

6 Dietary Habits

The Dietary Habits Questionnaire consisted of a series of questions on key dietary patterns and habits associated with diet quality and/or nutritional status. Participants were asked about key behaviours such as breakfast consumption, the frequency of eating certain foods, food preparation and cooking practices (eg, removal of excess fat, addition of salt), and choosing low fat or reduced-salt foods.

Frequency of intake focused on the major food groups, which are important for assessing diet quality, such as vegetables and fruit, breads, meat and seafood, takeaways, sugary drinks and confectionery. Questions on specific foods focused primarily on dietary fat intake by examining the type of milk, spreads and cooking fats usually used.

Most of these questions included five or more response options. Where possible, the responses to these questions were combined to make comparisons against specific nutritional guidelines or recommendations, or to aid interpretation of the results. The number of participants in each response category was often too small to present the results for each ethnic group stratified by age group and sex. Therefore, detailed results for Māori, Pacific and New Zealand European and Other ethnic groups are presented in the online data tables (www.moh.govt.nz).

As with all self-reported dietary data, results may be influenced by social desirability (ie, a tendency to over-report healthy foods and under-report less healthy foods).

6.1 Having breakfast every day

Eating breakfast regularly is associated with the prevention of weight gain and a lower body mass index (BMI) compared to skipping breakfast (Cho et al 2003; Ma et al 2003; van der Heijden et al 2007).

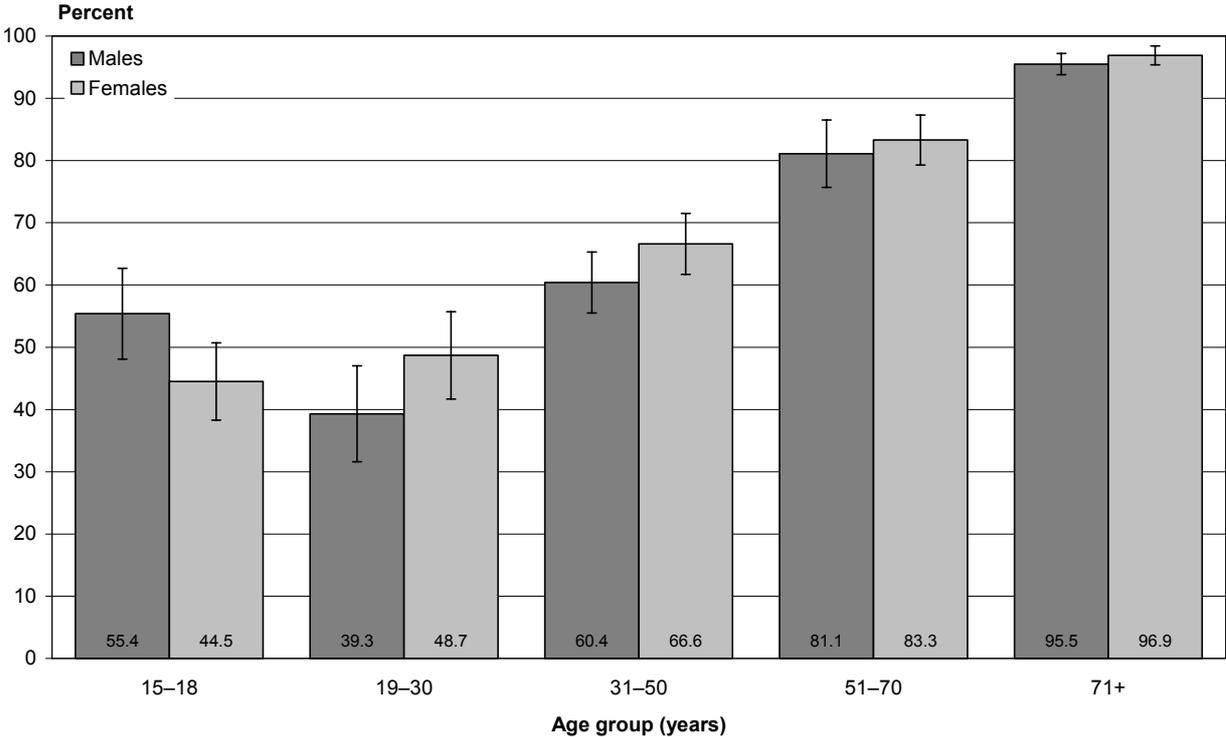
Survey question

How many days in an average week do you have something to eat for breakfast? You may have eaten at home, in a car, at work or in a café.

Breakfast was eaten daily by 66.9% of the total population aged 15 years and over, and a further 18.8% ate breakfast three to six times a week. Six percent did not usually eat breakfast (Table 6.1).

Overall, the proportion of both males and females who reported eating breakfast daily increased with increasing age, except that males aged 19–30 years were less likely to have eaten breakfast daily (39.3%) compared to males aged 15–18 years (55.4%) (Figure 6.1).

Figure 6.1: Percent eating breakfast daily, by age group and sex



There was a decrease in the proportion of those who reported consuming breakfast daily with increasing neighbourhood deprivation in both males and females. Those living in NZDep2006 quintile 1 were more likely to *Eat breakfast daily* (males 72.0%; females 79.0%) compared to those living in quintile 5 (males 54.8%; females 56.6%).

Table 6.1: Frequency of eating breakfast per week, by age group, NZDep2006 and sex

		0–2 times per week (prevalence), (95% CI)	3–6 times per week (prevalence), (95% CI)	7 times per week (prevalence), (95% CI)
NZ population (aged 15+)		14.4 (12.9–15.9)	18.8 (17.1–20.4)	66.9 (65.2–68.6)
By age group (years)				
Males	15–18	13.9 (9.6–18.3)	30.7 (23.7–37.7)	55.4 (48.0–62.7)
	19–30	27.0 (19.7–34.3)	33.7 (25.5–41.9)	39.3 (31.6–47.0)
	31–50	18.9 (14.8–23.0)	20.7 (16.3–25.1)	60.4 (55.5–65.3)
	51–70	8.9 (5.4–12.4)	10.0 (6.2–13.8)	81.1 (75.7–86.5)
	71+	1.7 (0.8–3.1)	2.8 (1.6–4.5)	95.5 (93.9–97.2)
	Total	15.9 (13.7–18.1)	19.6 (17.4–21.9)	64.5 (62.1–66.9)
Females	15–18	21.0 (16.4–25.5)	34.5 (29.1–40.0)	44.5 (38.3–50.7)
	19–30	21.7 (16.2–27.2)	29.6 (23.1–36.0)	48.7 (41.7–55.7)
	31–50	14.6 (11.1–18.2)	18.8 (14.1–23.4)	66.6 (61.7–71.5)
	51–70	6.6 (4.0–9.2)	10.1 (7.2–13.0)	83.3 (79.3–87.3)
	71+	1.3 (0.4–2.9)	1.8 (0.9–3.2)	96.9 (95.5–98.4)
	Total	13.0 (11.1–14.8)	17.9 (15.7–20.2)	69.1 (66.7–71.5)
By NZDep2006 quintile				
Males	1	12.0 (6.4–17.5)	16.0 (10.1–22.0)	72.0 (65.1–78.9)
	2	13.3 (8.8–17.9)	17.6 (11.6–23.6)	69.0 (62.9–75.2)
	3	16.4 (11.5–21.3)	18.6 (13.0–24.2)	64.9 (57.6–72.3)
	4	18.0 (11.9–24.1)	23.2 (17.5–28.9)	58.8 (52.1–65.5)
	5	21.2 (15.9–26.5)	24.0 (18.4–29.7)	54.8 (49.0–60.6)
Females	1	8.7 (4.2–15.5)	12.3 (7.9–16.7)	79.0 (73.0–84.9)
	2	8.4 (5.4–11.4)	14.3 (10.0–18.7)	77.3 (72.6–82.0)
	3	11.5 (7.4–15.6)	18.9 (12.1–25.8)	69.5 (61.5–77.5)
	4	15.5 (10.3–20.7)	21.9 (16.7–27.1)	62.6 (56.6–68.7)
	5	21.4 (16.5–26.3)	22.0 (18.2–25.7)	56.6 (51.5–61.8)

Notes:

Frequency for never, 1, 2, 3, 4, 5, 6, 7 times per week are presented in the online data tables.

Results for Māori, Pacific and NZEO are presented in the online data tables.

6.2 Eating from the four major food groups

The *Food and Nutrition Guidelines for Healthy Adults* (Ministry of Health 2003b) recommend that people consume a variety of nutritious foods from each of the four major food groups each day. These are:

- vegetables and fruit
- breads and cereals, preferably whole-grain
- milk and milk products, preferably reduced- or low-fat options
- lean meat, poultry, seafood, eggs or alternatives.

Vegetables and fruit

Vegetables and fruit are highly nutritious and have been shown to protect against heart disease, stroke and high blood pressure (World Health Organization 2003). There is also evidence that vegetables and fruit protect against cancers of the mouth, larynx, pharynx, oesophagus and stomach, and that fruit also protects against lung cancer (World Cancer Research Fund and American Institute for Cancer Research 2007).

In New Zealand it is recommended that adults eat at least three servings of vegetables and at least two servings of fruit each day (Ministry of Health 2003b). Note that this recommendation allows up to one serving of juice to be counted, whereas the survey question excluded juice. The *Food and Nutrition Guidelines* recommend limiting the consumption of fruit juice because of the high sugar content.

Survey questions

On average, how many servings of fruit (fresh, frozen, canned or stewed) do you eat a day? Do not include fruit juice or dried fruit. (A serving is the same as a medium piece of fruit like an apple or two small pieces of fruit like two apricots, or half a cup of stewed fruit).

On average, how many servings of vegetables (fresh, frozen or canned) do you eat a day? Do not include vegetable juices. (A serving is the same as one potato, half a cup of peas or a cup of salad).

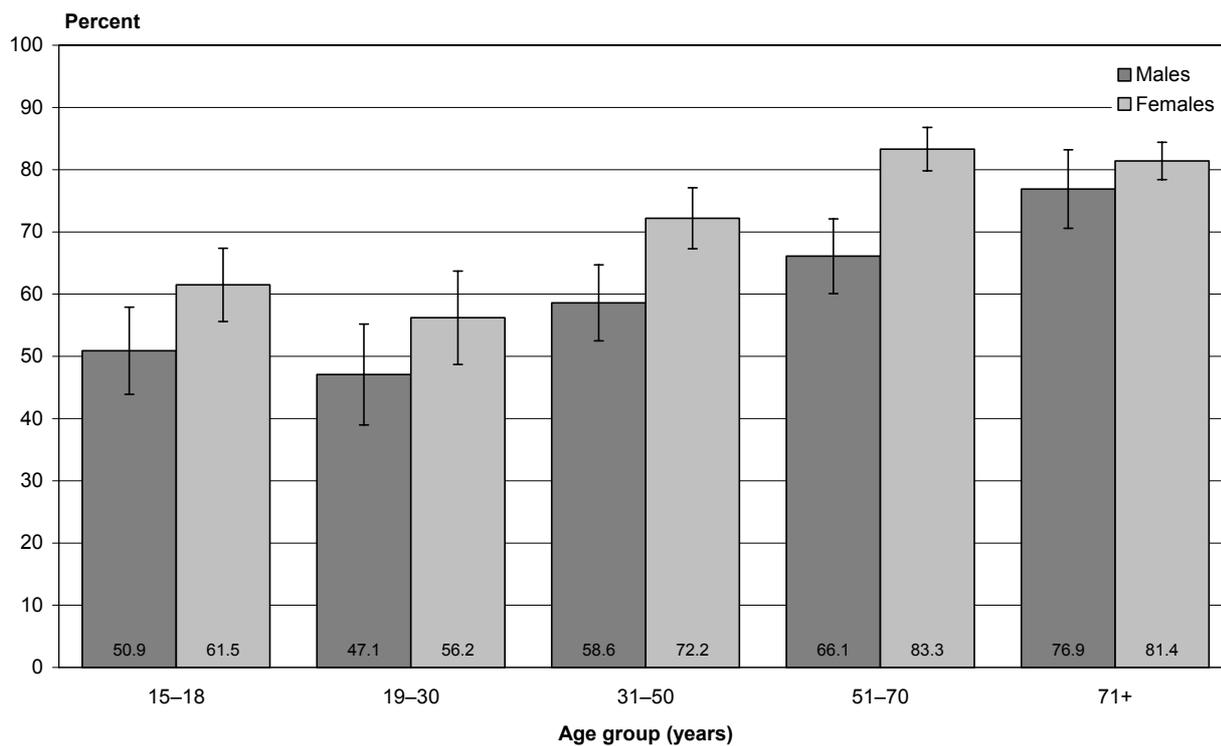
The recommended three or more servings of vegetables each day was eaten by 66.0% of the total population aged 15 years and over (Table 6.2). The recommended two or more servings of fruit each was eaten by 60.4% of the total population aged 15 years and over (Table 6.3).

Recommended vegetable intake

The recommended three or more servings of vegetables each day was eaten by 72.2% of females and 59.3% of males (Table 6.2). Females aged 31–50 and 51–70 years were more likely than males in these age groups to have reported eating at least three servings of vegetables a day (Figure 6.2). There were no differences between males and females for the other age groups.

Younger females (15–30 years) were less likely to report eating at least three servings of vegetables a day compared to females of other ages, with those aged 51+ years most likely to report consuming the recommended intake. Younger males (15–30 years) were less likely to report eating at least three servings of vegetables a day compared to males aged 51+ years.

Figure 6.2: Consumption of 3+ servings of vegetables a day, by age group and sex



Males and females living in the least deprived neighbourhoods (quintile 1) were more likely to report eating three or more servings of vegetables per day (males 65.6%; females 82.2%) than males and females living in the most deprived neighbourhoods (quintile 5: males 54.4%; females 62.4%).

Overall, the proportion of New Zealanders aged 15 years and over eating at least three servings of vegetables a day decreased with increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.2: Number of servings of vegetables consumed per day, by age group, NZDep2006 and sex

		< 1 serving a day (prevalence), (95% CI)	1 serving a day (prevalence), (95% CI)	2 servings a day (prevalence), (95% CI)	3+ servings a day (prevalence), (95% CI)
Total population		2.8 (2.1–3.6)	10.1 (8.7–11.5)	20.9 (19.1–22.7)	66.0 (63.7–68.2)
By age group (years)					
Males	15–18	4.5 (2.3–7.8)	17.5 (11.3–23.7)	26.5 (20.6–32.4)	50.9 (43.8–57.9)
	19–30	4.7 (2.1–8.8)	21.1 (14.6–27.7)	27.0 (20.0–34.0)	47.1 (39.1–55.2)
	31–50	3.1 (1.3–5.0)	13.0 (9.2–16.8)	25.2 (20.1–30.3)	58.6 (52.4–64.7)
	51–70	3.2 (1.3–6.5)	10.1 (6.1–14.1)	20.4 (15.1–25.6)	66.1 (60.1–72.1)
	71+	2.0 (1.0–3.4)	4.8 (3.2–6.5)	16.3 (10.3–22.2)	76.9 (70.6–83.2)
	Total	3.5 (2.2–4.7)	13.5 (11.0–16.0)	23.6 (20.7–26.4)	59.3 (55.7–62.9)
Females	15–18	4.0 (2.2–6.6)	8.1 (5.2–11.0)	26.4 (20.8–32.0)	61.5 (55.6–67.4)
	19–30	2.4 (1.0–4.8)	13.1 (8.6–17.5)	27.9 (21.6–34.1)	56.2 (48.7–63.7)
	31–50	2.7 (1.3–4.9)	6.4 (3.9–8.9)	18.3 (24.4–22.2)	72.2 (67.3–77.1)
	51–70	1.5 (0.7–3.0)	3.6 (2.0–5.3)	11.5 (8.2–14.8)	83.3 (79.9–86.8)
	71+	0.9 (0.4–1.9)	5.1 (3.3–7.0)	12.6 (9.8–15.3)	81.4 (78.4–84.4)
	Total	2.2 (1.5–3.0)	7.0 (5.6–8.4)	18.4 (16.1–20.6)	72.2 (69.5–74.8)
By NZDep2006 quintile					
Males	1	3.2 (0.6–9.4)	9.7 (5.3–16.1)	21.4 (15.2–27.7)	65.6 (57.9–73.4)
	2	1.7 (0.4–4.6)	10.1 (5.6–14.6)	21.4 (13.9–28.9)	66.7 (58.3–75.1)
	3	3.2 (1.1–7.1)	13.2 (7.8–18.6)	28.7 (22.8–34.6)	54.7 (47.7–61.7)
	4	3.2 (1.4–6.4)	20.0 (14.0–26.0)	23.7 (18.6–28.7)	52.9 (46.4–59.4)
	5	6.5 (3.7–9.3)	16.0 (10.7–21.2)	22.8 (17.6–27.9)	54.4 (47.9–61.0)
Females	1	0.9 (0.0–4.4)	3.4 (1.4–7.0)	13.5 (9.2–17.8)	82.2 (78.0–86.4)
	2	2.5 (0.9–5.4)	3.6 (1.5–7.2)	19.9 (14.8–25.0)	74.0 (69.0–79.0)
	3	1.1 (0.3–2.8)	7.3 (4.4–10.3)	15.7 (10.3–21.2)	75.6 (69.5–81.7)
	4	2.7 (1.6–4.2)	9.1 (5.2–13.1)	20.1 (15.3–24.8)	67.1 (61.1–73.1)
	5	4.0 (1.9–6.0)	11.5 (8.9–14.1)	22.2 (18.1–26.2)	62.4 (57.7–67.0)

Notes:

Never eat vegetables = 0.2%, and so was not recorded in the table.

