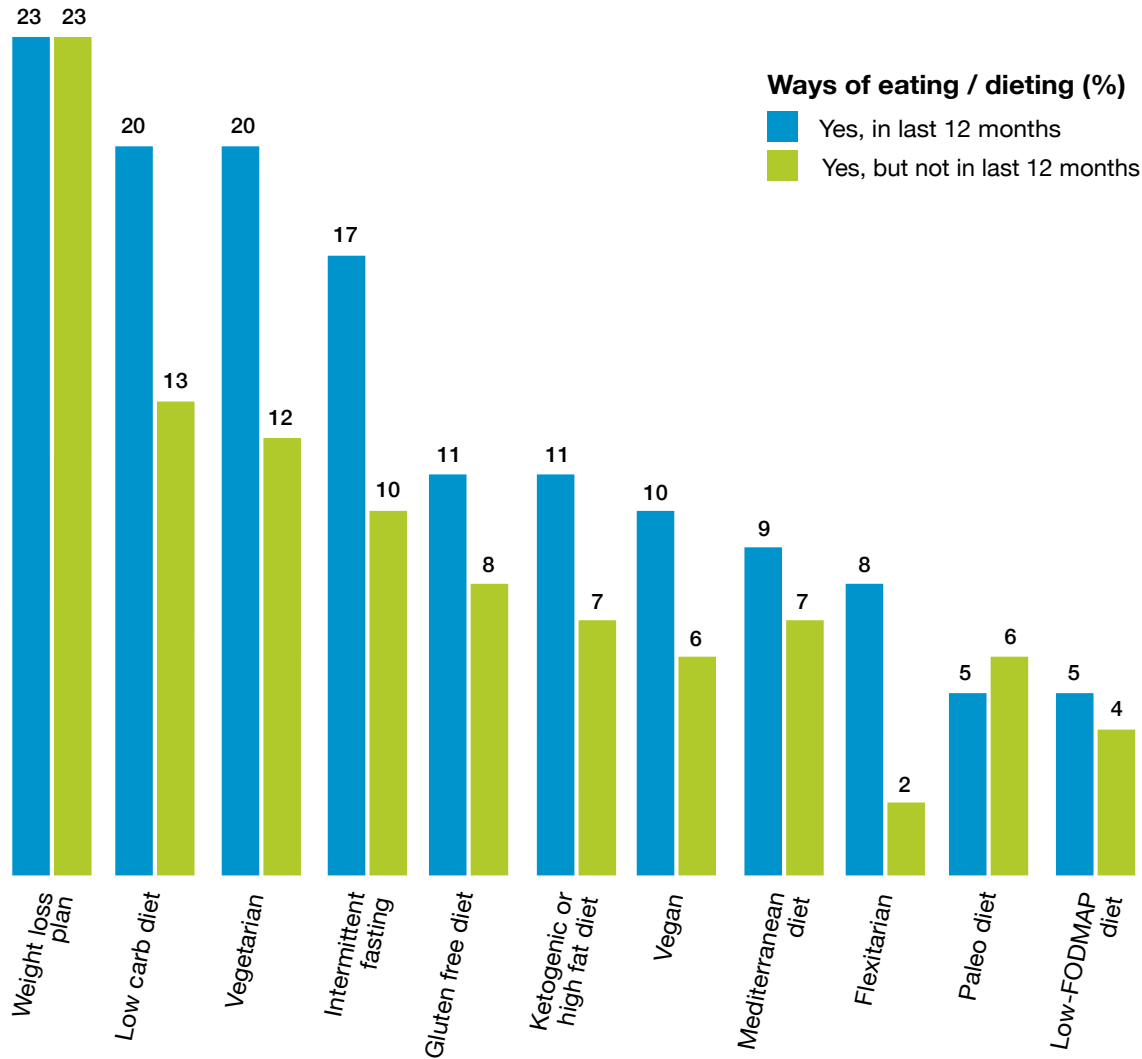
- Animal welfare is also front on mind for consumers, but environmental sustainability less so. 38% of respondents identified that animal welfare was an important factor in their decision to purchase food. This was particularly high among 15-34 year olds (48%). In contrast, knowing the manufacturer committed to producing food in an environmentally sustainable way and the use of modern farm technologies both garnered more unimportant responses than important.

Supplements taken

- Respondents with a diagnosed health condition made up less than a quarter of those who take supplements. Only 9% of respondents acknowledged taking supplements (including vitamins and mineral types) specifically for a diagnosed health condition. A further 34% of respondents acknowledged the use of supplements for general improvement of their health. Most commonly taken supplements included unspecified vitamins and multi-vitamins (28%), vitamins D and C together or alone (19%), followed by magnesium (18%).

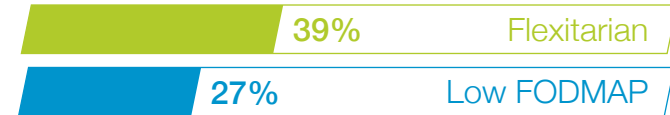
Ways of eating and dieting

The most popular way of dieting was identified as a weight loss plan.



30% who identified as Asian stated they are currently or have been in the last 12 months **vegetarian**. A further 12% self-identified as **vegan** and 13% **flexitarian**.

Respondents had never heard of:



There was no significant difference between female (24%), and male (21%) when asked if they had followed a weight loss plan within the last 12 months. However, a further 30% of females and only 17% of males indicated they had followed a weight loss diet, but not in the last 12 months.



Q1: Yes, in the last 12 months or now – Have you ever followed each of these ways of eating or dieting? (n=1,346)


Q1: Yes, but not in the last 12 months – Have you ever followed each of these ways of eating or dieting? (n=1,346)

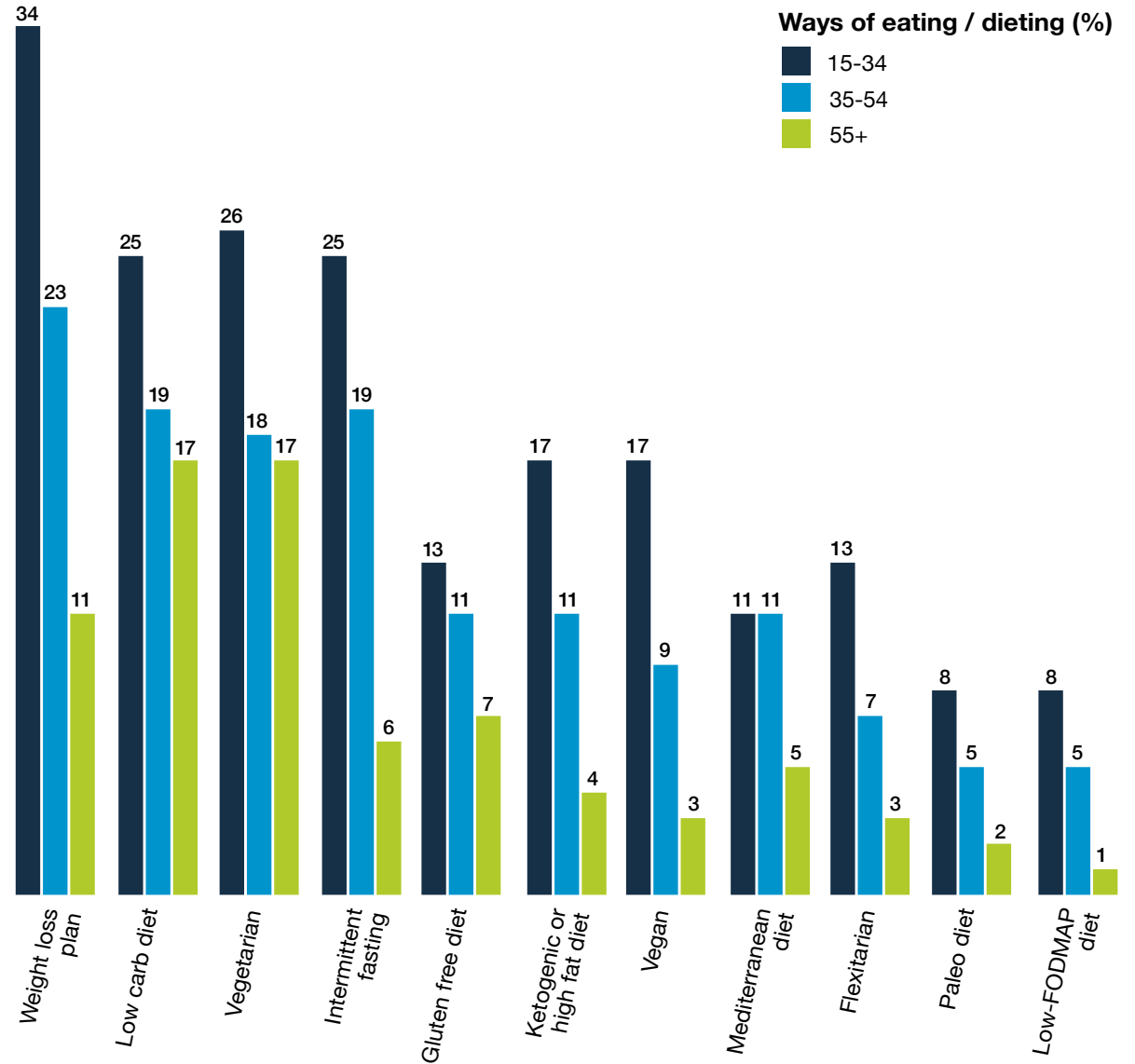
Ways of eating and dieting

Age seemed to play a key role in patterns of eating.

Older generations were much less likely to be following or have followed a diet in the last 12 months

17%
of respondents aged 55+ identified that they are currently, or have been in the last 12 months following a vegetarian and / or low carb diet. These were the highest recognised ways of eating amongst this age group.