Results for 3, 4, 5+ servings a day are presented in the online data tables.

Results for Māori, Pacific and NZEO are presented in the online data tables.

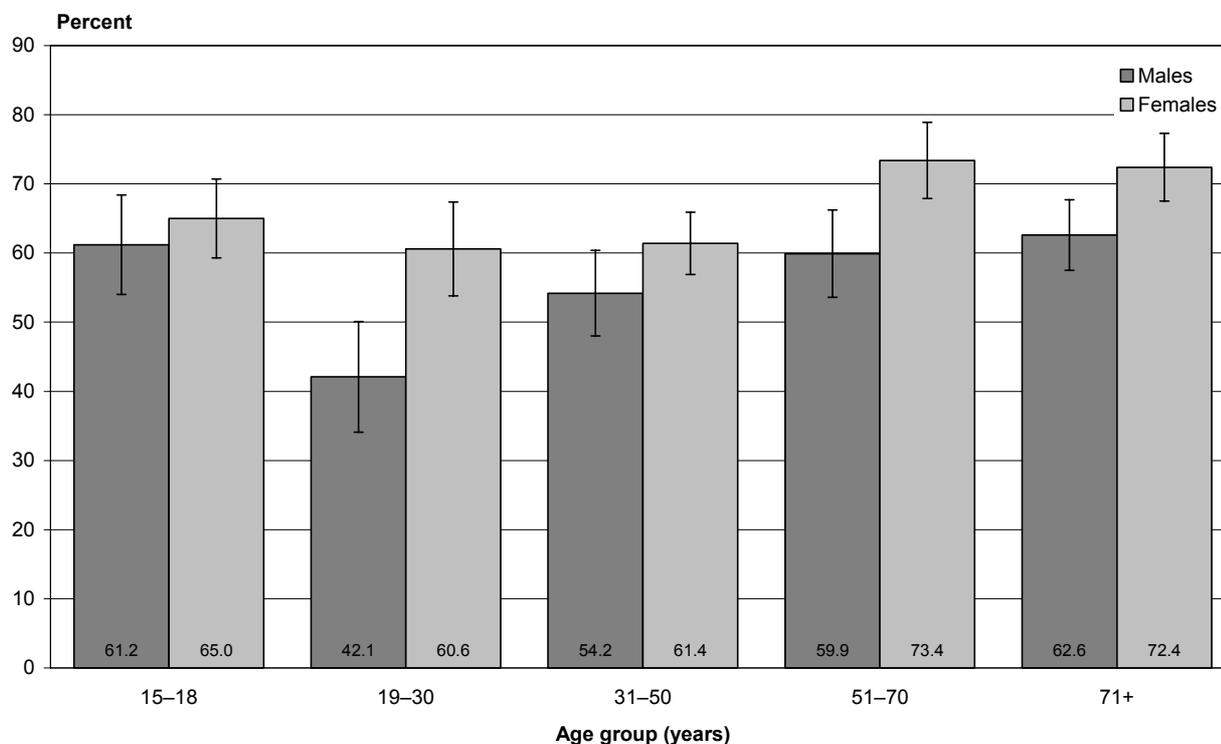
Recommended fruit intake

The recommended two or more servings of fruit each day was reported to be eaten by 54.6% of males and 65.8% of females (Table 6.3). This did not include fruit juice.

Females aged 19–30 and 51–70 years were more likely to report eating the recommended number of servings compared to males in the same age groups (Figure 6.3). There were no differences between males and females for the other age groups.

Males aged 19–30 years were less likely to report eating at least two servings of fruit a day compared to males in other age groups, except 31–50 years. Females aged 19–30 years were less likely to report eating at least two servings of fruit a day compared to females aged 51+ years.

Figure 6.3: Consumption of 2+ servings of fruit per day, by age group and sex



Males living in areas of high neighbourhood deprivation (quintile 5) were less likely to report eating at least two servings of fruit a day (42.8%) compared to males living in areas of low neighbourhood deprivation (quintile 1: 66.0%).

Females living in areas of high neighbourhood deprivation (quintile 5) were less likely to report eating at least two servings of fruit a day (57.4%) compared to females living in areas of low neighbourhood deprivation (quintile 1: 73.6%).

Overall, there was a decrease in the proportion of those who reported eating at least two servings of fruit a day with increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.3: Number of servings of fruit consumed per day, by age group, NZDep2006 and sex

		Never (prevalence), (95% CI)	< 1 serving a day (prevalence), (95% CI)	1 serving a day (prevalence), (95% CI)	2+ servings a day (prevalence), (95% CI)
Total population		2.6 (1.9–3.3)	14.8 (13.4–16.3)	22.2 (20.2–24.1)	60.4 (58.6–62.1)
By age group (years)					
Males	15–18	3.2 (1.7–5.6)	16.8 (11.7–21.9)	18.7 (12.9–24.6)	61.2 (54.0–68.4)
	19–30	4.8 (2.0–9.6)	25.6 (18.1–33.0)	27.5 (19.3–35.6)	42.1 (34.2–50.1)
	31–50	3.6 (1.8–6.3)	18.1 (13.4–22.7)	24.1 (18.5–29.7)	54.2 (48.1–60.4)
	51–70	2.4 (0.8–5.2)	14.0 (9.6–18.5)	23.7 (18.0–29.4)	59.9 (53.5–66.2)
	71+	2.6 (1.3–4.6)	10.4 (7.7–13.1)	24.4 (19.8–29.1)	62.6 (57.4–67.7)
	Total	3.4 (2.3–4.5)	17.7 (15.2–20.2)	24.3 (20.9–27.6)	54.6 (51.4–57.8)
Females	15–18	1.7 (0.7–3.3)	11.7 (8.2–15.2)	21.6 (16.8–26.5)	65.0 (59.3–70.7)
	19–30	3.3 (1.2–7.1)	14.4 (9.8–19.1)	21.7 (15.8–27.5)	60.6 (53.8–67.4)
	31–50	2.1 (1.0–3.8)	14.2 (11.2–17.3)	22.3 (18.2–26.4)	61.4 (56.9–65.9)
	51–70	1.1 (0.3–2.9)	10.1 (6.8–13.3)	15.4 (10.8–20.0)	73.4 (67.9–78.9)
	71+	0.7 (0.2–1.9)	5.9 (3.9–7.9)	21.0 (16.2–25.9)	72.4 (67.5–77.3)
	Total	1.9 (1.1–2.7)	12.1 (10.5–13.8)	20.2 (18.0–22.4)	65.8 (63.6–67.9)
By NZDep2006 quintile					
Males	1	1.5 (0.2–4.7)	11.9 (7.0–16.8)	20.6 (14.3–27.0)	66.0 (59.3–72.7)
	2	2.3 (0.7–5.7)	16.7 (10.7–22.7)	26.8 (19.7–33.9)	54.3 (46.1–62.4)
	3	2.9 (0.9–6.8)	14.7 (9.0–20.5)	24.6 (18.2–31.0)	57.8 (51.2–64.3)
	4	5.5 (2.5–10.4)	22.2 (15.5–28.9)	23.7 (17.2–30.3)	48.6 (40.6–56.5)
	5	5.6 (3.0–9.4)	25.3 (20.5–30.1)	26.4 (20.3–32.5)	42.8 (37.2–48.4)
Females	1	0.1 (0.0–0.4)	11.3 (7.3–16.5)	15.1 (9.8–20.4)	73.6 (67.9–79.3)
	2	1.4 (0.3–3.8)	10.7 (6.1–15.4)	15.3 (10.8–19.9)	72.5 (67.2–77.9)
	3	2.2 (0.5–6.1)	11.6 (7.2–16.0)	24.4 (19.0–29.9)	61.8 (55.7–67.8)
	4	2.5 (1.2–4.5)	12.4 (9.0–15.9)	21.5 (16.4–26.7)	63.5 (57.8–69.3)
	5	3.1 (1.7–5.3)	15.0 (11.0–19.0)	24.4 (19.9–28.9)	57.4 (52.1–62.7)

Notes:

Results for 2, 3, 4+ servings a day are presented in the online data tables.

Results for Māori, Pacific and NZEO are presented in the online data tables.

Bread

The *Food and Nutrition Guidelines* recommend that adults eat at least six servings of breads and cereals each day, preferably whole-grain varieties. This report comments on the type of bread chosen.

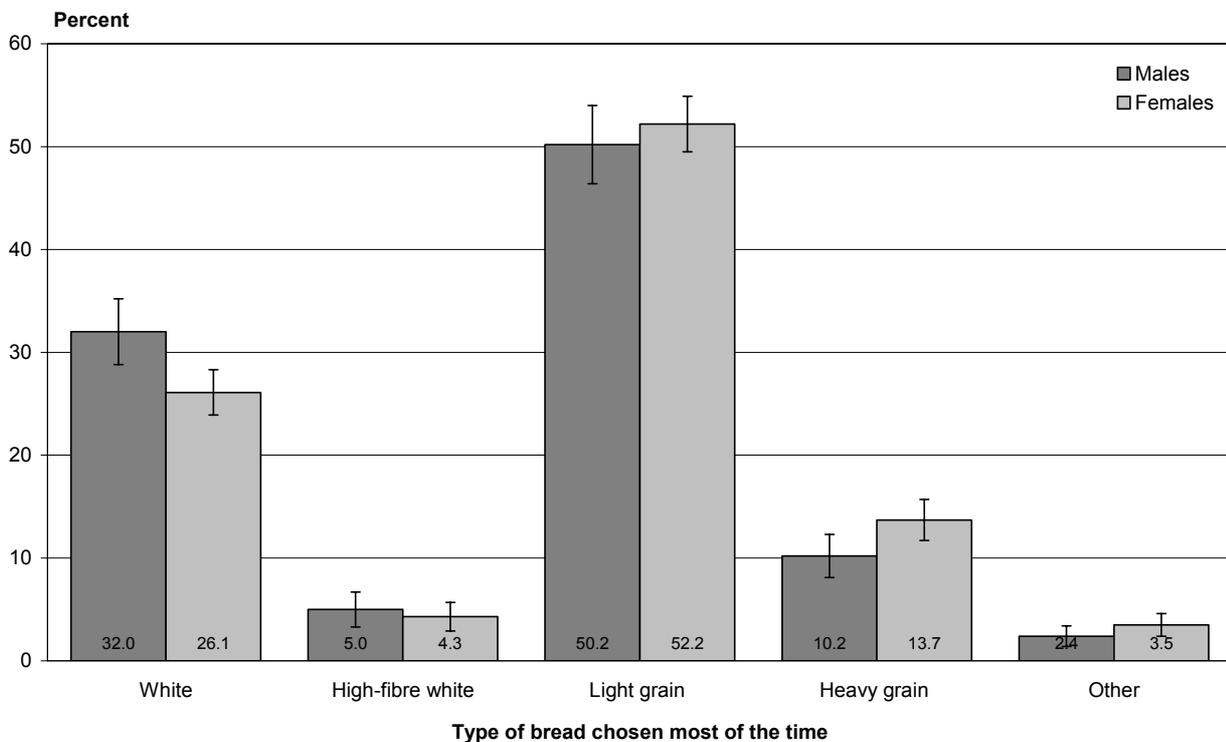
Survey question

What type of bread, rolls or toast do you eat most of?

Response options: White, high-fibre white, light grain, heavy grain, other.

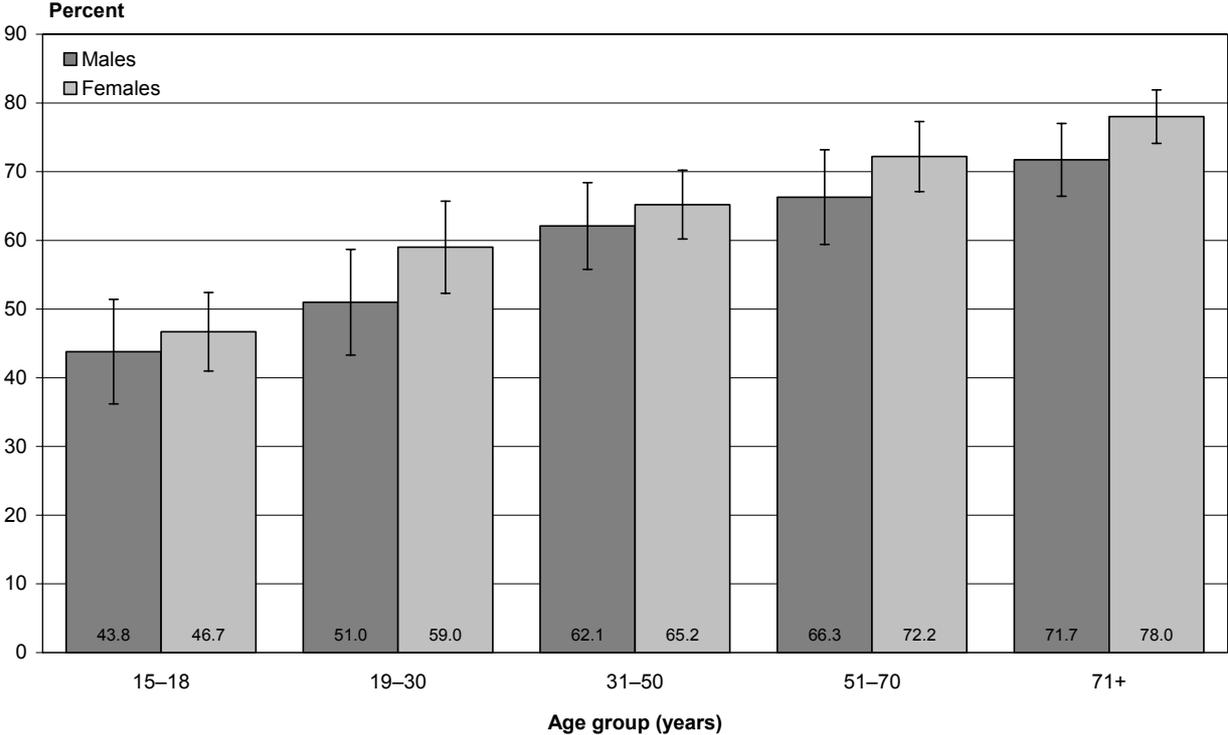
Whole-grain bread (heavy- or light-grain) was chosen most often by 63.3% of the total population aged 15 years and over, with white bread chosen most often by 28.9% (Table 6.4, Figure 6.4). A small proportion ate mostly high-fibre white bread (4.6%) or another type of bread (3.0%).

Figure 6.4: Type of bread chosen most of the time, by sex



There were no differences in each age group in the proportion of males and females who reported choosing light-grain or heavy-grain bread. The prevalence of eating mostly light-grain or heavy-grain bread increased with increasing age, with 43.8% of males and 46.7% of females aged 15–18 years choosing these breads, compared to 71.7% of males and 78.0% of females aged 71+ years (Figure 6.5).

Figure 6.5: Light- or heavy-grain bread eaten most of the time, by age group and sex



Males and females living in the least deprived neighbourhoods (NZDep2006 quintile 1) were more likely to eat mostly light- or heavy-grain bread (males 68.0%; females 76.9%) than males (45.1%) and females (53.4%) living in the most deprived neighbourhoods (quintile 5). Overall, there was a decrease in the proportion of those eating mostly light- or heavy-grain bread with increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.4: Type of bread consumed most of the time, by age group, NZDep2006 and sex

		White (prevalence), (95% CI)	High-fibre white (prevalence), (95% CI)	Light or heavy grain bread (prevalence), (95% CI)	Other type of bread (prevalence), (95% CI)
Total population		28.9 (27.0–30.9)	4.6 (3.5–5.7)	63.3 (61.2–65.3)	3.0 (2.3–3.7)
By age group (years)					
Males	15–18	49.7 (42.7–56.7)	5.2 (1.4–12.8)	43.8 (36.1–51.4)	1.3 (0.5–2.8)
	19–30	42.0 (34.6–49.4)	5.1 (1.9–10.7)	51.0 (43.2–58.7)	1.7 (0.3–5.3)
	31–50	31.2 (25.8–36.5)	3.9 (1.9–7.1)	62.1 (55.7–68.4)	2.8 (1.2–5.4)
	51–70	24.1 (17.8–30.4)	6.6 (3.5–11.1)	66.3 (59.3–73.2)	2.6 (0.9–5.6)
	71+	21.3 (16.5–26.0)	3.8 (2.2–6.1)	71.7 (66.4–77.0)	3.2 (1.9–5.0)
	Total	32.0 (28.8–35.2)	5.0 (3.2–6.7)	60.4 (56.9–64.0)	2.4 (1.4–3.4)
Females	15–18	48.6 (42.4–54.7)	2.5 (1.1–4.7)	46.7 (40.9–52.4)	1.8 (0.6–4.0)
	19–30	33.9 (28.2–39.6)	5.7 (2.4–11.3)	59.0 (52.3–65.7)	1.3 (0.5–2.9)
	31–50	27.6 (22.7–32.6)	4.1 (2.1–6.1)	65.2 (60.2–70.2)	2.8 (1.3–5.0)
	51–70	17.1 (13.0–21.2)	3.8 (1.8–7.0)	72.2 (67.0–77.3)	6.6 (3.9–10.5)
	71+	13.5 (10.2–16.7)	4.4 (2.6–6.9)	78.0 (74.1–81.9)	3.9 (2.4–6.0)
	Total	26.1 (23.9–28.3)	4.3 (2.9–5.7)	65.9 (63.6–68.2)	3.5 (2.5–4.6)
By NZDep2006 quintile					
Males	1	22.8 (17.1–28.6)	6.8 (2.9–12.9)	68.0 (60.8–75.1)	2.5 (0.7–6.3)
	2	26.7 (19.5–34.0)	4.8 (2.1–9.2)	63.9 (55.3–72.4)	3.7 (1.5–7.7)
	3	30.0 (23.3–36.8)	4.1 (1.6–8.5)	63.1 (56.1–70.1)	2.8 (1.1–5.8)
	4	34.7 (27.0–42.3)	4.8 (1.8–10.3)	58.9 (51.9–65.9)	1.5 (0.5–3.2)
	5	49.5 (42.9–56.1)	3.9 (1.6–7.8)	45.1 (38.6–51.6)	1.4 (0.5–3.3)
Females	1	17.3 (11.6–23.1)	3.0 (1.2–6.2)	76.9 (71.3–82.5)	2.7 (1.0–5.6)
	2	20.1 (14.6–25.6)	4.7 (2.2–8.7)	68.8 (62.4–75.2)	5.9 (3.4–9.6)
	3	25.9 (18.8–32.9)	5.4 (2.1–11.1)	64.4 (57.7–71.2)	4.0 (1.5–8.4)
	4	27.5 (22.6–32.5)	3.3 (1.6–6.0)	66.4 (61.7–71.1)	2.6 (1.1–5.1)
	5	39.8 (34.6–45.0)	4.8 (2.0–7.5)	53.4 (47.9–58.9)	2.1 (0.7–4.8)

Notes:

Results for Māori, Pacific and NZEO are presented in the online data tables.

Milk and milk products

The *Food and Nutrition Guidelines* recommend that adults choose low- or reduced-fat options for milk and milk products.

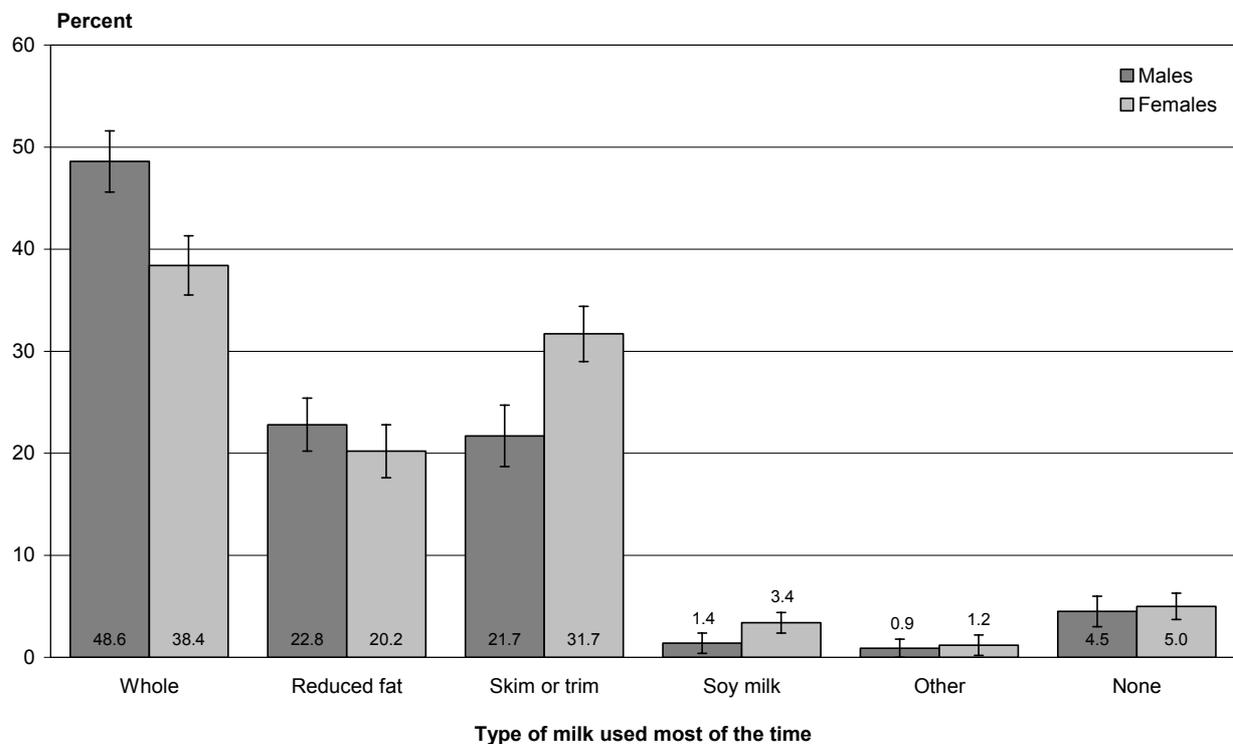
Survey question

What type of milk do you use the most of?

Response options: None, whole or standard milk, reduced fat, skim or trim, soy, other.

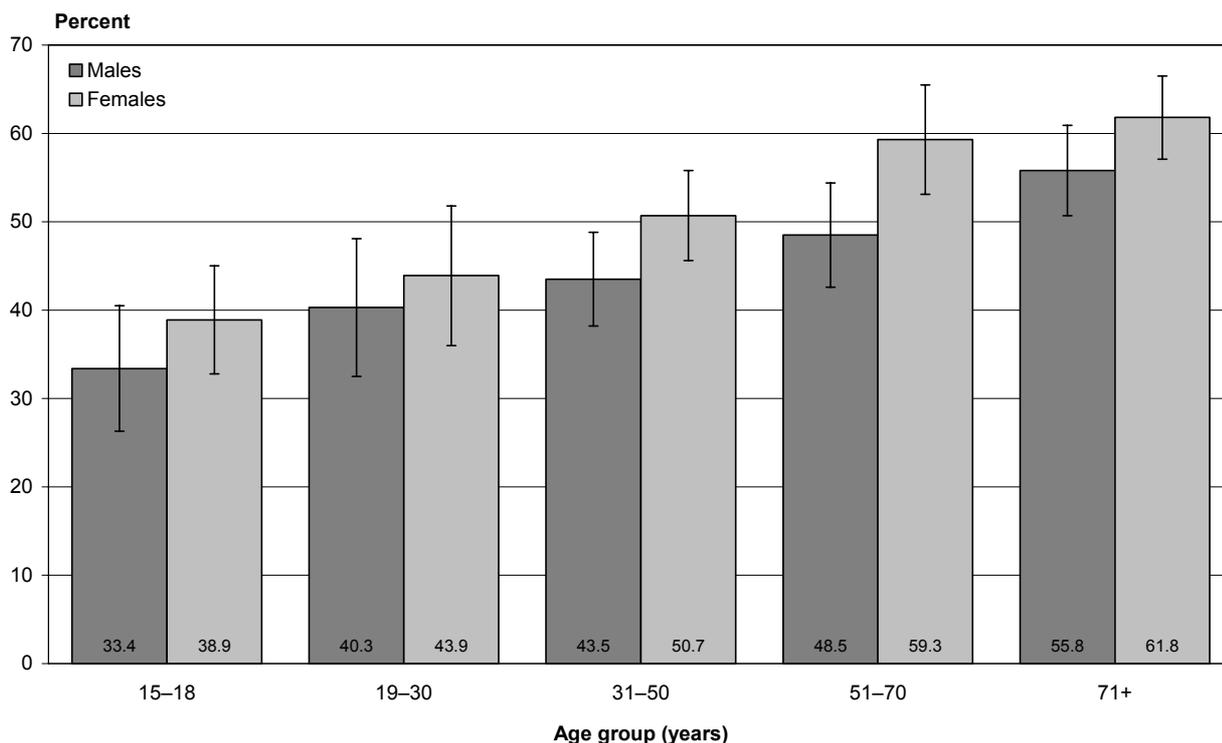
Reduced-fat or trim milk was used most of the time by 48.4% of the total population aged 15 years and over, while 43.3% used whole or standard milk most of the time (Table 6.5, Figure 6.6).

Figure 6.6: Type of milk used most of the time, by sex



There were no significant differences in use of reduced-fat or trim milk most of the time between males and females within each age group. The use of reduced-fat or trim milk increased with increasing age for both males and females, although it levelled off at 51+ years in females (Figure 6.7).

Figure 6.7: Reduced-fat or trim milk chosen most of the time, by age group and sex



Males and females living in the least deprived neighbourhoods were more likely to use trim or reduced-fat milk most of the time (NZDep2006 quintile 1: males 54.7%; females 56.5%) than those living in the most deprived neighbourhoods (quintile 5: males 32.9%; females 40.5%). Overall, there was a decrease in the proportion of those using trim or reduced-fat milk most of the time with increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.5: Type of milk used most of the time, by age group, NZDep2006 and sex

		Whole/ standard (prevalence), (95% CI)	Reduced fat (prevalence), (95% CI)	Skim or trim (prevalence), (95% CI)	Soy milk (prevalence), (95% CI)	None (prevalence), (95% CI)	Reduced fat or skim or trim (prevalence), (95% CI)
Total population		43.3 (41.3–45.4)	21.4 (19.7–23.2)	26.9 (24.9–28.9)	2.4 (1.7–3.1)	4.8 (3.8–5.8)	48.4 (46.2–50.5)
By age group (years)							
Males	15–18	60.8 (53.7–67.9)	21.7 (15.4–28.1)	11.7 (7.8–15.6)	1.0 (0.2–3.1)	2.0 (0.6–4.8)	33.4 (26.4–40.5)
	19–30	55.3 (47.8–62.8)	22.4 (15.2–29.6)	17.9 (11.5–24.3)	1.8 (0.2–6.5)	2.6 (0.6–6.7)	40.3 (32.5–48.1)
	31–50	50.1 (44.9–55.2)	23.9 (19.3–28.6)	19.6 (15.1–24.1)	0.8 (0.2–2.1)	4.0 (2.1–6.8)	43.5 (38.2–48.8)
	51–70	41.7 (35.3–48.1)	20.8 (15.7–25.8)	27.7 (22.4–33.1)	2.1 (0.7–4.8)	7.7 (3.9–11.5)	48.5 (42.6–54.4)
	71+	38.1 (33.1–43.0)	26.2 (22.0–30.4)	29.5 (24.1–35.0)	1.4 (0.6–2.9)	3.9 (2.1–6.5)	55.8 (50.6–60.9)
	Total	48.6 (45.6–51.6)	22.8 (20.2–25.4)	21.7 (18.8–24.7)	1.4 (0.8–2.4)	4.5 (3.1–6.0)	44.5 (41.6–47.5)
	Females	15–18	51.1 (45.3–56.9)	21.6 (16.2–27.0)	17.3 (12.8–21.8)	3.9 (2.1–6.7)	5.6 (3.5–8.5)
19–30		47.2 (39.6–54.8)	16.7 (11.2–22.1)	27.2 (19.9–34.5)	4.2 (1.8–8.2)	4.3 (1.9–8.2)	43.9 (35.9–51.8)
31–50		40.9 (36.0–45.9)	20.1 (16.3–23.9)	30.6 (26.1–35.0)	2.6 (1.3–4.6)	3.5 (1.7–6.2)	50.7 (45.5–55.8)
51–70		27.6 (22.7–32.4)	20.5 (15.1–25.8)	38.9 (33.6–44.1)	4.7 (2.5–8.0)	7.8 (4.6–11.0)	59.3 (53.2–65.5)
71+		31.6 (27.0–36.2)	25.7 (20.8–30.5)	36.2 (31.5–40.8)	0.9 (0.3–2.0)	4.7 (2.9–7.1)	61.8 (57.2–66.5)
Total		38.4 (35.6–41.3)	20.2 (17.6–22.8)	31.7 (29.1–34.4)	3.4 (2.3–4.4)	5.0 (3.8–6.3)	51.9 (48.7–55.1)
By NZDep2006 quintile							
Males	1	39.8 (33.6–46.0)	26.2 (20.7–31.8)	28.5 (21.5–35.5)	1.7 (0.3–4.7)	2.2 (0.6–5.8)	54.7 (48.5–60.9)
	2	50.5 (42.2–58.9)	20.3 (13.2–27.4)	23.4 (16.6–30.2)	0.7 (0.2–1.7)	4.0 (1.4–8.9)	43.6 (35.1–52.1)
	3	44.7 (38.0–51.5)	20.8 (14.7–26.9)	24.9 (17.8–32.0)	1.6 (0.4–4.2)	6.9 (3.4–12.2)	45.7 (38.7–52.7)
	4	49.8 (42.1–57.4)	26.2 (20.0–32.3)	16.5 (9.8–23.2)	1.9 (0.3–6.0)	5.6 (2.7–10.2)	42.6 (35.1–50.1)
	5	61.3 (54.7–67.9)	20.1 (14.8–25.5)	12.7 (8.1–17.4)	1.3 (0.2–4.4)	4.2 (2.1–7.4)	32.9 (26.1–39.7)
Females	1	29.7 (22.0–37.4)	21.0 (15.7–26.2)	35.5 (28.1–42.9)	4.8 (2.2–8.8)	7.4 (3.6–13.2)	56.5 (47.8–65.1)
	2	29.1 (24.0–34.2)	21.1 (15.4–26.8)	38.0 (31.5–44.5)	5.3 (2.8–9.0)	5.4 (2.9–9.1)	59.1 (52.6–65.6)
	3	35.9 (28.0–43.8)	21.8 (13.6–30.1)	36.1 (29.0–43.1)	2.1 (0.7–4.8)	3.2 (1.3–6.5)	57.9 (49.3–66.6)
	4	46.5 (41.4–51.6)	19.5 (14.9–24.2)	24.8 (19.7–29.8)	2.6 (1.0–5.4)	5.5 (3.0–8.0)	44.3 (38.4–50.2)
	5	51.8 (46.2–57.4)	17.2 (12.6–21.8)	23.3 (17.7–29.0)	2.1 (1.0–3.7)	4.0 (2.2–6.7)	40.5 (34.4–46.6)

Notes:

Other category = 1.1%, and so was not recorded in the table.

Results for Māori, Pacific and NZEO are presented in the online data tables.

Meat, chicken, seafood, and processed meat

The *Food and Nutrition Guidelines* recommend that adults consume at least one serving a day of lean meat, poultry, chicken, seafood, eggs, nuts and seeds, or legumes.

Survey questions

In the past four weeks, which of the following have you eaten at all?

Response options: Red meat; chicken; seafood; none of these foods.

How often do you eat red meat? (Includes beef, pork, mutton, lamb, goat)

How often do you eat chicken? (Chicken breast, drumsticks, whole chicken, not nuggets or chicken roll)

How often do you eat fresh or frozen fish or shellfish? Do not include battered/fried or canned fish or seafood.