 **1 in 3** respondents (34%) aged 15-34 identified that they are currently, or have been in the last 12 months following a weight loss plan.



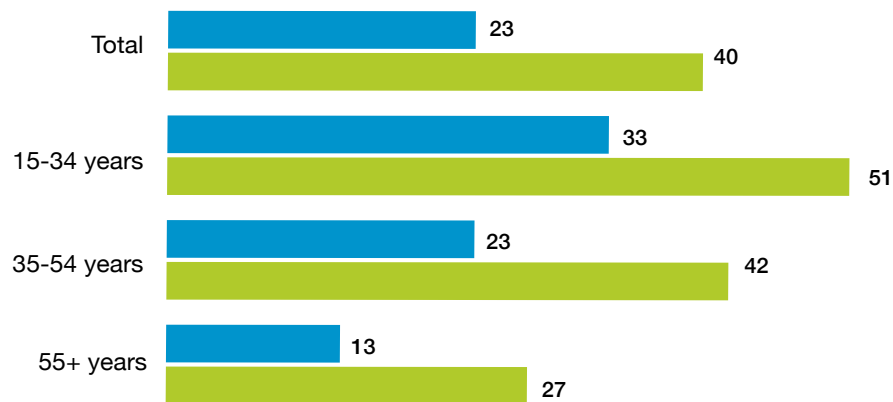
Q1: Yes, in the last 12 months or now – Have you ever followed each of these ways of eating or dieting? (n=1,346)
 Q1: Yes, but not in the last 12 months – Have you ever followed each of these ways of eating or dieting? (n=1,346)

Food allergies and intolerances

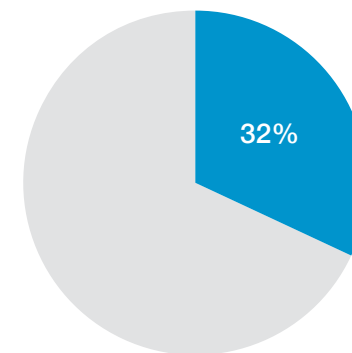
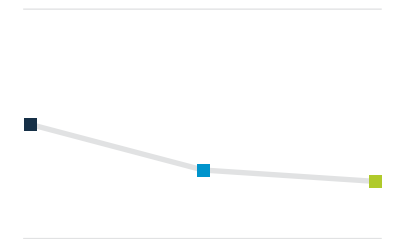
Younger participants were most likely to report a reaction from food.

Yes, food / drink allergies (%)

- Whether anyone in their household has been told by a doctor that they have an allergy or immune response to food
- Whether anyone in the household believes they have a food they are either allergic to or can't tolerate



A less marked but noticeable trend is how perceived allergies and intolerances appeared to peak in large cities (45%), decrease for provincials (37%) and decrease again with country/ rural areas (35%).



of Pasifika respondents stated that they or someone in their household had been diagnosed by a doctor with an allergy or an immune response to a food or beverage; this was higher than any other ethnicity.

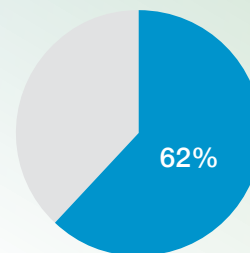
Q2: Have you or anyone in your household been told by a doctor that you/they have a food allergy or an immune response to food? (n=1,346)
 Q3: Does anyone in your household, including yourself, have any foods or drinks which they believe they are either allergic to or can't tolerate? (n=1,346)

Which foods cause an effect

Cow's milk was the most likely food to cause a reaction.



who identified as NZ European, stated that they or someone in their household believed that they had an intolerance or undiagnosed reaction to gluten - this was the highest among all ethnicities

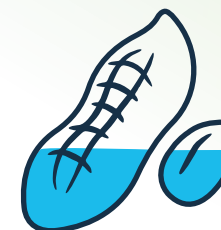


of respondents who identified as Māori stated that they or someone in their household believed they had an intolerance or undiagnosed reaction to cow's milk - this was the highest among all groups.

The most common diagnosed allergies among those aged 15-34



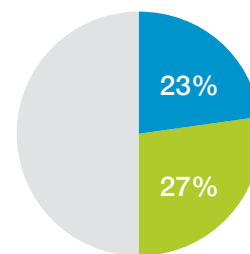
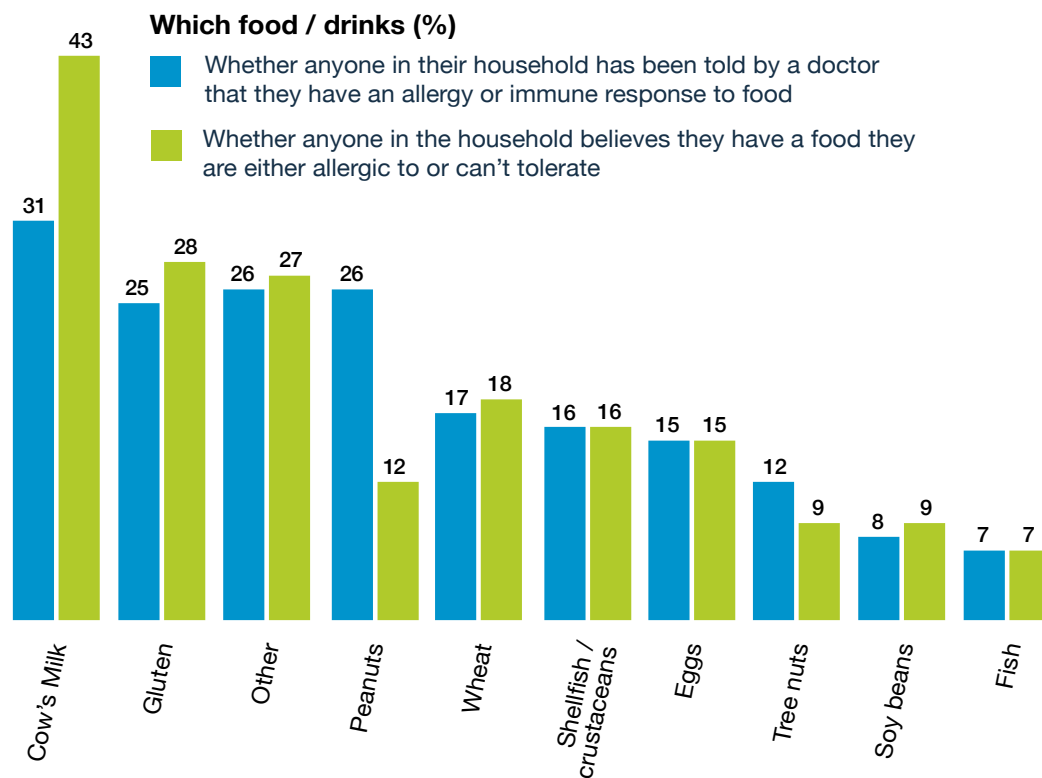
Cow's Milk
41%



Peanuts
32%



Gluten
29%



1 in 2 respondents who identified as Asian, stated that they or someone in their household had a diagnosed allergy to or believed that they had an intolerance to shellfish / crustaceans - this was the highest among all groups. *Diagnosed = 23%, Intolerance = 27%*

Q4: Diagnosed allergy/immune response to: Which of these foods have that effect? (n=344) Q3: Intolerance/undiagnosed allergy to: Which of these foods have that effect? (n=457)

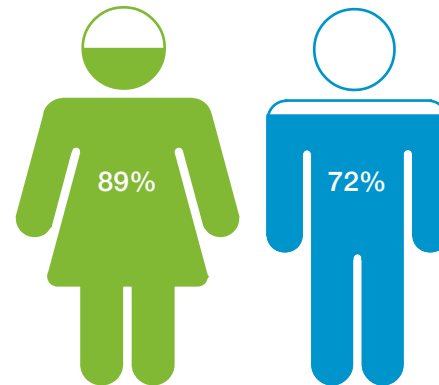
Attitudes to food and food preparation

Eight of the 10 statements were endorsed by two thirds or more of the survey respondents reflecting a confidence and positivity around these facets of food.

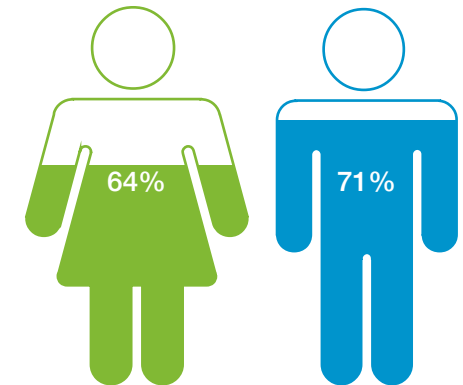
Food & food preparation (%)



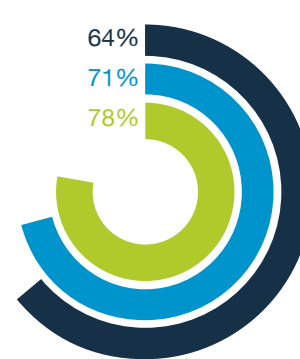
Q5: Yes summary – please show whether each of these statements apply to you? (n=1,346)



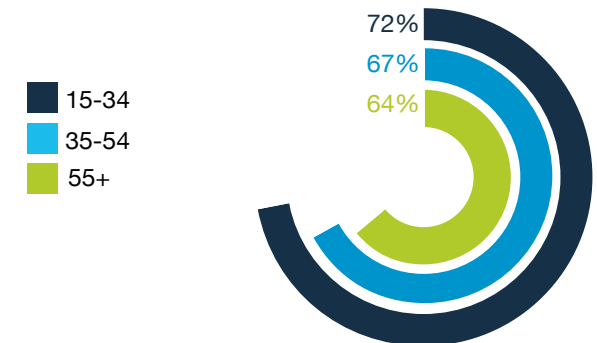
Agreed with the statement
I make the decisions around food / meals in the household.