How often do you eat battered or fried fish or shellfish? This may include battered or deep-fried fish bought from the 'Fish and Chip' shop.

How often do you eat canned fish or shellfish? Canned fish includes products such as tuna, salmon and sardines.

Response options: Never; less than once per week; 1–2 times per week; 3–4 times per week; 5–6 times per week; 7 or more times per week.

Red meat or chicken

Most of the total population aged 15 years and over (94.5%) reported eating red meat in the past four weeks, with red meat eaten one to two times per week by 30.1% and three to four times per week by 45.4% (Table 6.6).

Most of the total population aged 15 years and over (93.4%) reported eating chicken in the past four weeks. Most reported eating chicken either one to two times per week (56.4%) or three to four times per week (24.2%) (Table 6.7).

Patterns of red meat and chicken consumption were similar across quintiles of neighbourhood deprivation.

Table 6.6: Frequency of eating red meat, by age group, NZDep2006 and sex

		Never or not consumed in past 4 weeks Prevalence (95% CI)	Less than 1 time per week Prevalence (95% CI)	1–2 times per week Prevalence (95% CI)	3–4 times per week Prevalence (95% CI)	5+ times per week Prevalence (95% CI)
Total population		5.5 (4.6–6.5)	4.5 (3.5–5.5)	30.1 (28.0–32.2)	45.4 (43.2–47.7)	14.4 (12.7–16.1)
By age group (years)						
Males	15–18	3.6 (1.8–6.3)	3.2 (1.6–5.8)	34.3 (27.0–41.5)	45.4 (39.1–51.8)	13.5 (10.3–16.7)
	19–30	3.2 (1.0–7.5)	3.0 (0.9–7.4)	26.9 (19.7–34.1)	46.9 (38.5–55.2)	20.0 (13.5–26.5)
	31–50	5.9 (3.3–9.5)	2.5 (1.1–4.8)	28.0 (22.5–33.4)	48.6 (42.7–54.5)	15.1 (11.4–18.8)
	51–70	3.9 (1.7–7.4)	5.3 (2.5–9.8)	31.6 (25.7–37.6)	47.0 (40.3–53.7)	12.1 (8.2–16.0)
	71+	3.6 (2.3–5.4)	5.5 (3.2–8.6)	25.7 (20.8–30.7)	43.8 (39.0–48.6)	21.4 (17.0–25.7)
	Total	4.4 (3.0–5.8)	3.7 (2.4–5.0)	29.0 (26.2–31.8)	47.1 (43.7–50.6)	15.7 (13.6–17.8)
Females	15–18	8.4 (5.4–11.3)	7.8 (4.6–12.3)	31.8 (26.5–37.2)	40.5 (34.0–46.9)	11.5 (7.3–15.6)
	19–30	7.7 (3.4–12.0)	7.5 (3.8–13.2)	34.9 (28.7–41.2)	34.8 (27.8–41.8)	15.0 (10.2–19.8)
	31–50	6.4 (3.8–9.1)	4.7 (2.1–7.3)	31.8 (26.7–36.8)	45.2 (40.6–49.8)	11.9 (8.2–15.6)
	51–70	6.4 (3.6–9.3)	3.5 (2.0–5.7)	27.9 (22.8–33.0)	50.4 (44.8–55.9)	11.8 (8.7–14.9)
	71+	4.4 (2.6–6.9)	5.8 (3.1–8.5)	28.9 (24.9–32.9)	42.0 (36.9–47.1)	18.9 (14.5–23.4)
	Total	6.6 (5.1–8.1)	5.3 (3.8–6.7)	31.1 (28.1–34.1)	43.8 (41.2–46.5)	13.2 (11.1–15.3)
By NZDep2006 quintile						
Males	1	2.6 (0.8–6.3)	2.4 (0.6–6.2)	28.8 (22.9–34.7)	53.0 (45.7–60.3)	13.2 (8.5–17.9)
	2	4.3 (1.7–8.8)	2.9 (0.8–7.1)	29.5 (22.6–36.5)	47.6 (40.6–54.6)	15.7 (10.5–20.8)
	3	5.0 (2.2–9.4)	5.6 (2.3–10.9)	30.3 (22.8–37.8)	45.1 (37.3–52.9)	14.0 (9.6–18.4)
	4	3.0 (1.2–6.1)	3.2 (1.1–6.9)	30.9 (23.6–38.1)	45.3 (36.9–53.7)	17.7 (13.2–22.2)
	5	7.7 (4.2–11.2)	4.6 (1.9–7.4)	25.3 (19.7–31.0)	43.3 (37.2–49.4)	19.1 (14.3–23.8)
Females	1	6.3 (2.5–12.7)	5.0 (2.3–9.1)	36.9 (28.2–45.6)	40.9 (32.8–49.0)	10.9 (5.8–16.1)
	2	5.4 (2.7–9.5)	5.2 (2.5–9.4)	28.5 (22.8–34.2)	48.4 (41.6–55.3)	12.5 (8.4–16.6)
	3	7.1 (3.5–12.7)	5.6 (2.2–11.3)	27.5 (20.3–34.8)	42.8 (36.6–49.1)	17.0 (11.3–22.6)
	4	6.5 (3.9–9.1)	4.7 (2.6–6.9)	31.6 (27.2–36.0)	46.4 (41.2–51.6)	10.8 (7.2–14.5)
	5	7.9 (4.7–11.1)	5.9 (3.3–8.4)	32.5 (27.0–37.9)	39.5 (34.1–44.9)	14.3 (10.9–17.7)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

Table 6.7: Frequency of eating chicken, by age group, NZDep2006 and sex

		Never or not consumed in past 4 weeks Prevalence (95% CI)	Less than 1 time per week Prevalence (95% CI)	1–2 times per week Prevalence (95% CI)	3–4 times per week Prevalence (95% CI)	5+ times per week Prevalence (95% CI)
Total population		6.6 (5.5–7.6)	8.3 (7.1–9.4)	56.4 (54.4–58.4)	24.2 (22.1–26.4)	4.5 (3.5–5.6)
By age group (years)						
Males	15–18	3.4 (1.7–5.8)	11.0 (6.4–15.6)	50.6 (43.5–57.7)	27.3 (20.8–33.7)	7.7 (3.4–14.6)
	19–30	4.8 (1.9–9.9)	8.5 (4.6–14.2)	49.5 (40.9–58.0)	30.9 (22.7–39.1)	6.3 (3.2–11.1)
	31–50	5.5 (3.2–8.7)	5.5 (2.8–8.2)	61.5 (56.0–66.9)	23.6 (18.6–28.6)	3.9 (1.5–6.3)
	51–70	10.0 (6.5–13.5)	9.2 (5.5–12.9)	60.4 (53.9–67.0)	16.4 (10.7–22.1)	3.9 (1.3–8.6)
	71+	16.6 (12.2–21.0)	12.3 (9.3–15.3)	59.3 (53.4–65.1)	10.7 (7.5–13.8)	1.1 (0.4–2.5)
	Total	7.4 (5.7–9.1)	8.2 (6.4–10.0)	57.7 (54.8–60.6)	22.3 (19.2–25.4)	4.4 (2.8–6.1)
Females	15–18	7.4 (4.5–11.2)	6.9 (4.4–10.1)	46.2 (40.3–52.1)	33.5 (28.1–38.9)	6.0 (3.6–9.4)
	19–30	5.1 (2.1–10.2)	3.2 (1.2–6.8)	54.1 (47.4–60.7)	31.7 (25.1–38.3)	5.9 (3.1–8.8)
	31–50	2.9 (1.4–4.4)	8.9 (6.3–11.6)	54.8 (50.4–59.2)	27.3 (23.1–31.5)	6.0 (3.5–8.6)
	51–70	8.2 (5.5–10.9)	9.3 (6.3–12.4)	56.4 (51.5–61.3)	23.6 (18.9–28.3)	2.4 (1.0–4.9)
	71+	10.4 (8.0–12.7)	14.3 (11.0–17.6)	61.1 (56.1–66.1)	12.3 (7.5–17.0)	2.0 (1.0–3.3)
	Total	5.8 (4.6–7.0)	8.3 (6.8–9.9)	55.1 (52.7–57.6)	26.1 (23.5–28.7)	4.7 (3.5–5.9)
By NZDep2006 quintile						
Males	1	6.6 (3.4–11.4)	4.0 (1.5–8.4)	63.7 (58.1–69.3)	18.2 (11.7–24.6)	7.6 (3.5–14.0)
	2	6.8 (3.6–11.6)	10.2 (5.4–15.0)	58.0 (50.8–65.2)	22.4 (16.7–28.1)	2.6 (0.7–6.6)
	3	4.5 (2.4–7.6)	8.0 (3.9–12.1)	58.9 (51.5–66.2)	25.8 (18.3–33.4)	2.8 (0.7–7.2)
	4	8.7 (4.6–12.8)	9.3 (5.8–12.8)	52.4 (44.8–59.9)	24.1 (17.5–30.7)	5.5 (2.3–10.9)
	5	11.3 (6.9–15.7)	10.2 (6.5–13.9)	53.8 (47.4–60.1)	21.6 (15.3–27.9)	3.2 (2.0–4.8)
Females	1	3.9 (1.5–8.0)	8.6 (5.1–13.3)	58.7 (51.3–66.1)	25.9 (18.6–33.1)	3.0 (0.9–7.0)
	2	6.2 (4.0–8.4)	9.5 (6.1–13.0)	58.0 (51.0–65.0)	23.2 (17.4–29.0)	3.1 (1.1–6.8)
	3	5.4 (2.2–8.5)	8.1 (4.3–11.8)	55.6 (49.4–61.8)	26.9 (20.3–33.5)	4.0 (1.9–7.3)
	4	5.3 (3.5–7.1)	6.0 (3.9–8.1)	53.8 (48.2–59.5)	28.1 (22.7–33.6)	6.7 (3.6–9.8)
	5	8.0 (5.1–11.0)	9.5 (6.5–12.6)	49.4 (44.4–54.3)	26.5 (21.5–31.5)	6.6 (4.0–9.1)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

Seafood (fish and shellfish)

Eighty percent of the total population aged 15 years and over reported eating seafood in the past four weeks. The proportion eating seafood was highest for those aged 31 years and over, and lowest in those aged 15–18 years, for both males and females.

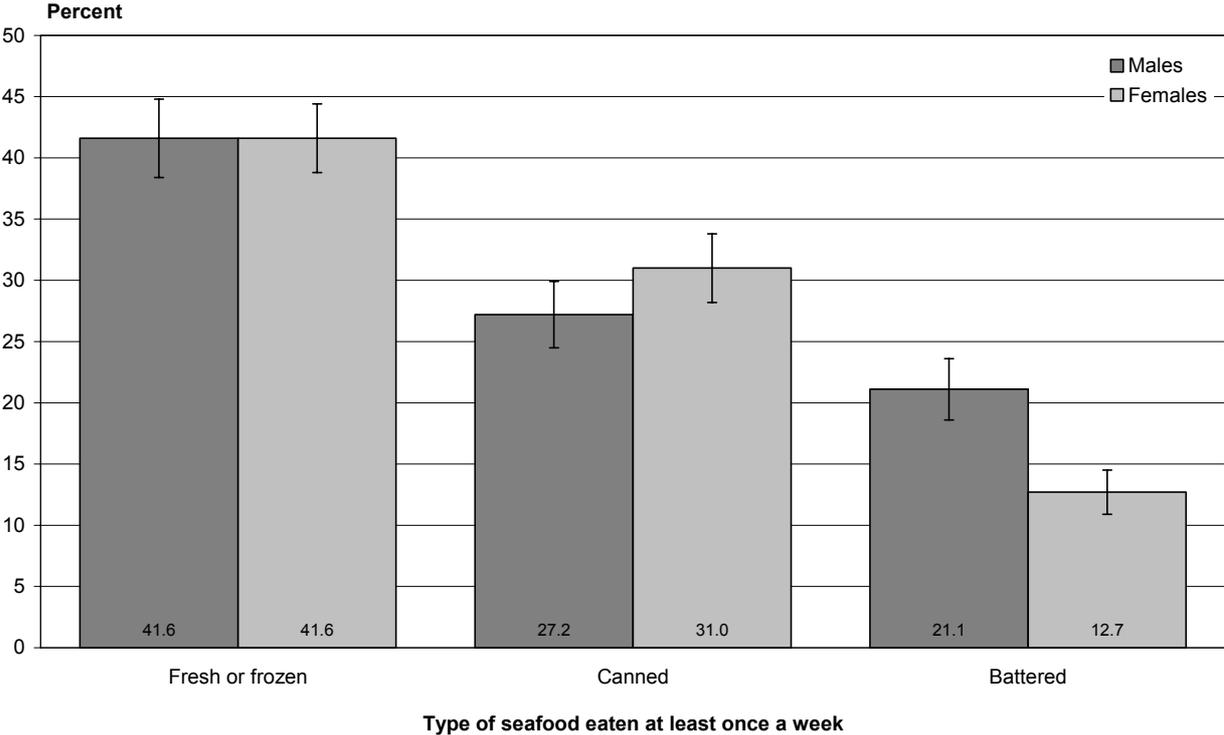
Fresh or frozen seafood was eaten by 41.6% of the total population aged 15 years and over one or more times a week, and by 30.0% less than once a week. Fresh or frozen seafood was not eaten in the past four weeks, or never, by 28.4% of the adult population (Table 6.8).

Canned seafood was eaten by 29.2% of the total population aged 15 years and over one or more times a week, and by 29.2% less than once a week. Canned seafood was not eaten in the past four weeks, or never, by 41.6% (Table 6.9).

Battered or fried seafood was not eaten in the past four weeks, or never, by 40.9% of the total population aged 15 years and over. Battered or fried seafood was eaten by 16.7% of the adult population one or more times a week, and by 42.4% less than once a week (Table 6.10).

Fresh or frozen seafood was the most common type of seafood consumed at least once a week by the total population aged 15 years and over, followed by canned seafood (Figure 6.8).

Figure 6.8: Type of seafood eaten at least once a week, by sex



There were no differences in the proportion of males and females who reported eating fresh or frozen seafood, or canned seafood one or more times a week, within each age group. Males aged 31+ years were more likely than females aged 31+ years to have eaten battered seafood one or more times a week.

Males aged 51+ years were more likely to have eaten fresh or frozen seafood one or more times a week compared to males aged 15–50 years. Females aged 51+ years were more likely to have eaten fresh or frozen seafood one or more times a week compared to females aged 15–30 years.

Males and females aged 19+ years were more likely to have eaten canned seafood one or more times a week compared to those aged 15–18 years. There were no significant differences in frequency of eating battered or fried seafood one or more times a week between age groups.

There were no differences in the reported frequency of consumption of frozen seafood or canned seafood by neighbourhood deprivation. More people living in the most deprived neighbourhoods ate battered or fried fish one or more times a week (NZDep2006 quintile 5: males 27.2%; females 17.8%) than people living in the least deprived neighbourhoods (quintile 1: males 16.0%; females 9.5%).

Table 6.8: Frequency of eating fresh or frozen seafood (fish or shellfish), by age group, NZDep2006 and sex

		Never, or not consumed in past 4 weeks (prevalence), (95% CI)	Less than 1 time per week (prevalence), (95% CI)	1+ times per week (prevalence), (95% CI)
Total population		28.4 (26.3–30.6)	30.0 (27.8–32.2)	41.6 (39.3–43.8)
By age group (years)				
Males	15–18	50.9 (42.5–59.2)	23.8 (17.1–30.5)	25.3 (18.2–32.4)
	19–30	32.4 (23.9–40.8)	32.7 (25.2–40.3)	34.9 (27.2–42.6)
	31–50	27.9 (23.2–32.7)	35.8 (30.7–40.9)	36.3 (30.9–41.6)
	51–70	20.7 (15.7–25.8)	23.2 (18.0–28.4)	56.0 (49.6–62.5)
	71+	28.3 (22.9–33.8)	22.9 (17.7–28.1)	48.8 (42.9–54.7)
	Total	28.7 (25.7–31.8)	29.7 (26.7–32.7)	41.6 (38.4–44.8)
Females	15–18	52.4 (45.6–59.2)	23.2 (18.0–28.5)	24.4 (18.7–30.0)
	19–30	36.8 (30.0–43.6)	31.0 (24.7–37.4)	32.2 (25.5–38.8)
	31–50	25.9 (21.4–30.4)	33.7 (28.3–39.1)	40.4 (35.6–45.2)
	51–70	21.1 (16.0–26.2)	29.3 (23.6–34.9)	49.6 (43.1–56.2)
	71+	21.5 (17.7–25.4)	23.9 (19.0–28.8)	54.6 (49.4–59.7)
	Total	28.2 (25.5–30.8)	30.3 (27.6–33.0)	41.6 (38.7–44.4)
By NZDep2006 quintile				
Males	1	24.5 (17.7–31.2)	27.2 (21.1–33.3)	48.4 (40.8–55.9)
	2	26.6 (20.7–32.5)	35.2 (27.9–42.5)	38.1 (30.9–45.4)
	3	27.2 (19.5–34.8)	31.4 (24.0–38.7)	41.4 (32.9–50.0)
	4	35.4 (27.9–42.9)	27.0 (20.2–33.8)	37.6 (29.7–45.4)
	5	31.6 (25.8–37.3)	27.3 (21.9–32.8)	41.1 (34.2–48.0)
Females	1	20.3 (14.0–26.5)	28.8 (21.8–35.8)	50.9 (43.0–58.9)
	2	21.5 (16.1–26.9)	33.6 (27.2–40.1)	44.8 (38.5–51.1)
	3	30.6 (24.0–37.2)	35.1 (26.9–43.3)	34.3 (26.8–41.8)
	4	34.7 (29.5–39.9)	25.7 (20.8–30.6)	39.6 (33.3–45.9)
	5	33.5 (28.0–38.9)	27.1 (22.9–31.3)	39.5 (33.7–45.2)

Note: Results for Māori, Pacific and NZEO are presented in online data tables.

Table 6.9: Frequency of eating canned seafood (fish or shellfish), by age group, NZDep2006 and sex

		Never, or not consumed in past 4 weeks (prevalence), (95% CI)	Less than 1 time per week (prevalence), (95% CI)	1+ times per week (prevalence), (95% CI)
Total population		41.6 (39.6–43.7)	29.2 (27.1–31.3)	29.2 (27.4–30.9)
By age group (years)				
Males	15–18	74.5 (68.9–80.0)	14.6 (9.9–19.2)	11.0 (7.4–14.6)
	19–30	51.0 (43.3–58.8)	25.0 (17.0–33.0)	24.0 (17.0–31.0)
	31–50	42.6 (37.7–47.5)	27.4 (22.9–31.8)	30.1 (25.4–34.7)
	51–70	37.2 (30.9–43.6)	31.8 (25.3–38.3)	31.0 (25.1–36.9)
	71+	38.5 (32.2–44.8)	35.5 (29.3–41.8)	26.0 (21.5–30.4)
	Total	45.0 (42.1–47.9)	27.8 (25.0–30.7)	27.2 (24.5–29.9)
Females	15–18	69.6 (63.8–75.3)	17.4 (12.3–22.5)	13.0 (9.4–16.7)
	19–30	50.9 (44.2–57.7)	25.7 (19.8–31.7)	23.3 (17.4–29.3)
	31–50	33.3 (29.1–37.4)	32.1 (27.0–37.2)	34.7 (29.9–39.5)
	51–70	31.7 (26.2–37.2)	31.7 (25.9–37.5)	36.6 (30.8–42.5)
	71+	30.3 (25.9–34.6)	39.8 (34.5–45.0)	30.0 (24.6–35.3)
	Total	38.5 (36.1–41.0)	30.5 (27.5–33.5)	31.0 (28.2–33.8)
By NZDep2006 quintile				
Males	1	42.4 (36.7–48.1)	27.4 (22.4–32.5)	30.2 (25.1–35.2)
	2	44.7 (37.0–52.5)	28.4 (20.4–36.4)	26.9 (19.9–33.8)
	3	48.7 (40.3–57.0)	31.8 (24.1–39.5)	19.5 (12.4–26.7)
	4	42.9 (36.2–49.6)	24.2 (17.7–30.8)	32.9 (25.3–40.4)
	5	46.5 (40.1–53.0)	26.7 (21.7–31.7)	26.8 (21.4–32.2)
Females	1	34.8 (28.2–41.5)	31.4 (23.9–38.9)	33.8 (26.7–40.8)
	2	34.5 (28.4–40.6)	30.7 (24.0–37.3)	34.9 (28.8–40.9)
	3	36.6 (29.9–43.3)	32.4 (25.4–39.4)	31.0 (24.2–37.8)
	4	42.7 (37.3–48.0)	31.0 (25.6–36.4)	26.3 (21.3–31.3)
	5	44.4 (39.1–49.7)	26.7 (21.7–31.8)	28.9 (23.9–33.9)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

Table 6.10: Frequency of eating battered seafood (fish or shellfish), by age group, NZDep2006 and sex

		Never, or not consumed in past 4 weeks (prevalence), (95% CI)	Less than 1 time per week (prevalence), (95% CI)	1+ times per week (prevalence), (95% CI)
Total population		40.9 (38.8–43.0)	42.4 (40.1–44.6)	16.7 (15.2–18.3)
By age group (years)				
Males	15–18	52.4 (45.1–59.8)	32.5 (25.7–39.4)	15.1 (9.1–21.0)
	19–30	38.4 (29.3–47.4)	41.9 (33.0–50.8)	19.7 (13.2–26.2)
	31–50	34.4 (29.1–39.7)	43.5 (37.1–49.9)	22.1 (17.6–26.5)
	51–70	34.0 (28.3–39.7)	43.6 (37.4–49.9)	22.4 (17.5–27.2)
	71+	43.1 (36.8–49.4)	34.5 (29.5–39.5)	22.4 (17.6–27.2)
	Total	37.3 (34.0–40.7)	41.5 (37.8–45.3)	21.1 (18.7–23.6)
Females	15–18	60.3 (54.4–66.2)	27.1 (21.9–32.3)	12.6 (8.6–16.5)
	19–30	44.8 (38.2–51.4)	43.2 (36.0–50.4)	12.0 (8.2–15.7)
	31–50	38.1 (32.5–43.7)	48.2 (43.0–53.3)	13.7 (10.2–17.3)
	51–70	46.5 (40.6–52.5)	43.0 (36.7–49.3)	10.5 (7.3–13.7)
	71+	48.6 (43.4–53.8)	35.9 (30.8–41.1)	15.5 (11.4–19.5)
	Total	44.2 (41.5–46.9)	43.1 (40.2–46.1)	12.7 (10.9–14.5)
By NZDep2006 quintile				
Males	1	31.5 (25.5–37.5)	52.4 (45.2–59.7)	16.0 (11.4–20.7)
	2	35.7 (28.7–42.6)	40.6 (33.8–47.3)	23.8 (18.2–29.3)
	3	40.3 (32.9–47.8)	41.9 (34.0–49.8)	17.8 (12.5–23.0)
	4	40.8 (33.1–48.5)	36.7 (29.4–44.0)	22.5 (17.0–28.0)
	5	39.7 (34.1–45.2)	33.1 (28.0–38.2)	27.2 (20.9–33.6)
Females	1	42.0 (34.5–49.5)	48.5 (40.9–56.1)	9.5 (5.0–13.9)
	2	44.4 (38.3–50.5)	43.1 (36.0–50.1)	12.6 (7.7–17.4)
	3	44.5 (38.0–51.0)	45.5 (38.3–52.6)	10.0 (6.1–14.0)
	4	43.6 (38.3–48.8)	43.0 (37.0–49.0)	13.4 (9.8–17.1)
	5	46.5 (40.8–52.2)	35.7 (30.9–40.4)	17.8 (14.8–20.9)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

Processed meat

The World Cancer Research Fund and American Institute for Cancer Research (2007) recommends avoiding processed meat due to convincing evidence that as more processed meat is consumed there is an increased risk of colorectal cancer. Processed meat is also likely to be relatively high in saturated fatty acids and sodium.

Survey questions

In the past four weeks, which of the following have you eaten at all? Red meat; chicken; processed meats; seafood; none of these foods.

How often do you eat processed meats? (Includes ham, bacon, sausages, luncheon, canned corned beef, pastrami, salami).

Processed meat was eaten in the past four weeks by 87.3% of the total population aged 15 years and over (Table 6.11). Most reported eating processed meat either less than once a week (16.6%), one to two times per week (41.8%) or three to four times per week (20.4%). Males (90.0%) were more likely than females (84.9%) to have eaten processed meat in the past four weeks.

Table 6.11: Frequency of eating processed meat, by age group, NZDep2006 and sex

		Never, or not consumed in past 4 weeks (prevalence), (95% CI)	Less than 1 time per week (prevalence), (95% CI)	1–2 times per week (prevalence), (95% CI)	3–4 times per week (prevalence), (95% CI)	5+ times per week (prevalence), (95% CI)
Total population		12.7 (11.3–14.1)	16.6 (15.1–18.0)	41.8 (39.9–43.7)	20.4 (18.7–22.0)	8.6 (7.3–9.8)
By age group (years)						
Males	15–18	7.1 (4.1–10.0)	9.2 (6.3–12.1)	36.5 (29.1–43.9)	31.8 (24.6–39.0)	15.5 (10.1–20.8)
	19–30	11.0 (6.2–17.6)	12.4 (7.1–17.7)	38.9 (31.9–45.9)	21.8 (15.4–28.2)	15.9 (9.8–22.0)
	31–50	8.3 (5.5–11.1)	10.8 (7.2–14.4)	39.7 (33.9–45.4)	29.0 (24.0–34.0)	12.3 (8.8–15.8)
	51–70	10.9 (6.7–15.2)	17.8 (13.2–22.4)	45.7 (39.6–51.8)	16.2 (10.9–21.4)	9.4 (5.7–14.3)
	71+	14.7 (10.2–19.2)	14.0 (10.3–17.6)	47.7 (40.8–54.5)	16.5 (13.0–20.0)	7.2 (4.8–9.5)
	Total	10.0 (8.0–12.0)	13.2 (10.9–15.4)	41.6 (38.6–44.6)	23.1 (20.5–25.8)	12.0 (9.7–14.3)
Females	15–18	12.0 (8.7–15.4)	17.8 (12.9–22.7)	34.9 (29.9–40.0)	24.4 (19.4–29.4)	10.9 (7.2–14.5)
	19–30	17.3 (11.1–23.5)	17.6 (12.4–22.9)	42.6 (35.6–49.6)	17.5 (11.8–23.1)	5.0 (2.3–7.8)
	31–50	13.3 (9.6–16.9)	17.6 (14.0–21.3)	43.6 (39.4–47.7)	19.7 (15.6–23.8)	5.8 (3.6–8.1)
	51–70	16.7 (12.8–20.6)	22.4 (17.7–27.1)	40.8 (35.6–45.9)	16.4 (12.0–20.7)	3.8 (1.8–6.9)
	71+	15.3 (12.1–18.4)	25.7 (20.8–30.6)	43.2 (38.2–48.2)	11.0 (8.2–13.8)	4.9 (3.0–7.5)
	Total	15.1 (13.2–17.0)	19.7 (17.8–21.6)	42.0 (39.5–44.5)	17.8 (15.7–19.9)	5.4 (4.1–6.6)
By NZDep2006 quintile						
Males	1	11.0 (6.4–15.7)	15.6 (9.3–22.0)	40.1 (33.4–46.8)	21.5 (16.2–26.9)	11.7 (6.4–17.0)
	2	5.8 (2.7–10.5)	11.5 (7.0–16.0)	43.3 (35.8–50.9)	21.9 (15.7–28.0)	17.6 (12.0–23.2)
	3	8.9 (3.4–14.5)	13.6 (8.8–18.5)	39.8 (32.2–47.4)	26.1 (19.9–32.3)	11.5 (6.4–16.6)
	4	9.9 (6.1–13.8)	13.3 (8.3–18.2)	43.6 (35.4–51.7)	24.5 (17.7–31.3)	8.7 (5.0–12.4)
	5	15.0 (9.8–20.2)	11.4 (7.9–14.8)	41.6 (35.0–48.3)	22.0 (17.2–26.7)	10.0 (6.0–14.0)
Females	1	12.2 (8.1–16.3)	23.8 (18.5–29.0)	43.9 (36.9–50.9)	14.7 (9.0–20.4)	5.4 (2.7–9.5)
	2	13.1 (9.4–16.7)	16.9 (12.4–21.4)	45.9 (39.6–52.2)	21.4 (16.3–26.4)	2.8 (0.9–6.2)
	3	18.6 (14.0–23.2)	19.3 (14.1–24.5)	37.5 (30.9–44.2)	17.9 (13.2–22.6)	6.7 (3.5–9.9)
	4	15.7 (10.7–20.8)	19.8 (15.6–24.0)	42.2 (36.0–48.4)	15.9 (11.0–20.7)	6.4 (2.8–10.0)
	5	15.4 (10.7–20.1)	19.7 (14.8–24.6)	40.6 (35.5–45.6)	18.4 (14.1–22.7)	6.0 (3.5–8.4)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

6.3 Food preparation and cooking practices

Fat

One major health concern for adults in Western countries is excessive dietary fat intake, particularly saturated fat, which increases the risk of cardiovascular diseases (NHMRC 2006). The *Food and Nutrition Guidelines* encourage adults to reduce the percentage of energy from total fat and replace saturated fat with unsaturated fat.

Removing excess fat on meat and skin from chicken

The *Food and Nutrition Guidelines* recommend trimming all visible fat from meat and removing the skin from chicken.

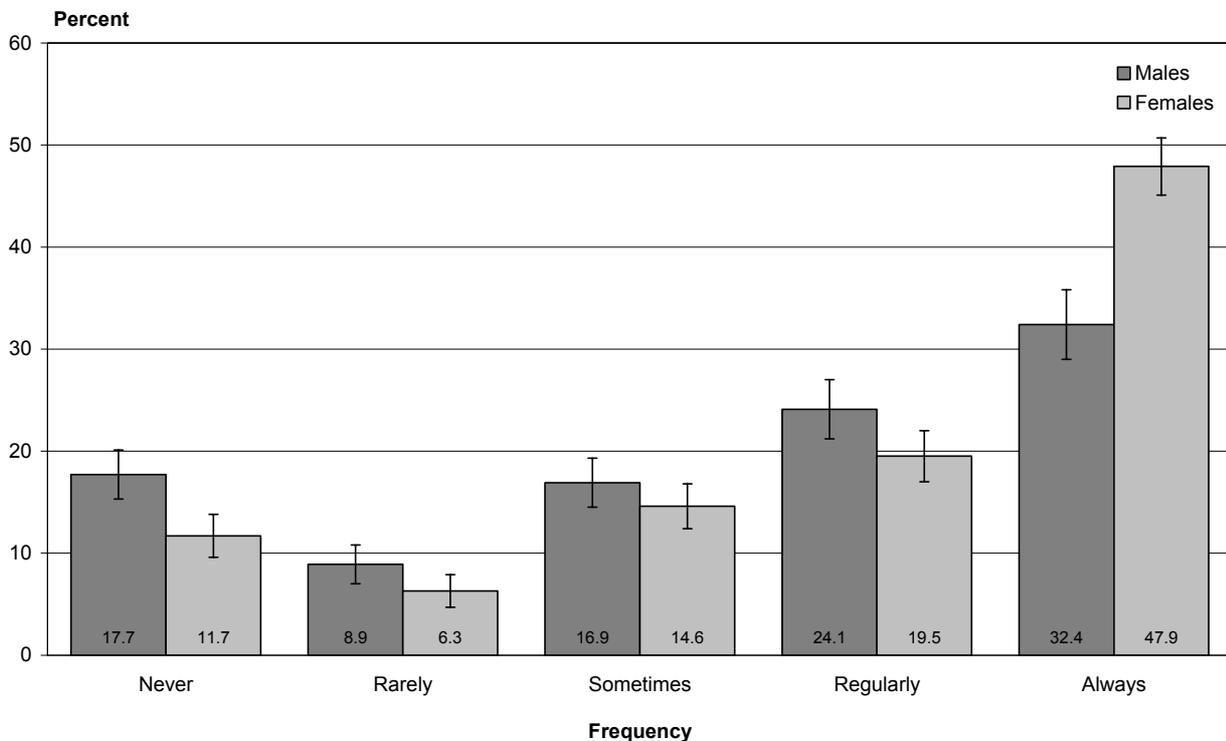
Survey questions

How often do you remove the excess fat from meat?

How often do you remove the skin from chicken?