Agreed with the statement
I enjoy food preparation and cooking.



Agreed with the statement
I make sure to cook healthy meals increased with age

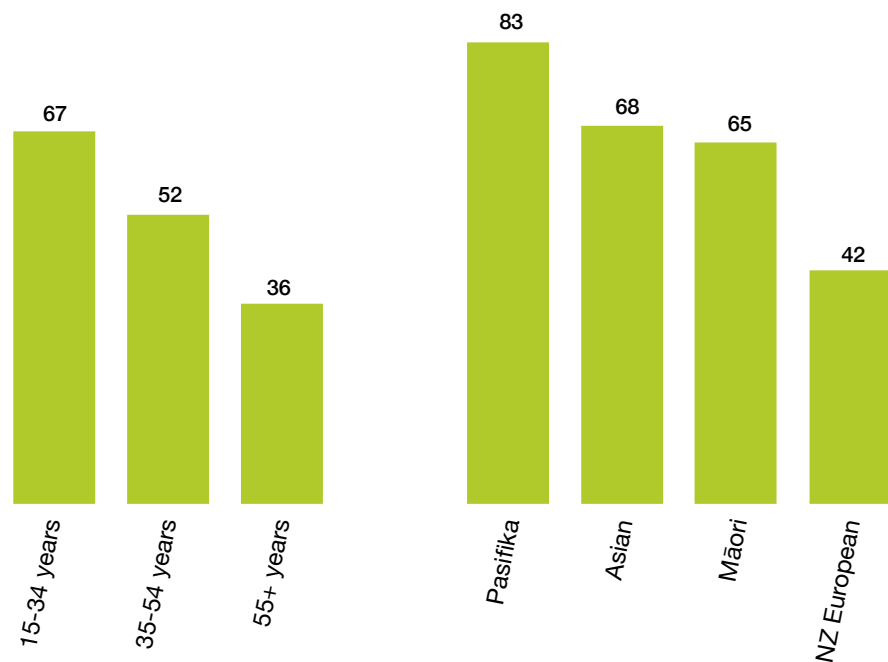


Agreed with the statement
I enjoy food preparation and cooking decreased with age

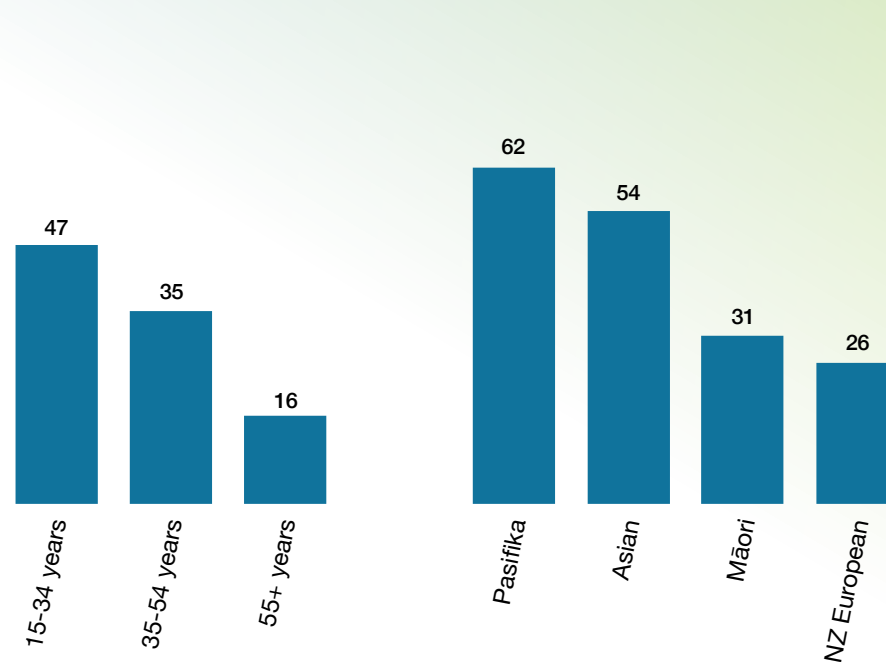
Attitudes to food and food preparation

Age and ethnicity played a key role in relation to the perceived expense of healthy foods and time available to regularly prepare food.

Healthy foods too expensive (%)



Too busy to prepare (%)

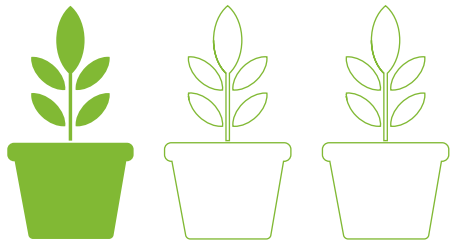


More than half of respondents (52%) agreed with the statement *I am able to cook, but healthy foods are too expensive.*

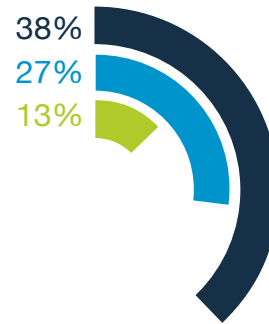
1 in 3 respondents agreed with the statement *I am too busy to cook foods regularly.*

Where people source their fruit and vegetables

Supermarkets were the most commonly recognised method for purchasing fresh produce.

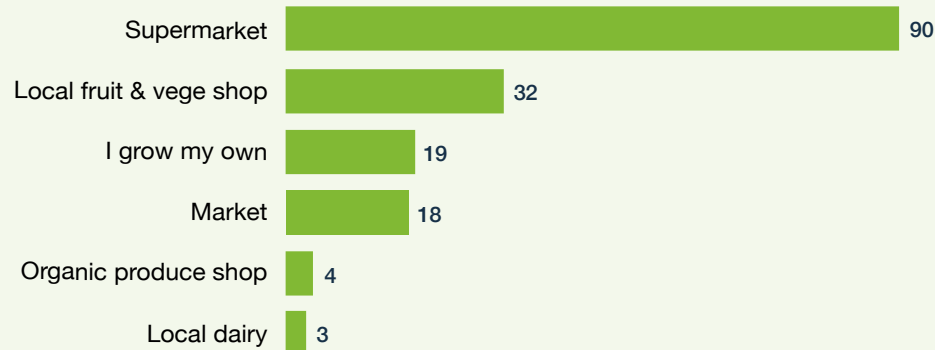


33% of respondents aged 55+ stated that they grow their own vegetables and fruit.



European households are less likely to shop at a market, while Asian and Pasifika, are more likely to do so.

Sources of fruit and vegetables (%)



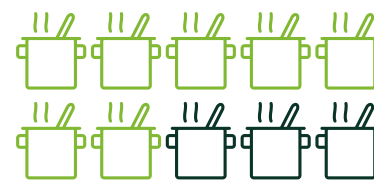
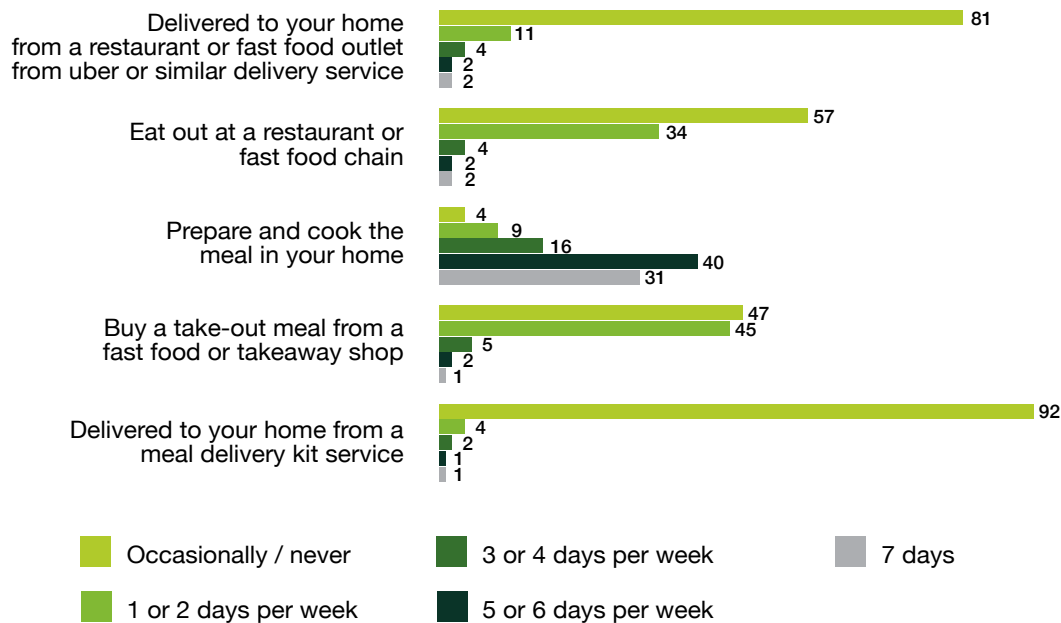
Q6: Where do you source most of your vegetables and fruit from? (n=1,346)



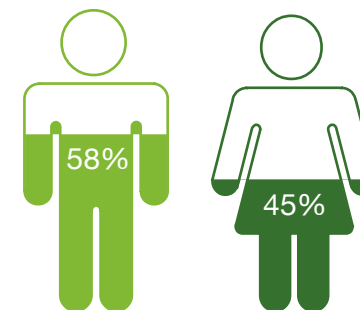
How people source the main meal of the day

Despite the rising popularity of delivery and food bags, many people still prefer to cook their main meal of the day at home.