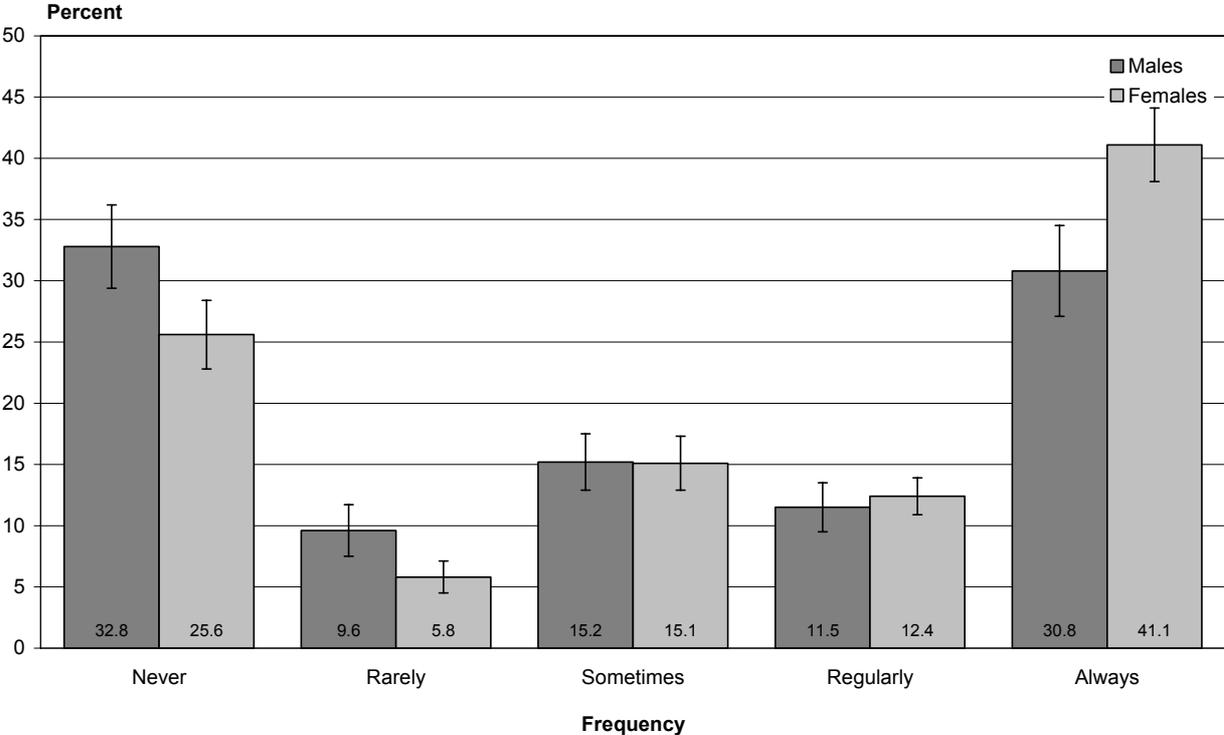
More than half of the total population aged 15 years and over trim excess fat from meat regularly or always (Figure 6.9).

Figure 6.9: Frequency of removal of excess fat from meat, by sex



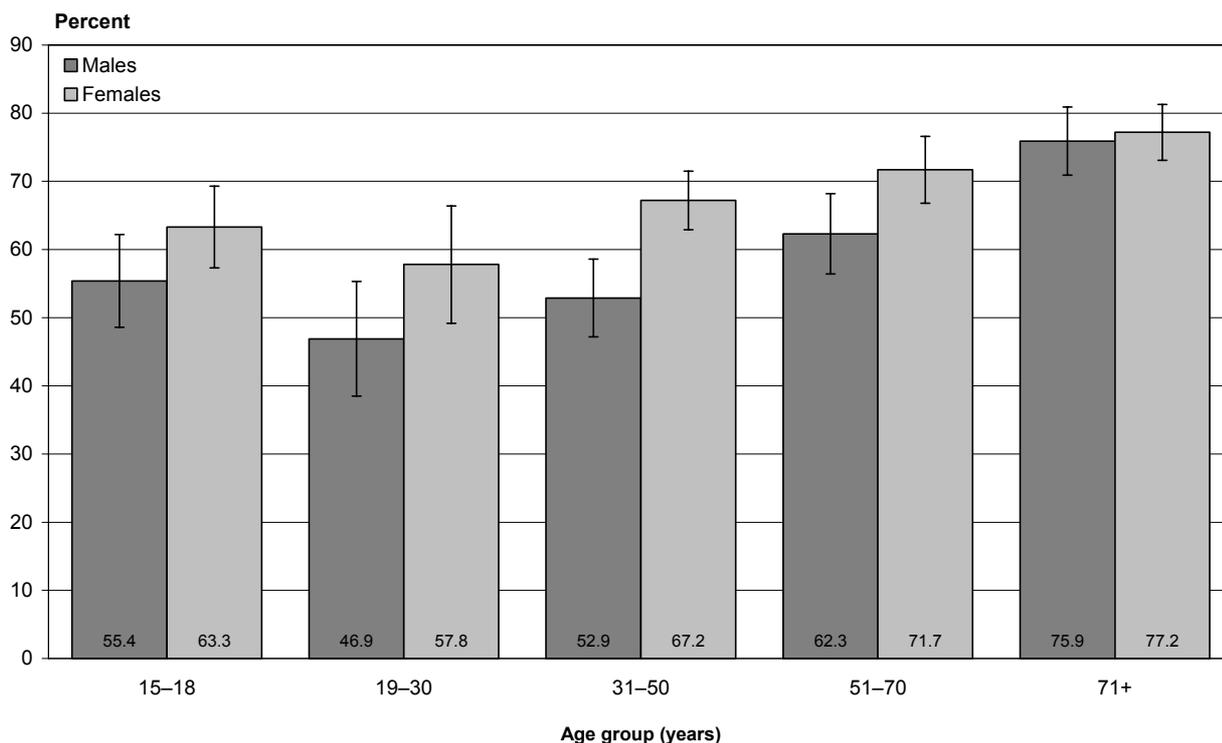
Almost half of the total population aged 15 years and over remove the skin of chicken regularly or always (Figure 6.10). However almost one-third of the population never remove the skin off chicken before eating.

Figure 6.10: Frequency of removal of skin from chicken, by sex



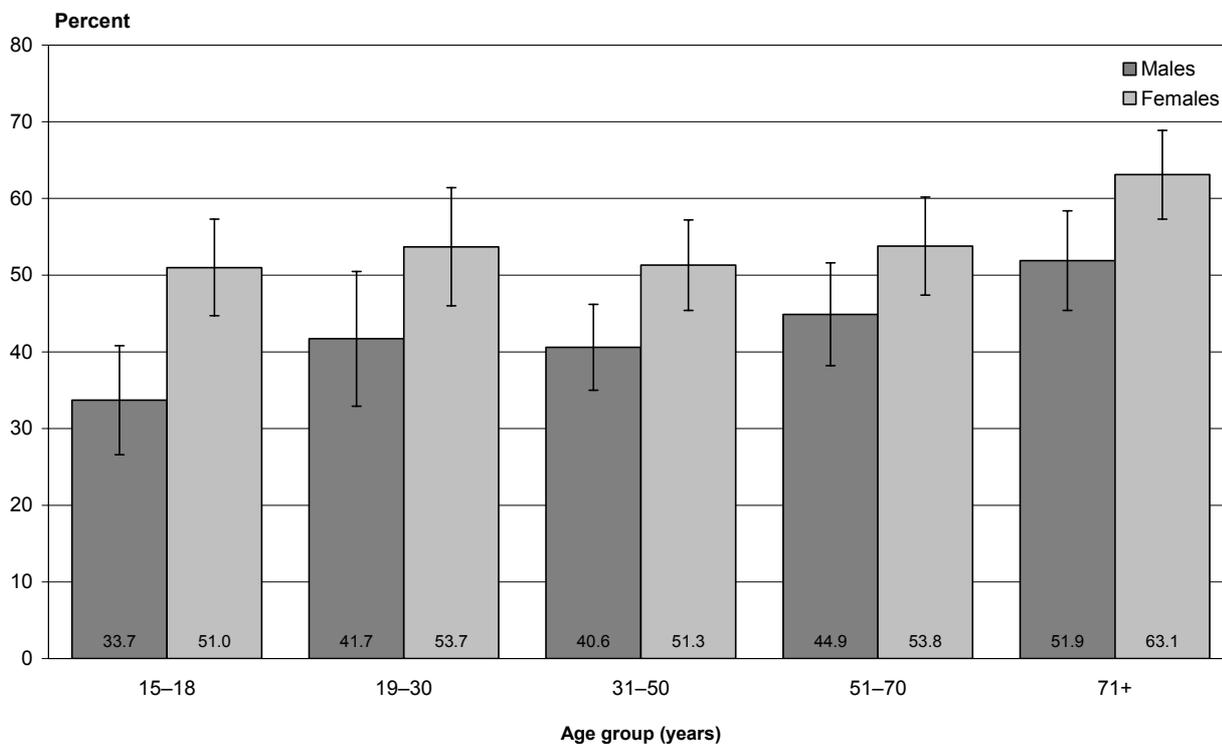
From 19–30 years there was an increase in the proportion of the total population aged 15 years and over removing excess fat regularly or always with increasing age in both males and females (Figure 6.11).

Figure 6.11: Remove excess fat from meat regularly or always, by age group and sex



In males, but not females, there was an increase in the proportion of adults removing the skin from chicken regularly or always with increasing age (Figure 6.12).

Figure 6.12: Remove skin from chicken regularly or always, by sex and age group



Overall, there was a decrease in those regularly or always removing the excess fat off meat, and in those regularly or always removing the skin off chicken with increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.12: Frequency of removal of excess fat from meat, and removal of skin from chicken, by age group, NZDep2006 and sex

		Removal of excess fat from meat regularly/always (prevalence), (95% CI)	Removal of chicken skin regularly/always (prevalence), (95% CI)
Total population		62.1 (60.1–64.0)	48.2 (45.8–50.6)
By age group (years)			
Males	15–18	55.4 (48.6–62.2)	33.7 (26.5–40.8)
	19–30	46.9 (38.5–55.3)	41.7 (33.0–50.5)
	31–50	52.9 (47.1–58.6)	40.6 (35.1–46.2)
	51–70	62.3 (56.4–68.2)	44.9 (38.3–51.6)
	71+	75.9 (70.8–80.9)	51.9 (45.5–58.4)
	Total	56.5 (53.4–59.6)	42.3 (38.6–46.1)
Females	15–18	63.3 (57.4–69.3)	51.0 (44.7–57.3)
	19–30	57.8 (49.3–66.4)	53.7 (45.9–61.4)
	31–50	67.2 (63.0–71.5)	51.3 (45.4–57.2)
	51–70	71.7 (66.7–76.6)	53.8 (47.3–60.2)
	71+	77.2 (73.0–81.3)	63.1 (57.3–68.9)
	Total	67.4 (64.7–70.0)	53.5 (50.6–56.5)
By NZDep2006 quintile			
Males	1	61.5 (54.5–68.5)	46.0 (36.8–55.3)
	2	59.7 (51.7–67.8)	41.4 (33.9–48.9)
	3	58.7 (50.6–66.8)	46.9 (38.5–55.3)
	4	50.1 (44.0–56.2)	42.5 (33.2–51.8)
	5	50.1 (43.5–56.8)	32.7 (26.5–39.0)
Females	1	75.1 (68.5–81.7)	57.4 (49.8–65.0)
	2	70.1 (63.8–76.3)	57.6 (50.1–65.0)
	3	65.8 (59.2–72.3)	56.5 (49.5–63.5)
	4	67.4 (61.1–73.6)	50.4 (44.9–55.9)
	5	58.7 (53.8–63.6)	44.9 (38.7–51.1)

Notes:

Results for Māori, Pacific and NZEO are presented in the online data tables.

Results for additional response options are presented in the online data tables.

Type of spread used

The *Food and Nutrition Guidelines* recommend choosing a margarine or spread (polyunsaturated or monounsaturated) instead of butter, and to use less spread on bread and rolls.

Survey question

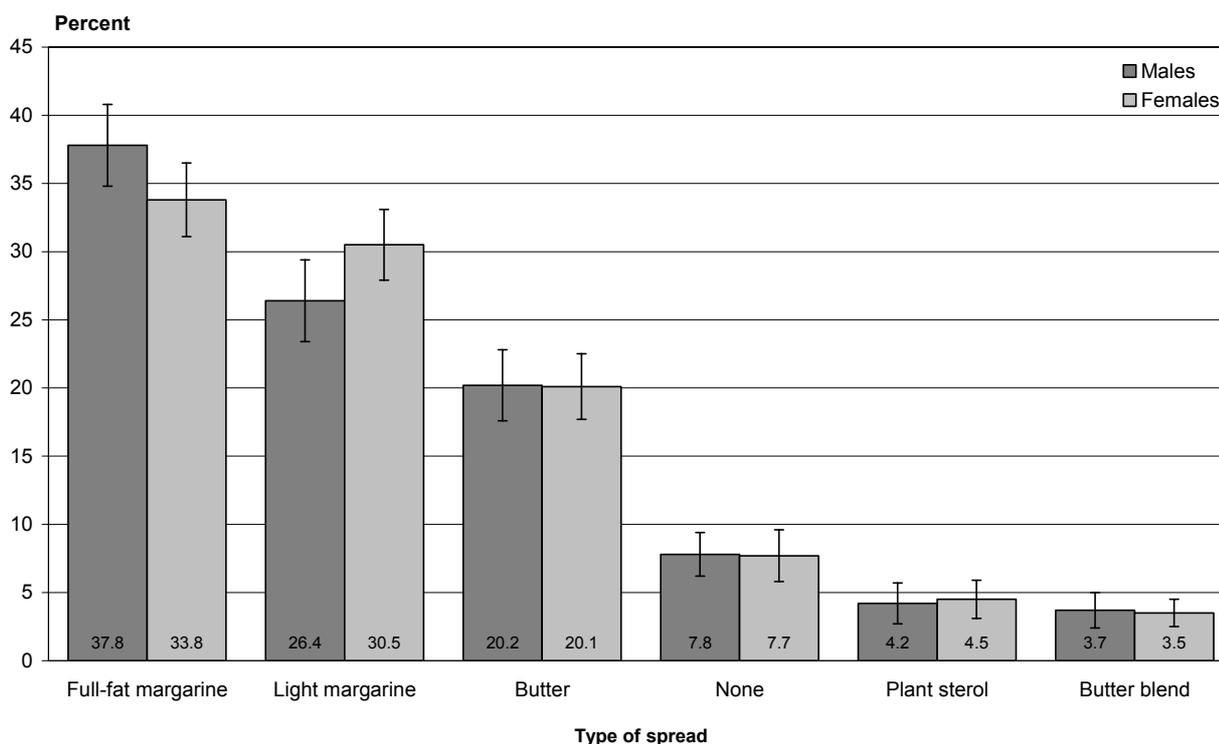
What type of butter or margarine spread do you use the most of?

Response options: None, butter, butter and margarine blend, margarine (full-fat), lite or reduced-fat margarine, plant sterol margarine.

Some type of margarine was used as a spread most of the time by 68.6% of the total population aged 15 years and over, 20.1% used butter, while 7.7% used no spread most of the time (Table 6.13).

Margarine (full-fat or light) was the most common type of spread used by the total population aged 15 years and over (Figure 6.13). Plant sterol and butter blend spreads were the least commonly used.

Figure 6.13: Spread used most of the time, by sex



Use of spread was similar among males and females in most age groups, except that males aged 51–70 years were less likely to use reduced-fat margarine (26.0%) than females of the same age group (37.6%). Use of spread was similar across age groups, except for a higher use of plant sterol margarine by those aged 51–70 years compared to younger age groups.

Males living in the most deprived neighbourhoods were less likely to use light or reduced-fat margarine (NZDep2006 quintile 5: 18.9%) than males living in the least deprived neighbourhoods (quintile 1: 38.0%) and more likely to use full-fat margarine (quintile 5: 47.5%; quintile 1: 27.7%).