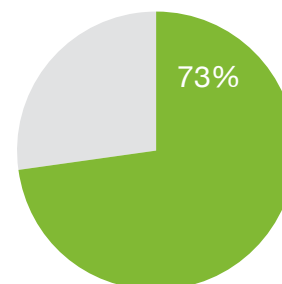
Sources of main meal (%)



7 in 10 respondents stated that they prepare and cook the main meal of the day at least five or more days per week, making this the most followed method for sourcing the main meal of the day.



Purchased a take-out meal from a fast-food or takeaway shop one or more days per week.



of respondents who identified as Asian stated that they were likely to eat out for their main meal of the day one or more days per week - this was higher than any other group.

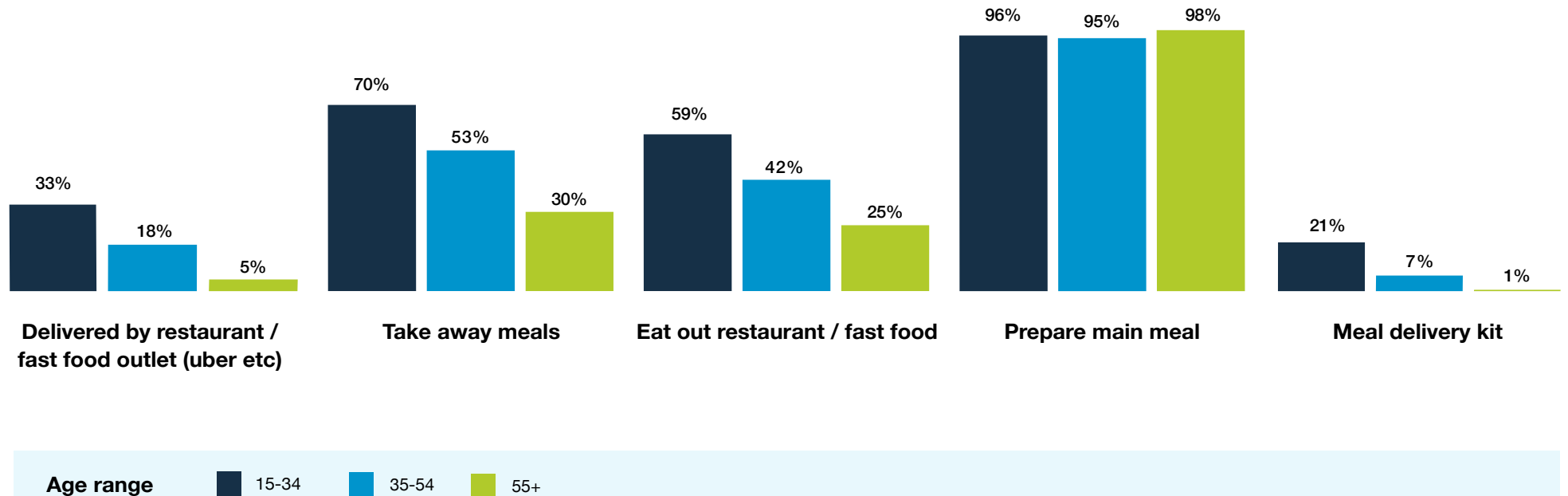
Q7: Delivered to your home from a restaurant or fast food outlet from Uber or similar delivery service – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Eat out at a restaurant or fast food chain – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Prepare and cook the meal in your home – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Buy a take-out meal from a fast food or takeaway shop – How many of the seven days of the week do you most commonly? (n=1,346)

How people source the main meal of the day

The age group of respondents had a marked effect on the way main meals were sourced.



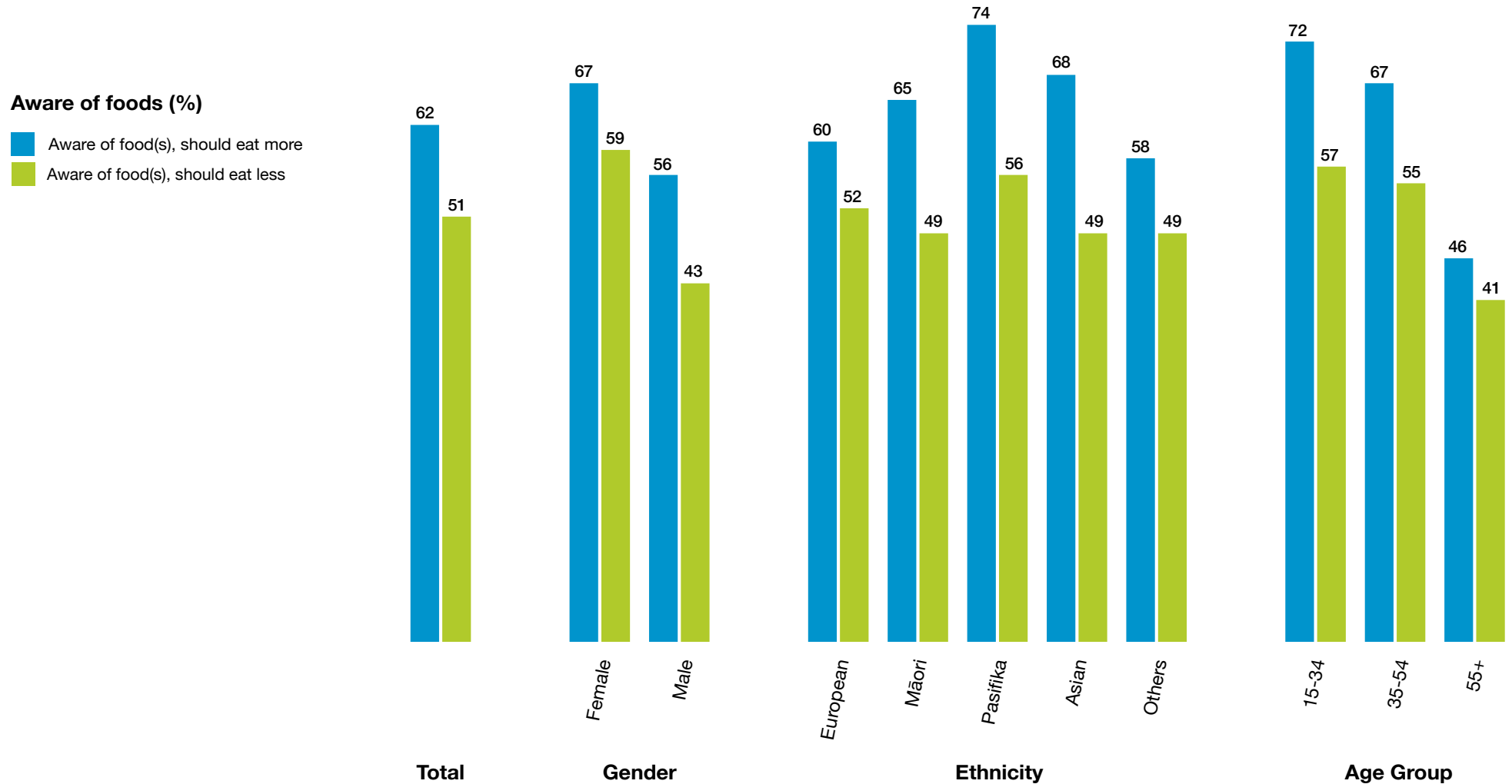
One or more days p/w



Q7: Delivered to your home from a restaurant or fast food outlet from Uber or similar delivery service – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Eat out at a restaurant or fast food chain – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Prepare and cook the meal in your home – How many of the seven days of the week do you most commonly? (n=1,346) Q7: Buy a take-out meal from a fast food or takeaway shop – How many of the seven days of the week do you most commonly? (n=1,346)

'Eat more' and 'eat less' foods

Over half of participants identified the need to change their diet.



Q8a: Are there any foods that you feel you should be eating more often? (n=1,346), Q9a: Are there any foods that you feel you are eating too much of? (n=1,346)

Top five 'eat more' and 'eat less' foods

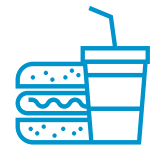
Many respondents believe they are not eating enough fruits and vegetables.

'Eat More' Foods %



Vegetables only	37
Fruit and vegetables	20
Fruits only	16
Meats (except fish)	11
Fish	11