Females living in the most deprived neighbourhoods (quintile 5) were less likely to use butter (14.2%) than females living in the least deprived neighbourhoods (quintile 1: 31.5%), and more likely to use any type of margarine (full-fat or reduced-fat) (quintile 5: 76.0%; quintile 1: 58.6%). Females living in the most deprived neighbourhoods (quintile 5) were more likely to use full-fat margarine (49.0 %) than females living in the least deprived neighbourhoods (quintile 1: 18.3 %). Overall, there was an increase in those choosing any type of margarine across increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.13: Type of spread used most of the time, by age group, NZDep2006 and sex

		Butter Prevalence (95% CI)	Butter/margarine blend Prevalence (95% CI)	Full-fat margarine Prevalence (95% CI)	Light or reduced- fat margarine Prevalence (95% CI)	Plant sterol margarine Prevalence (95% CI)	None Prevalence (95% CI)	Margarine–full-fat or light/reduced-fat Prevalence (95% CI)
Total population		20.1 (18.3–21.9)	3.6 (2.7–4.4)	35.7 (33.7–37.7)	28.5 (26.2–30.7)	4.4 (3.4–5.4)	7.7 (6.3–9.1)	68.6 (66.4–70.8)
By age group (years)								
Males	15–18	23.6 (17.7–29.6)	3.0 (1.2–6.3)	42.3 (34.9–49.6)	20.9 (15.3–26.5)	2.1 (0.6–5.4)	8.0 (5.0–12.2)	65.3 (58.2–72.4)
	19–30	17.3 (11.4–23.2)	2.0 (0.5–5.6)	40.3 (32.9–47.7)	25.8 (19.0–32.5)	2.3 (0.4–7.0)	12.3 (7.3–19.1)	68.4 (60.9–75.9)
	31–50	21.8 (17.0–26.6)	5.4 (3.0–9.0)	36.4 (30.5–42.4)	27.6 (22.3–32.9)	2.0 (0.7–4.5)	6.7 (3.9–9.5)	66.0 (60.6–71.4)
	51–70	19.4 (14.0–24.9)	3.1 (1.3–6.4)	35.7 (29.3–42.1)	26.0 (19.8–32.2)	8.8 (5.4–13.4)	6.9 (4.0–10.9)	70.5 (64.1–76.9)
	71+	19.1 (13.7–24.5)	2.5 (1.3–4.6)	39.6 (35.3–43.9)	28.7 (23.7–33.7)	5.7 (3.1–9.4)	4.4 (2.6–6.8)	74.0 (68.7–79.3)
	Total	20.2 (17.5–22.8)	3.7 (2.3–5.0)	37.8 (34.7–40.8)	26.4 (23.3–29.4)	4.2 (2.8–5.7)	7.8 (6.1–9.4)	68.4 (65.5–71.2)
Females	15–18	17.2 (12.9–21.4)	2.5 (1.1–4.7)	44.9 (38.9–50.9)	28.5 (23.5–33.6)	0.3 (0.0–1.8)	6.6 (4.1–9.9)	73.8 (69.1–78.5)
	19–30	18.4 (12.7–24.0)	2.8 (1.2–5.5)	37.5 (30.0–45.0)	29.4 (22.6–36.2)	2.3 (0.4–6.8)	9.6 (5.3–15.7)	69.2 (61.8–76.7)
	31–50	24.0 (19.6–28.3)	3.3 (1.7–5.7)	36.9 (32.0–41.7)	24.6 (20.4–28.9)	2.3 (1.2–4.2)	8.9 (5.4–12.4)	63.9 (59.2–68.5)
	51–70	16.9 (12.9–20.9)	4.8 (2.7–7.8)	24.7 (19.9–29.4)	37.6 (32.6–42.7)	9.8 (5.9–13.7)	6.2 (3.5–10.1)	72.1 (66.2–78.0)
	71+	19.4 (15.0–23.8)	2.8 (1.4–4.9)	31.7 (27.2–36.1)	36.4 (31.2–41.7)	5.6 (3.5–7.6)	4.2 (2.1–7.3)	73.6 (68.7–78.6)
	Total	20.1 (17.7–22.5)	3.5 (2.5–4.5)	33.8 (31.1–36.5)	30.5 (27.8–33.1)	4.5 (3.1–5.9)	7.7 (5.8–9.6)	68.8 (65.6–71.9)
By NZDep2006 quintile								
Males	1	21.3 (14.7–27.8)	3.2 (1.2–6.6)	27.7 (21.6–33.8)	38.0 (30.4–45.6)	4.7 (2.1–9.1)	5.1 (2.5–9.2)	70.4 (62.6–78.3)
	2	22.3 (16.1–28.5)	4.0 (1.7–8.0)	40.5 (33.4–47.5)	19.5 (14.3–24.6)	4.5 (1.8–8.9)	9.3 (5.3–13.2)	64.4 (57.2–71.6)
	3	18.7 (13.6–23.7)	4.5 (1.9–8.7)	36.3 (29.7–42.9)	27.8 (20.5–35.1)	5.2 (1.7–11.6)	7.6 (3.8–13.5)	69.2 (62.7–75.8)
	4	18.1 (12.2–24.1)	5.1 (2.1–10.1)	39.7 (32.9–46.6)	25.0 (19.5–30.6)	3.6 (1.4–7.3)	8.5 (3.5–13.5)	68.3 (61.6–75.0)
	5	20.1 (15.4–24.8)	1.5 (0.4–4.0)	47.5 (40.8–54.2)	18.9 (13.8–24.0)	3.0 (0.7–8.2)	9.0 (5.1–13.0)	69.4 (63.0–75.7)
Females	1	31.5 (23.8–39.2)	4.7 (2.0–9.1)	18.3 (13.1–23.5)	33.2 (26.3–40.1)	7.1 (3.9–11.7)	5.2 (2.2–10.3)	58.6 (51.5–65.7)
	2	21.3 (15.8–26.7)	2.8 (1.1–5.8)	31.6 (26.2–37.0)	33.5 (27.0–40.0)	4.7 (2.8–7.5)	6.1 (3.3–10.3)	69.9 (63.3–76.4)
	3	16.3 (11.8–20.8)	4.5 (2.1–8.4)	32.1 (25.5–38.6)	31.3 (24.1–38.5)	4.8 (2.1–9.2)	11.0 (5.4–16.5)	68.2 (60.6–75.8)
	4	18.6 (13.8–23.5)	2.3 (0.7–5.5)	37.0 (31.3–42.6)	30.0 (24.7–35.2)	3.0 (1.5–5.4)	9.1 (4.9–13.3)	70.0 (63.8–76.1)
	5	14.2 (10.8–17.5)	3.3 (1.8–5.7)	49.0 (43.2–54.9)	24.0 (18.8–29.1)	3.0 (1.1–6.4)	6.5 (3.1–9.9)	76.0 (71.5–80.6)

Note: Results for Māori, Pacific and NZEO are presented in the online data tables.

Type of fat or oil used for cooking

The *Food and Nutrition Guidelines* recommend using less fat in cooking, and when using fat, choosing a vegetable oil or oil high in monounsaturated fat (such as olive or canola oil).

Survey question

What type of fat or oil do you use most often when cooking?

Response options: None, butter, margarine, oil, dripping or lard, other.

Oil was used most often when cooking by 89.9% of the total population aged 15 years and over. There were no differences in type of oil used by males and females, or by age group (Table 6.14).

There was no gradient across NZDep2006 quintiles in the proportion of the total population aged 15 years and over choosing less saturated fats (oil or margarine), after adjusting for age, sex and ethnic group.

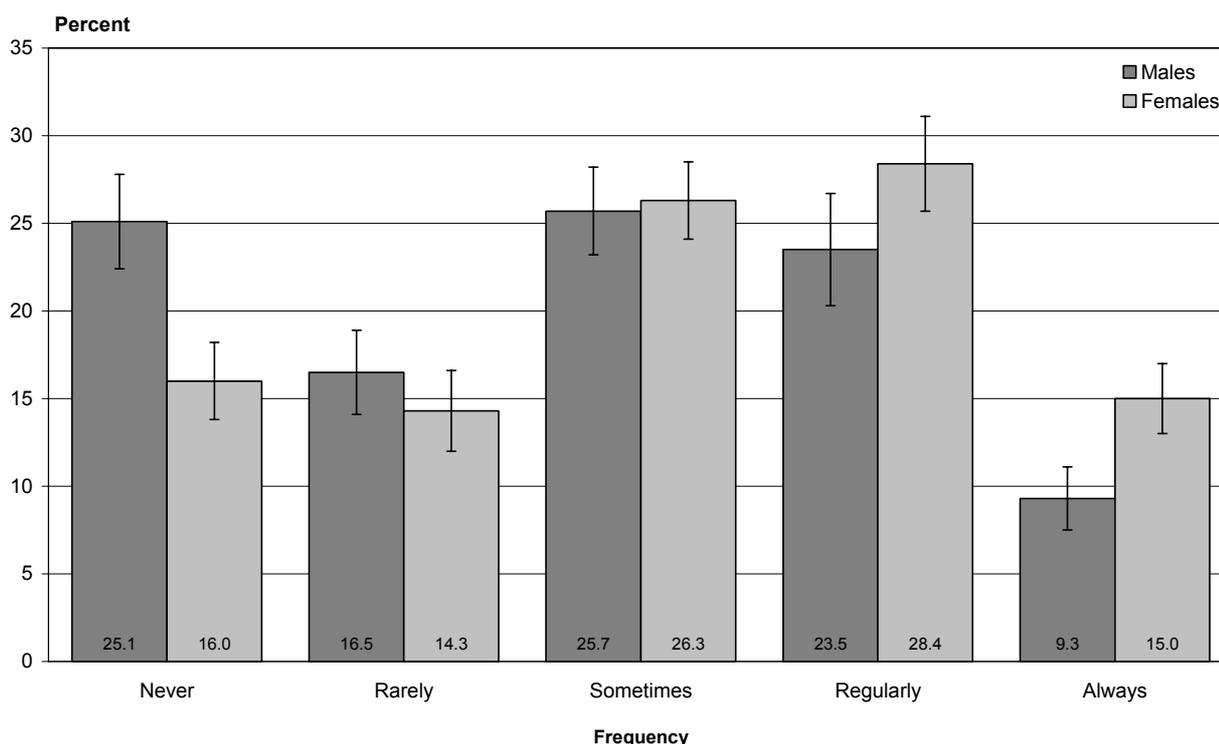
Use of low or reduced-fat varieties of food

Survey question

How often do you choose low or reduced-fat varieties of foods instead of the standard variety?

Low or reduced-fat varieties of food were chosen regularly or always by 38.3%, sometimes by 26.0%, and never or rarely by 35.7% of the population (Table 6.14). Females aged 15–18 years and 51–70 years were more likely to have chosen low or reduced-fat varieties regularly or always compared to males of these age groups. The proportion of the total population aged 15 years and over who regularly or always chose low or reduced-fat varieties of foods increased with increasing age, then levelled off in those aged 51+ years.

Figure 6.14: Choice of low or reduced-fat varieties of food, by sex



Males and females living in the least deprived areas (NZDep2006 quintile 1: males 38.5%; females 50.1%) were more likely to choose low or reduced-fat varieties of foods regularly or always compared to those living in the most deprived areas (quintile 5: males 24.6%; females 33.6%).

Salt

High sodium intake (principally from salt) is associated with high blood pressure, an important risk factor for cardiovascular disease, particularly stroke (NHMRC 2006). The *Food and Nutrition Guidelines* encourage reducing sodium consumption by preparing meals with minimal added salt, and when purchasing foods and drinks prepared away from home choosing those that are low in salt.

There is concern over the low iodine status of New Zealanders. If using salt for cooking or at the table, it is recommended that iodised salt be used (Ministry of Health 2003b). Mandatory fortification of bread with iodised salt commenced in New Zealand in September 2009.

Survey question

We are interested in whether or not your household uses any iodised salt. Not all salt is iodised, so it is best to view the packet.

How often do you add salt to your food after it has been cooked or prepared?

How often do you choose low- or reduced-salt varieties of foods instead of the standard variety?

Adding salt to food and use of iodised salt

Use of iodised salt

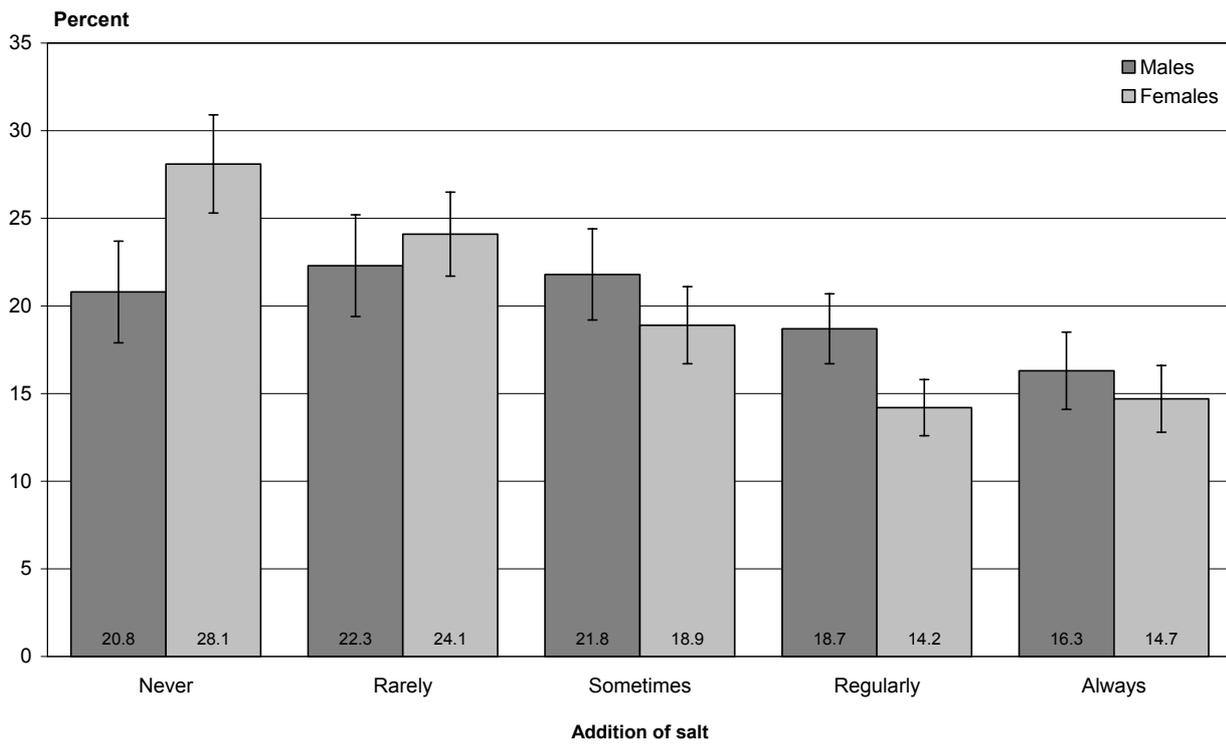
Most of the total population aged 15 years and over (84.2%) used iodised salt at home, while 13.6% did not use iodised salt and 2.2% did not use any salt at home (Table 6.15). There were similar patterns of use of iodised salt among males and females and across age groups. Of those who used salt at home, 85.7% used iodised salt.

Overall, there was no gradient across NZDep2006 quintiles of those who used iodised salt, after adjusting for age, sex and ethnic group.

Addition of salt to food

Salt was never or rarely added to food after it has been cooked or prepared by 47.9% of the total population aged 15 years and over (Table 6.14; Figure 6.15). There were similar patterns of addition of salt to food across age groups.

Figure 6.15: Addition of salt to food after cooking or preparation, by sex

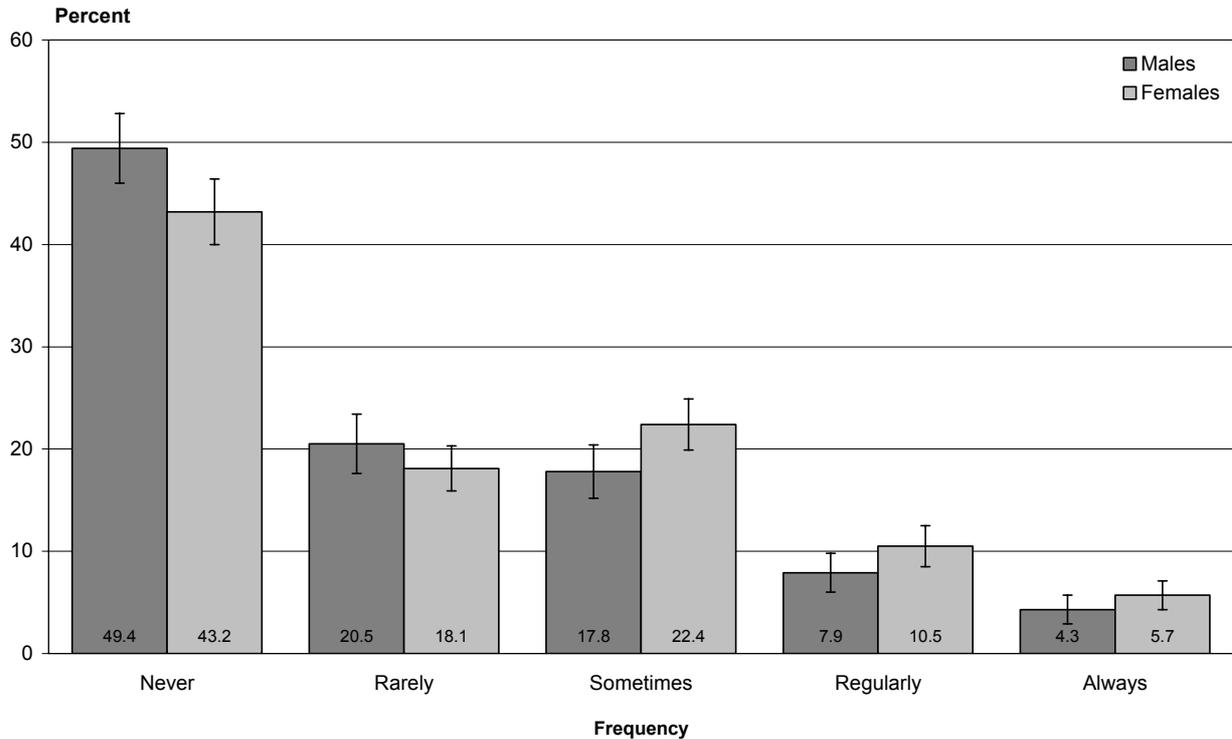


For males and females, there were no differences in the proportion who never or rarely added salt by neighbourhood deprivation. Overall, there was no gradient across NZDep2006 quintiles for those never or rarely adding salt, after adjusting for age, sex and ethnic group.