'Eat Less' Foods %



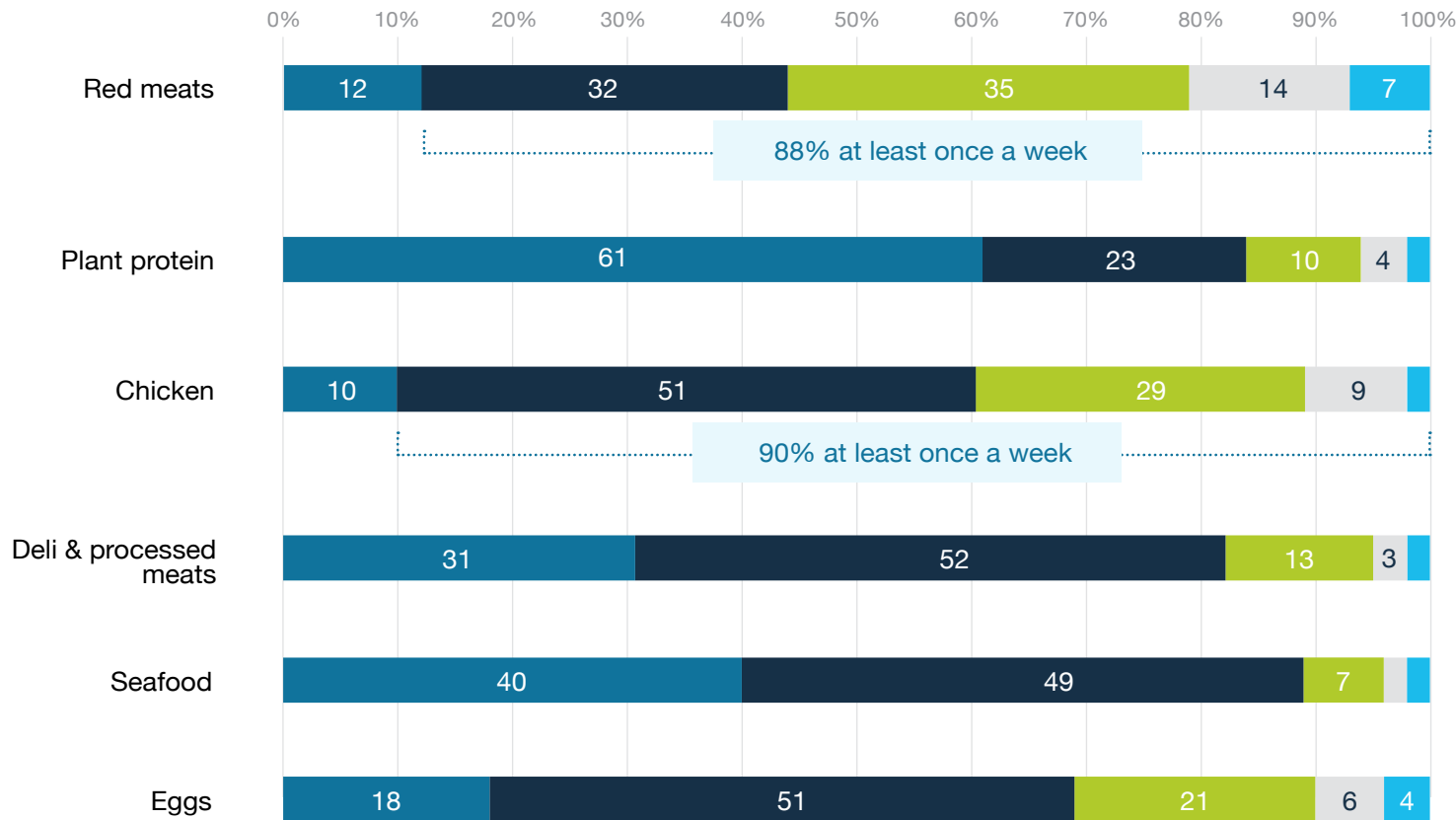
Sweets, dessert, sugars	33
Carbs, high carb food and breads and toast	25
Chips, fried fish / chips, fat	15
Meats (except fish)	13
Fast foods	11

Q8b: Are there any foods that you feel you should be eating more often – what is that? (n=834)

Q9b: Are there any foods that you feel you are eating too much of – what is that? (n=690)

Protein foods eaten

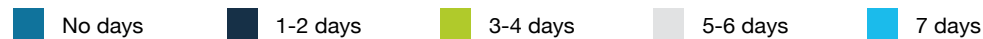
Traditional sources of protein remain the most commonly consumed.



78% of respondents who identified as Asian stated that they consumed plant proteins more than one day per week, versus 39% of all respondents.

Egg consumption (at least once a week) was highest among those who identified as Asian (93%), followed by Māori (92%) compared to 82% of all respondents.

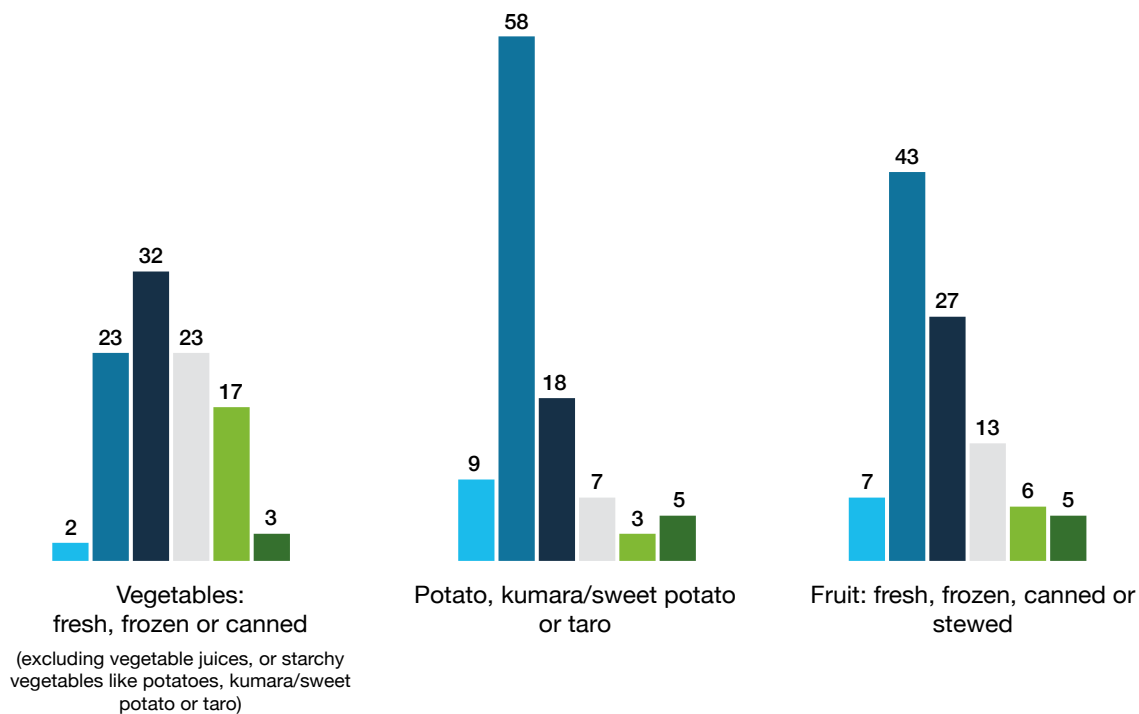
Days per week eaten (%)



Q10: Red meats like beef, lamb, pork, veal, goat, venison, – includes beef hamburgers but exclude sausages – On how many of the last seven days? (n=1,346) Q10: Plant protein like tofu, vegan meat substitutes, beans/lentils or others – On how many of the last seven days? (n =1,346) Q10: Chicken meats like drumsticks, breasts, whole chicken – includes chicken burger but excludes nuggets or chicken roll – On how many of the last seven days? (n =1,346) Q10: Deli and processed meats like sausages, hot dogs, salami, pastrami, ham, bacon, corned beef, canned meat, chicken nuggets, cheerios, luncheon or surimi – On how many of the last seven days? (n =1,346) Q10: Seafood like fish, mussels, prawns, shrimp – includes canned or frozen – On how many of the last seven days? (n =1,346) Q10: Eggs, boiled, poached, fried or scrambled – On how many of the last seven days? (n =1,346)

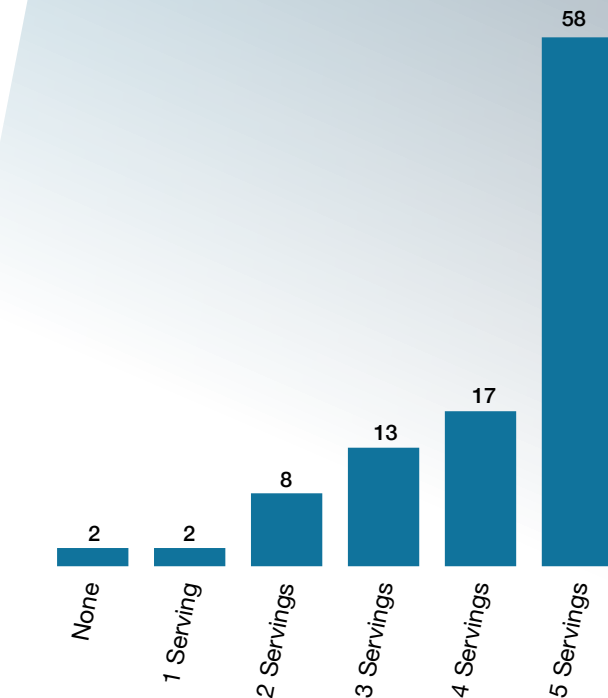
Vegetables and fruits eaten per day

Kiwis are not reaching the target of five plus a day.



On average how many servings per day (%)

■ Never, I don't eat them
 ■ 1 Serving
 ■ 2 Servings
 ■ 3 Servings
 ■ 4+ Servings
 ■ Don't know



All three categories aggregated – vegetables, root and starchy vegetables and fruit

2 in 5 respondents identified eating the recommended three or more serves of vegetables per day (excluding starchy vegetables), leaving 60% not consuming enough.



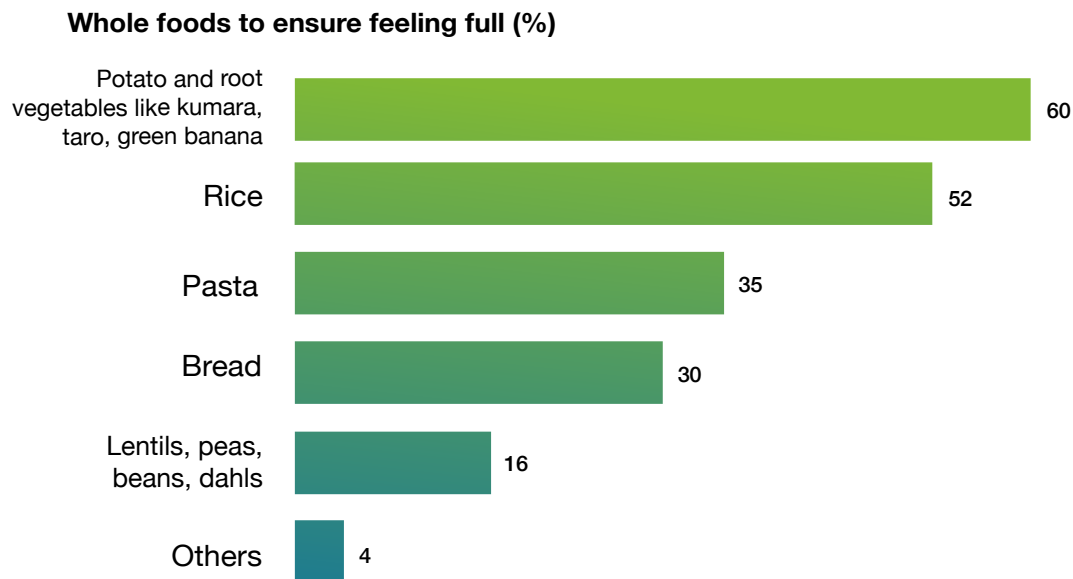
46% of respondents identified that they are eating the recommended two or more serves of fruit per day, leaving 54% that are not consuming enough.



Q11: On average how many servings of vegetables – fresh, frozen or canned do you eat per day? (n=1,346)
 Q12: On average how many servings of potato, kumara / sweet potato or taro do you eat per day? (n=1,346)
 Q13: On average how many servings of fruit – fresh, frozen or canned do you eat per day? (n=1,346)

Fill-up foods

Potato and root vegetables were the most common filler foods.



60% of those aged 15-34 stated that they were likely to include rice to ensure that they were full after their meal.



78% of respondents aged 55+ were more likely to include potato and root vegetables in their meal, to ensure they were full.



47% of respondents who identified as Māori stated that bread was a more common choice to ensure they felt full after a meal.



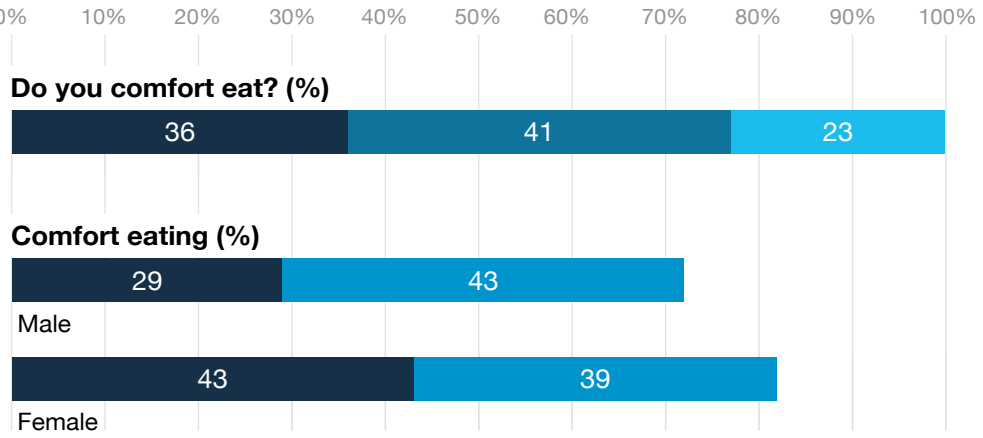
85% of respondents who identified as Asian stated that they were more likely to include rice in a meal to ensure that they felt full after a meal, followed by those who identified as Pasifika (70%).



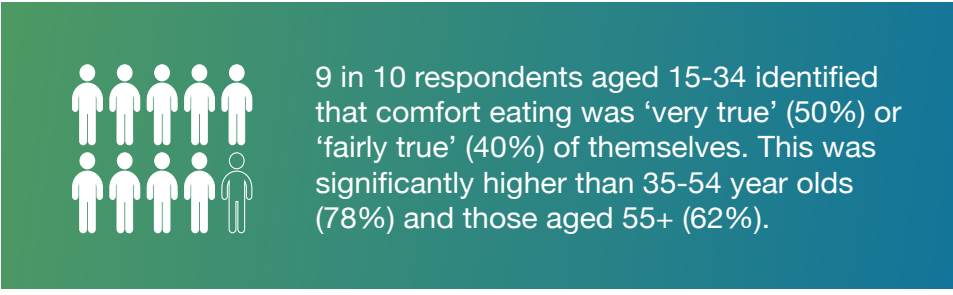
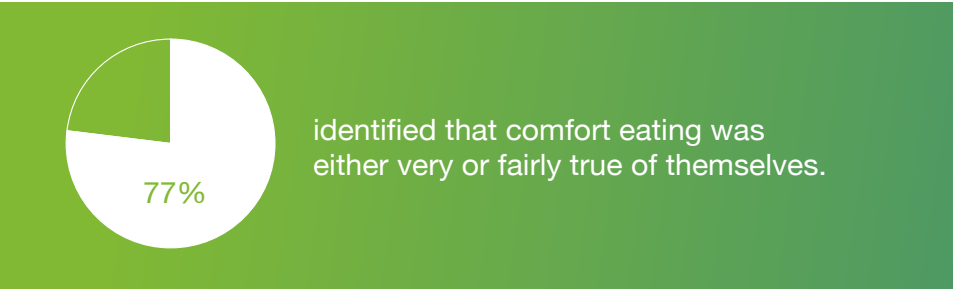
Q14: To make sure that you will be full after your meal, which of these would you be most likely to include in your main meal? (n=1,346)

Comfort eating

Females were more likely to comfort eat when feeling down, stressed or gloomy.



- Very true
- Fairly true
- Not true



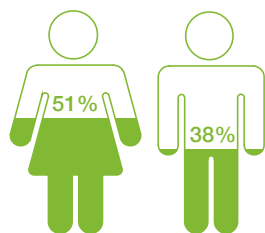
Q15a: A person feeling down, stressed or gloomy on occasion, might go and find something to eat as a pick-me-up and to comfort themselves. Do you feel this is true of you? (n=1,346)

Comfort eating

Respondents were significantly less likely to choose a 'healthy' snack when comfort eating.



Among Pasifika respondents, ice cream (49%) and fast food (46%) was the most preferred comfort food, similarly among Asians, fast food (39%) and ice cream (34%) compared with sweets at 22% and 30% respectively.

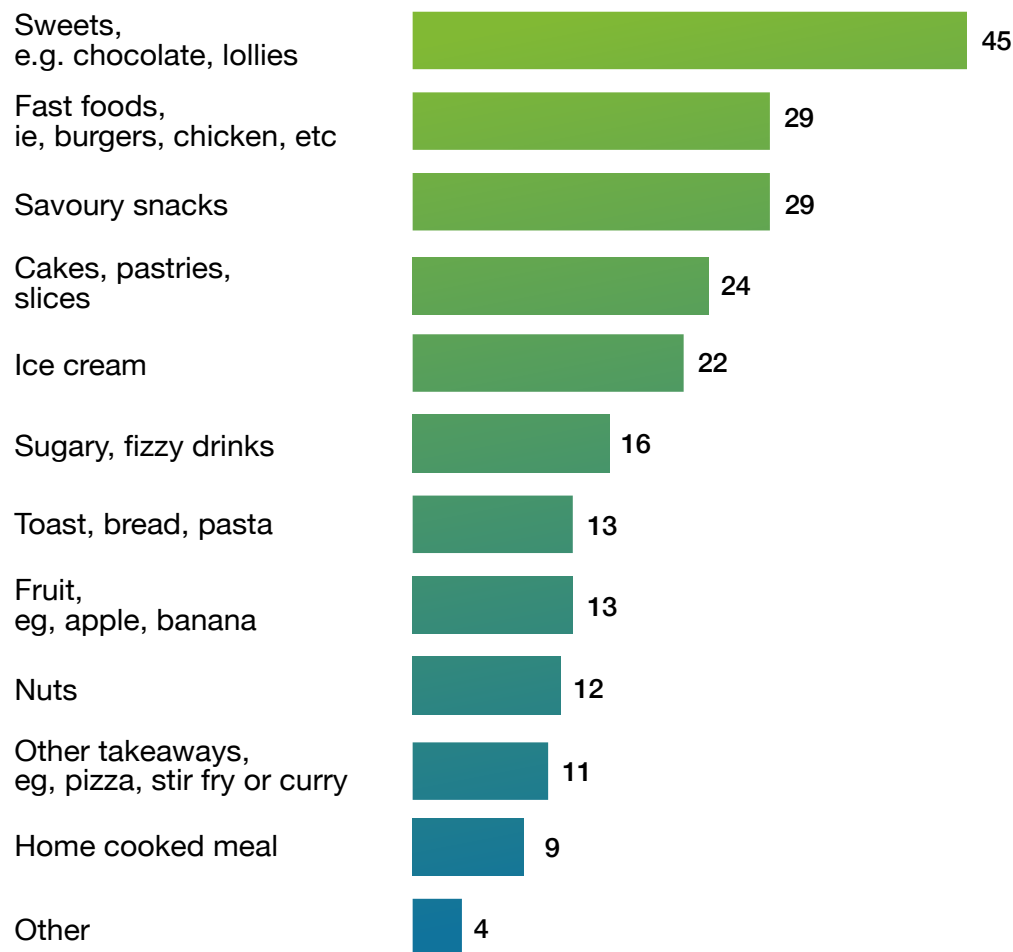


Half of female respondents chose sweets as their preferred comfort food compared to just over a third of males.



1 in 4 respondents aged 55+ chose healthier snacks such as fruit and / or nuts as their preferred comfort food.

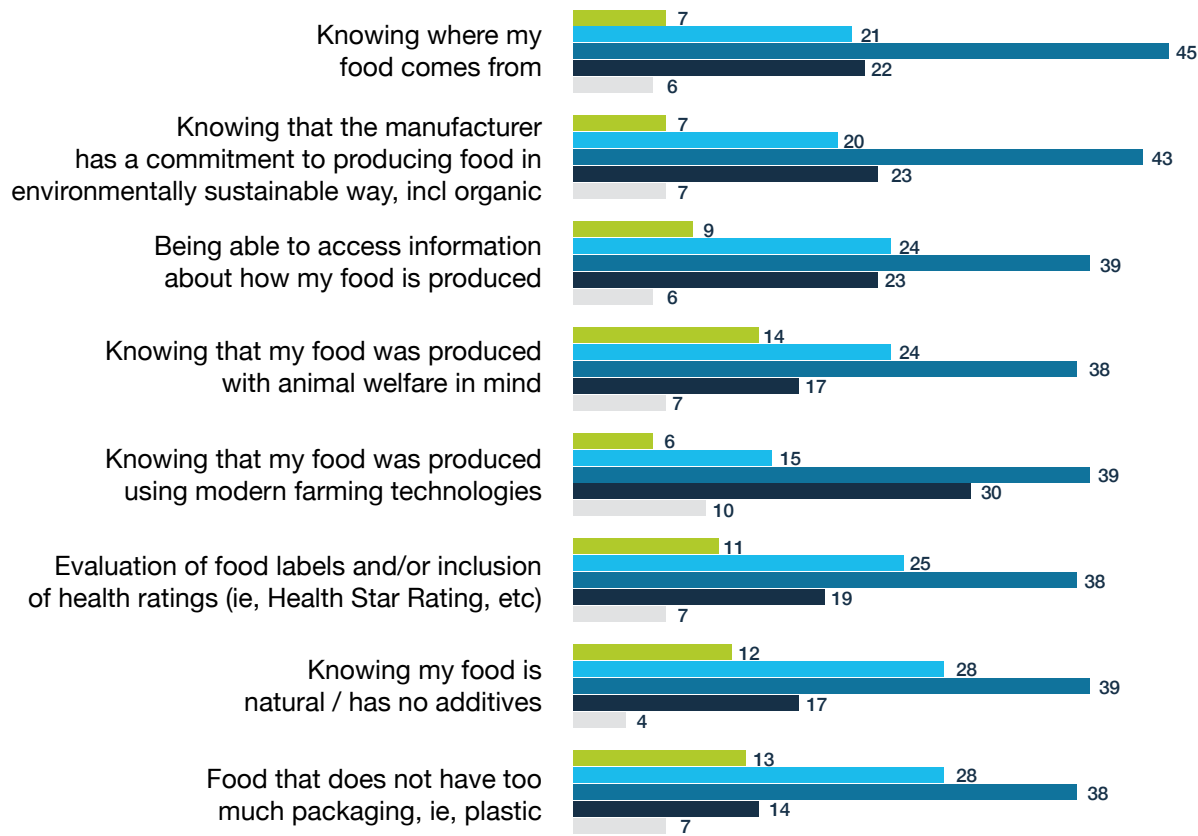
Most common choice of comfort food (%)



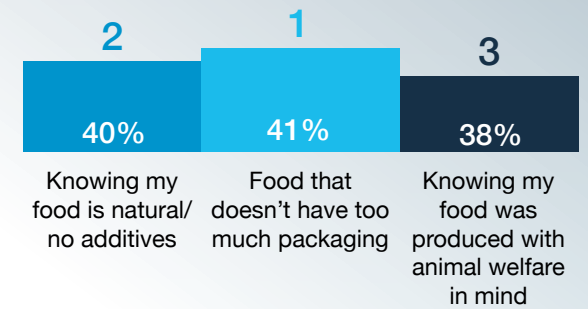
Food choice criteria - buying

Having 'natural' food without additives and foods with less packaging / plastic were perceived to be most important.

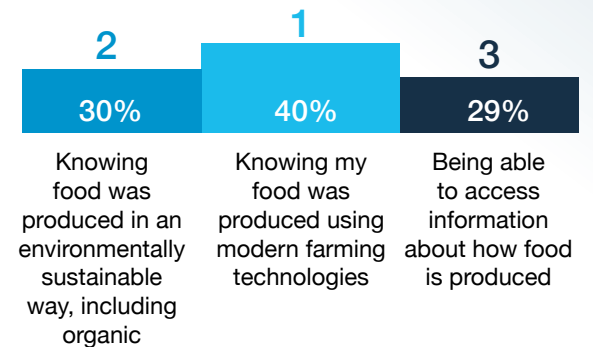
Influence buying decision (%)



Extremely or very important – top 3



Not very or not important – top 3

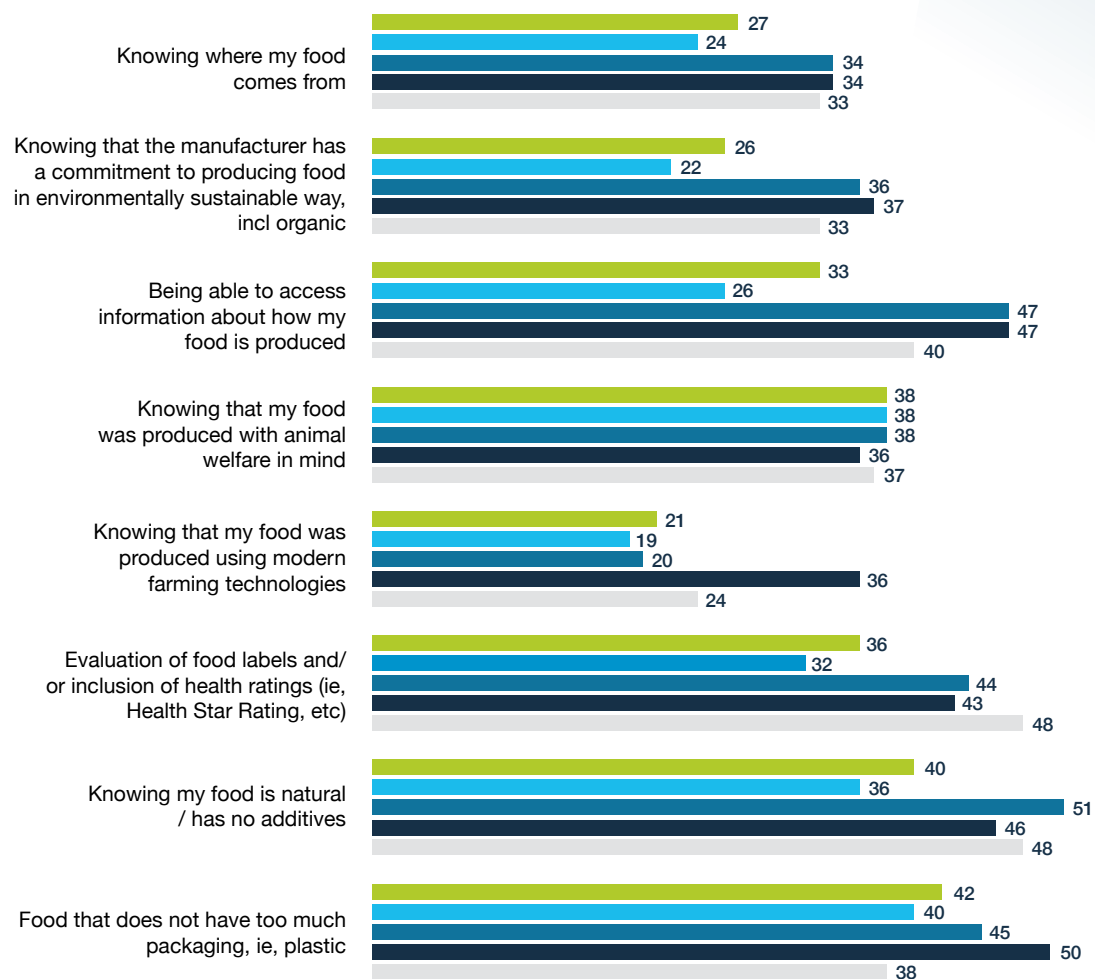


Q16: How important are the following factors in your decision to purchase a food or beverage? (n=1,346)

Food choice criteria - buying

Those who identified as Pasifika and Māori were more likely to show greater care when making food purchasing decisions.

Influence buying decision (%) answers: extremely or very important



■ Total
 ■ NZ Euro
 ■ Māori
 ■ Pasifika
 ■ Asian

Q16: How important are the following factors in your decision to purchase a food or beverage? (n=1,346)

Important vs. unimportant considerations

Extremely or very important

Not very or not important



NZ Euro

40% food that doesn't have too much packaging



43% knowing food was produced using modern farming technologies



Māori

51% knowing food is natural / no additives



38% knowing food was produced using modern farming technologies



Pasifika

50% food that doesn't have too much packaging



30% Knowing where my food comes from



Asian

48% evaluation of food labels and / or inclusion of health ratings + knowing food is natural / no additives

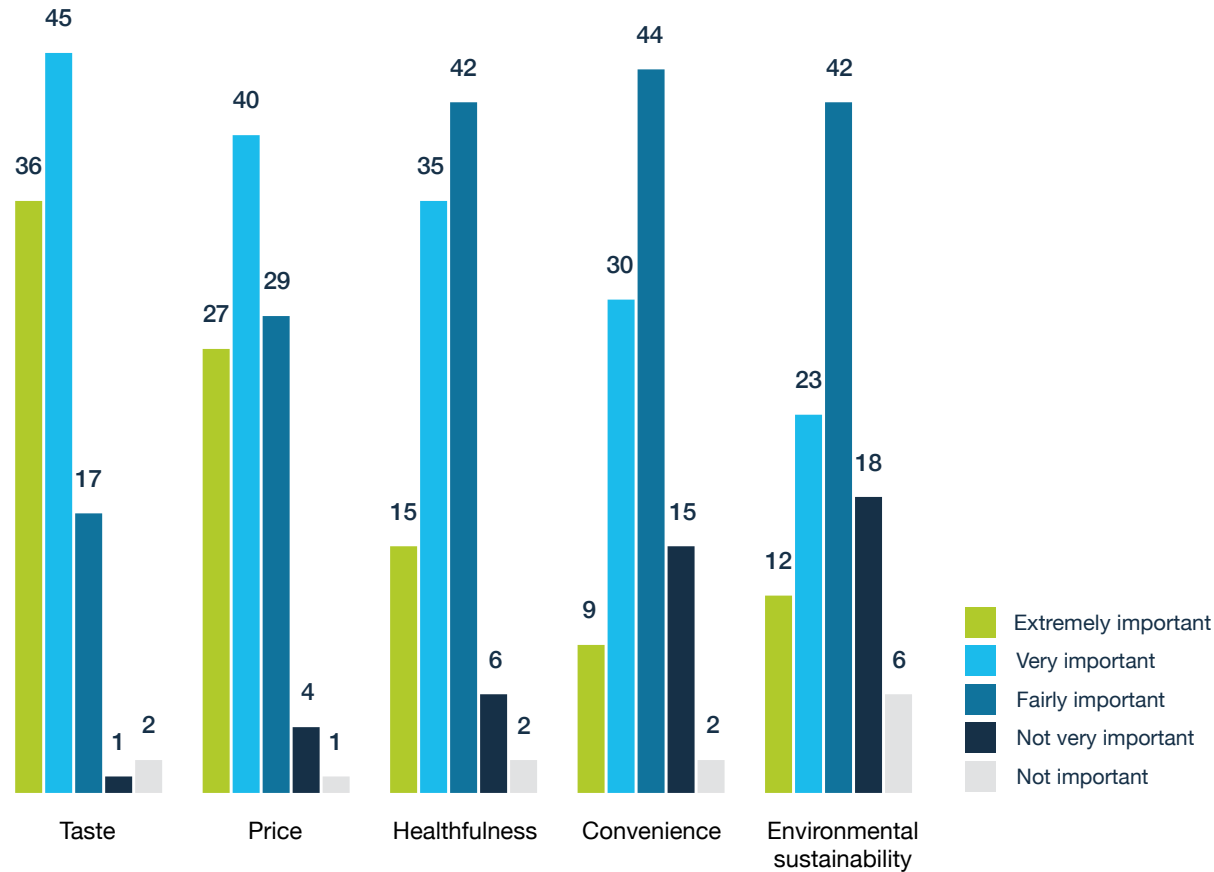


30% knowing food was produced using modern farming technologies

Food choice criteria - eating

Taste and price were deemed most important when making decisions around food.

Influence eating decision (%)



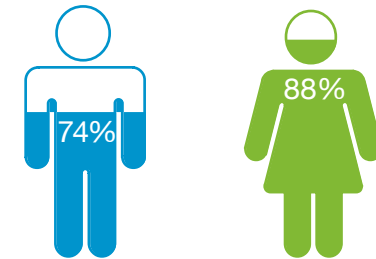
Top three factors

Extremely or very important



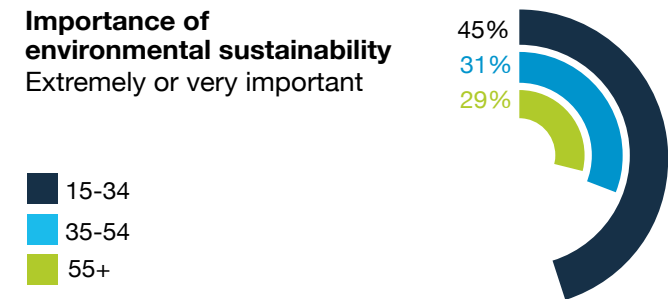
Importance of taste

Extremely or very important



Importance of environmental sustainability

Extremely or very important

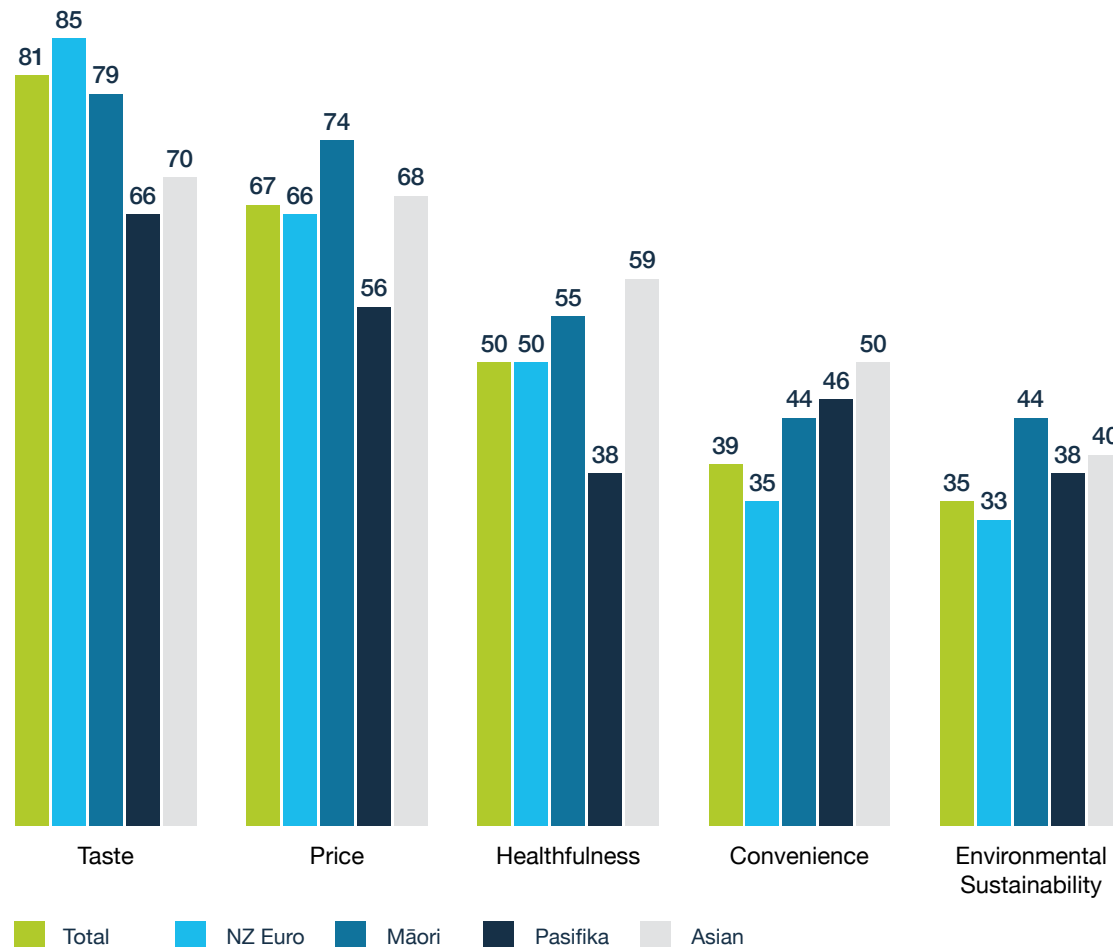


Q17: How important are the following factors in your decision to buy food and beverage? (n=1,346)

Food choice criteria - eating

Taste and price played a key role in purchasing decisions.

Influence eating decision (%) answers: extremely or very important



Healthfulness

Was identified as extremely or very important making purchasing decisions, most among those who identified as Asian (59%) and least among those who identified as Pasifika (38%).



Price

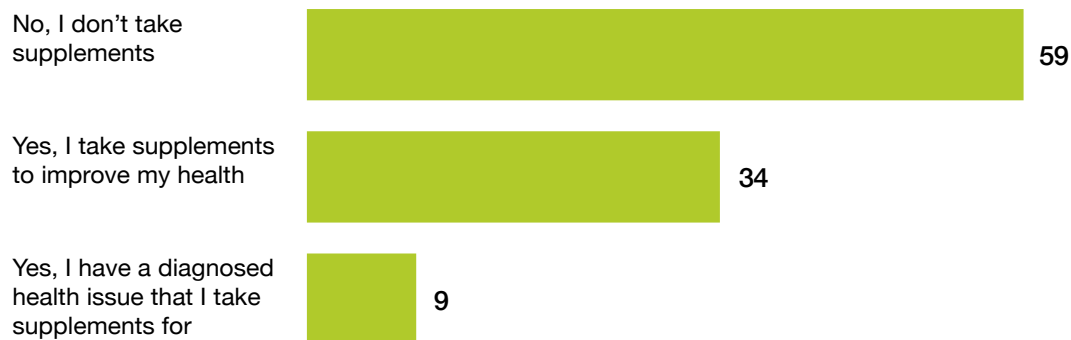
was rated as extremely important, most among those who identified as Māori (36%), Pasifika (35%), and those aged 15-34 (31%).



rated **convenience** as **extremely or very important**, which was markedly of less importance overall; however this spiked among those who identified as Asian (50%) followed by those aged 15-34 (47%).

Supplements taken

Take any food supplements (%)




Among respondents who took supplements to improve their health, females (39%) and those who identified as Asian (40%) were most likely to do so.

Overall Māori (70%) were the least likely to take supplements compared to 59% of all respondents.

Top six mentions	Total %
Vitamins or multivitamins unspecified	28
Vitamins D and C, together or alone	19
Magnesium	18
Vitamin B12, or just B	12
Fish oil, krill	11
Iron supplement	9

Next six mentions	Total %
Probiotics	4
Omega 3	4
Garlic product, any mentions of garlic	4
Protein	4
Glucosamine	3
Collagen	3

*These tables list the supplements people mentioned taking. These were unprompted mentions and multiple mentions were allowed.

The consumption of...