Use of low- or reduced-salt varieties of food

Low- or reduced-salt varieties of food were chosen regularly or always by 14.3%, sometimes by 20.2%, and never or rarely by 65.4% (Table 6.14). Almost half of the total population aged 15 years and over never chose low-or reduced-salt varieties of food (Figure 6.16).

Figure 6.16: Choice of low- or reduced-salt varieties of food, by sex



There was an increased use of low- or reduced-salt varieties of food regularly or always with increasing age, although in females this was highest among those aged 51–70 years.

Overall, there were no differences in the frequency of choosing low- or reduced-salt varieties of food by neighbourhood deprivation.

Table 6.14: Cooking oil, salt, low-fat, low-salt foods, by age group, NZDep2006 and sex

		Oil used in cooking most of the time (prevalence), (95% CI)	Low- or reduced-fat varieties of foods chosen regularly/always (prevalence), (95% CI)	Never/rarely add salt to food after it has been cooked or prepared (prevalence), (95% CI)	Low- or reduced-salt varieties of foods chosen regularly/always (prevalence), (95% CI)
Total population		89.9 (88.9–91.0)	38.3 (36.2–40.4)	47.9 (45.5–50.2)	14.3 (12.7–16.0)
By age group (years)					
Males	15–18	88.8 (83.3–94.4)	11.7 (7.7–15.7)	48.4 (41.8–54.9)	5.4 (2.8–9.4)
	19–30	85.3 (80.1–90.4)	23.4 (16.1–30.7)	43.1 (34.0–52.3)	7.9 (4.3–13.1)
	31–50	91.9 (88.9–94.9)	32.2 (26.6–37.8)	41.4 (36.8–46.0)	11.3 (7.4–15.2)
	51–70	90.4 (86.8–94.0)	42.0 (35.0–49.1)	43.5 (37.0–50.0)	15.8 (10.2–21.4)
	71+	89.7 (86.5–93.0)	46.6 (41.1–52.2)	44.3 (38.4–50.1)	21.7 (16.1–27.3)
	Total	89.7 (88.1–91.3)	32.8 (29.4–36.1)	43.1 (40.0–46.2)	12.3 (10.0–14.5)
Females	15–18	84.3 (80.3–88.3)	21.8 (17.2–26.5)	56.9 (51.2–62.6)	8.0 (5.2–10.7)
	19–30	89.4 (84.8–93.9)	37.0 (29.7–44.3)	55.6 (48.6–62.5)	11.0 (6.2–15.7)
	31–50	90.3 (87.6–92.9)	40.6 (35.8–45.3)	50.4 (45.2–55.7)	14.2 (10.9–17.4)
	51–70	93.0 (90.7–95.4)	55.6 (50.4–60.7)	50.5 (44.2–56.8)	25.0 (19.3–30.6)
	71+	87.6 (85.0–90.3)	48.5 (43.7–53.3)	53.6 (48.3–58.9)	16.8 (13.4–20.2)
	Total	90.1 (88.6–91.7)	43.4 (40.7–46.1)	52.2 (48.8–55.7)	16.2 (14.0–18.4)
By NZDep2006 quintile					
Males	1	94.4 (91.4–97.4)	38.5 (30.2–46.8)	45.3 (37.1–53.5)	13.6 (8.8–18.4)
	2	88.4 (83.7–93.0)	34.6 (26.3–43.0)	40.3 (34.2–46.4)	17.1 (11.2–23.0)
	3	91.9 (87.9–96.0)	36.7 (28.7–44.7)	48.5 (40.8–56.1)	11.3 (6.6–16.0)
	4	92.3 (88.4–96.2)	27.2 (21.1–33.2)	42.1 (35.0–49.1)	8.7 (4.6–12.8)
	5	80.0 (75.1–85.0)	24.6 (18.2–30.9)	38.6 (30.7–46.6)	9.8 (5.4–14.2)
Females	1	95.4 (92.7–98.2)	50.1 (43.8–56.4)	50.3 (42.8–57.8)	16.8 (10.0–23.6)
	2	91.2 (87.6–94.8)	46.0 (39.2–52.8)	52.0 (44.6–59.4)	17.7 (12.0–23.5)
	3	91.1 (86.4–95.8)	47.0 (40.3–53.8)	52.3 (43.6–61.0)	16.0 (11.3–20.6)
	4	87.4 (84.1–90.8)	39.9 (33.3–46.5)	56.8 (51.4–62.3)	15.3 (10.9–19.7)
	5	85.8 (82.6–88.9)	33.6 (28.0–39.3)	49.2 (44.1–54.4)	15.2 (10.6–19.9)

Notes:

Results for additional response options are presented in the online data tables.

Results for Māori, Pacific and NZEO are presented in the online data tables.

Table 6.15: Use of iodised salt, by age group, NZDep2006 and sex

		Yes (prevalence), (95% CI)	No (prevalence), (95% CI)	Do not use salt (prevalence), (95% CI)
NZ population (aged 15+)		84.2 (82.5–85.9)	13.6 (12.0–15.1)	2.2 (1.5–2.9)
By age group (years)				
Males	15–18	83.1 (76.7–89.6)	16.1 (9.7–22.5)	0.8 (0.2–2.1)
	19–30	85.8 (79.9–91.7)	12.5 (6.9–18.1)	1.7 (0.3–4.8)
	31–50	84.3 (80.1–88.6)	14.0 (9.8–18.2)	1.7 (0.7–3.4)
	51–70	82.6 (77.5–87.7)	13.4 (9.3–17.4)	4.0 (1.7–7.9)
	71+	85.9 (80.2–91.6)	9.1 (4.9–13.2)	5.0 (1.3–12.5)
	Total	84.2 (81.8–86.7)	13.2 (10.9–15.5)	2.5 (1.5–3.5)
Females	15–18	80.0 (73.9–86.1)	16.5 (11.2–21.9)	3.4 (0.9–8.7)
	19–30	85.8 (80.4–91.2)	13.2 (7.8–18.6)	1.0 (0.2–3.1)
	31–50	80.2 (75.6–84.7)	18.0 (13.6–22.5)	1.8 (0.7–3.6)
	51–70	87.2 (83.4–91.0)	10.0 (6.9–13.1)	2.8 (1.1–5.7)
	71+	90.0 (87.2–92.8)	8.4 (5.9–11.0)	1.5 (0.7–2.8)
	Total	84.2 (81.7–86.6)	13.9 (11.5–16.2)	2.0 (1.1–2.8)
By NZDep2006 quintile				
Males	1	83.2 (77.3–89.2)	14.5 (9.9–19.1)	2.3 (0.5–6.3)
	2	86.3 (80.3–92.3)	11.4 (5.6–17.3)	2.3 (0.7–5.4)
	3	85.1 (80.2–90.0)	11.2 (6.2–16.2)	3.7 (1.3–7.9)
	4	82.5 (76.5–88.5)	15.9 (9.8–21.9)	1.6 (0.5–3.9)
	5	84.0 (79.3–88.8)	13.3 (8.6–17.9)	2.7 (1.1–5.6)
Females	1	83.4 (77.8–89.1)	15.0 (9.5–20.6)	1.5 (0.3–4.5)
	2	85.2 (80.1–90.4)	12.8 (7.7–17.9)	2.0 (0.4–5.6)
	3	87.2 (81.9–92.4)	12.5 (7.2–17.7)	0.3 (0.1–1.1)
	4	80.7 (74.9–86.5)	16.1 (10.7–21.6)	3.2 (1.3–6.4)
	5	84.0 (79.4–88.6)	13.0 (9.3–16.7)	3.0 (1.1–6.4)

Notes:

1152 respondents did not know if the salt used in the home was iodised.

Results for Māori, Pacific and NZEO are presented in the online data tables.

6.4 Fast foods and takeaways

Eating fast food more than twice a week is associated with an increased risk of weight gain, overweight and obesity (World Cancer Research Fund and American Institute for Cancer Research 2007). The *Food and Nutrition Guidelines* recommend choosing pre-prepared foods and snacks that have minimal added fat, especially saturated fat, and that are low in salt.

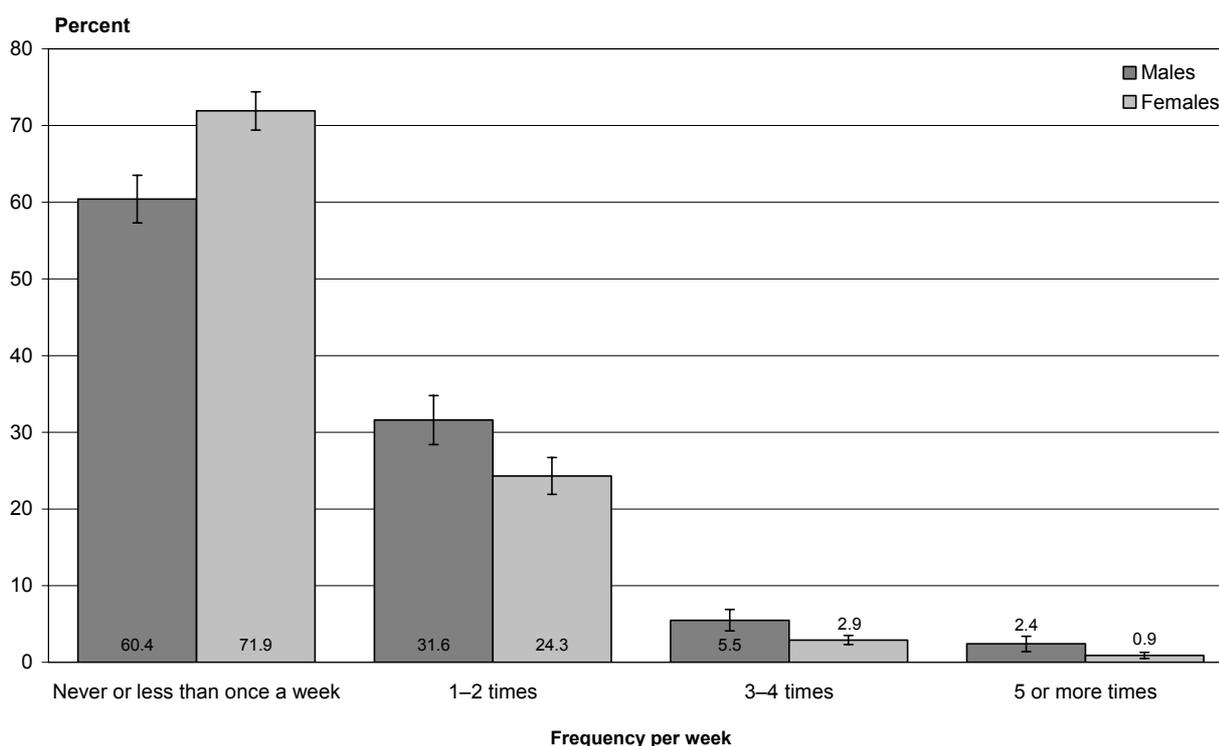
Fast food or takeaways

Survey question

How often do you eat fast food or takeaways from places like McDonalds, KFC, Burger King, pizza shops or fish and chip shops?

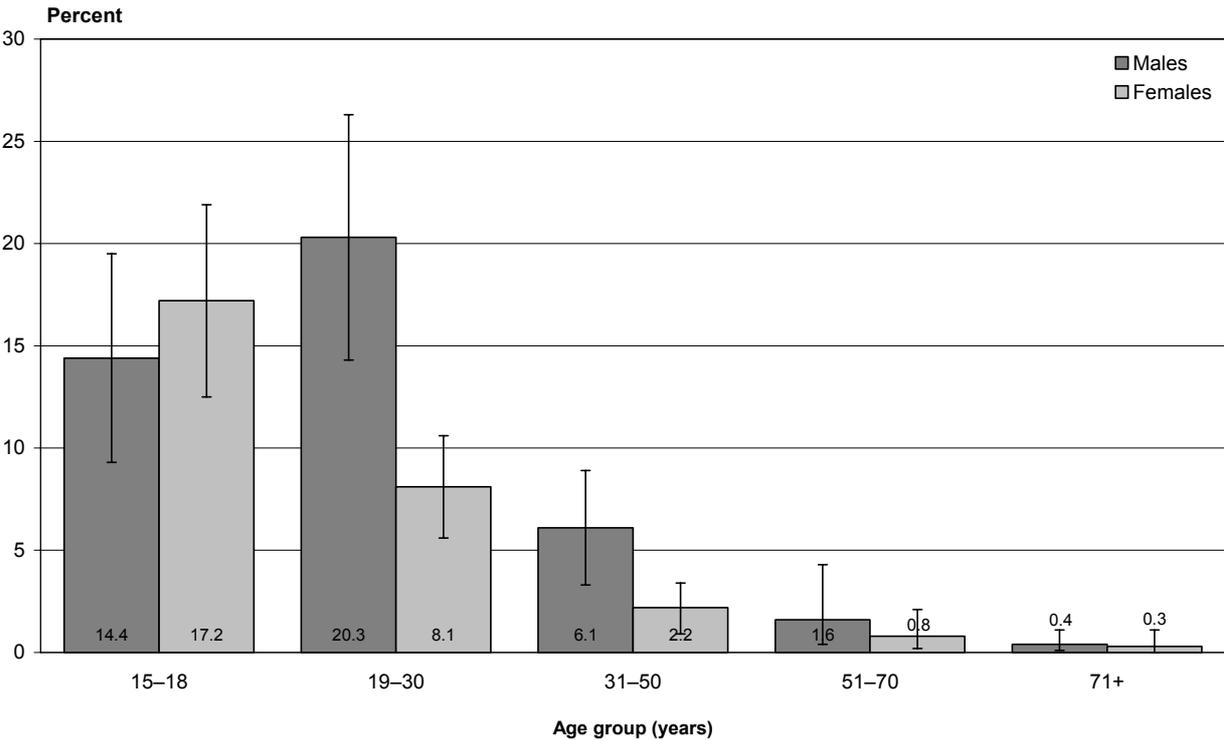
Fast food or takeaways were reported as being never eaten or eaten less than once a week by 66.4%, one or two times a week by 27.8%, and three or more times a week by 5.8% (Figure 6.17).

Figure 6.17: Frequency of eating fast food or takeaways, by sex



Adults aged 15–30 years were more likely to report eating fast food or takeaways three or more times a week compared to other age groups (Figure 6.18). Males aged 19–30 years were more likely to eat fast food or takeaways three or more times a week (20.3%) compared to females in the same age group (8.1%).

Figure 6.18: Fast food or takeaways eaten 3 or more times a week, by age group and sex



There were no differences in the frequency of eating fast food or takeaways by neighbourhood deprivation for males. Females living in the most deprived neighbourhoods were more likely to report eating fast food or takeaways three or more times a week (NZDep2006 quintile 5: 8.1%) compared to females living in the least deprived neighbourhoods (quintile 1: 2.5%). Overall, there was no gradient across NZDep2006 quintiles of those who reported eating fast food or takeaways three or more times a week, after adjusting for age, sex and ethnic group.

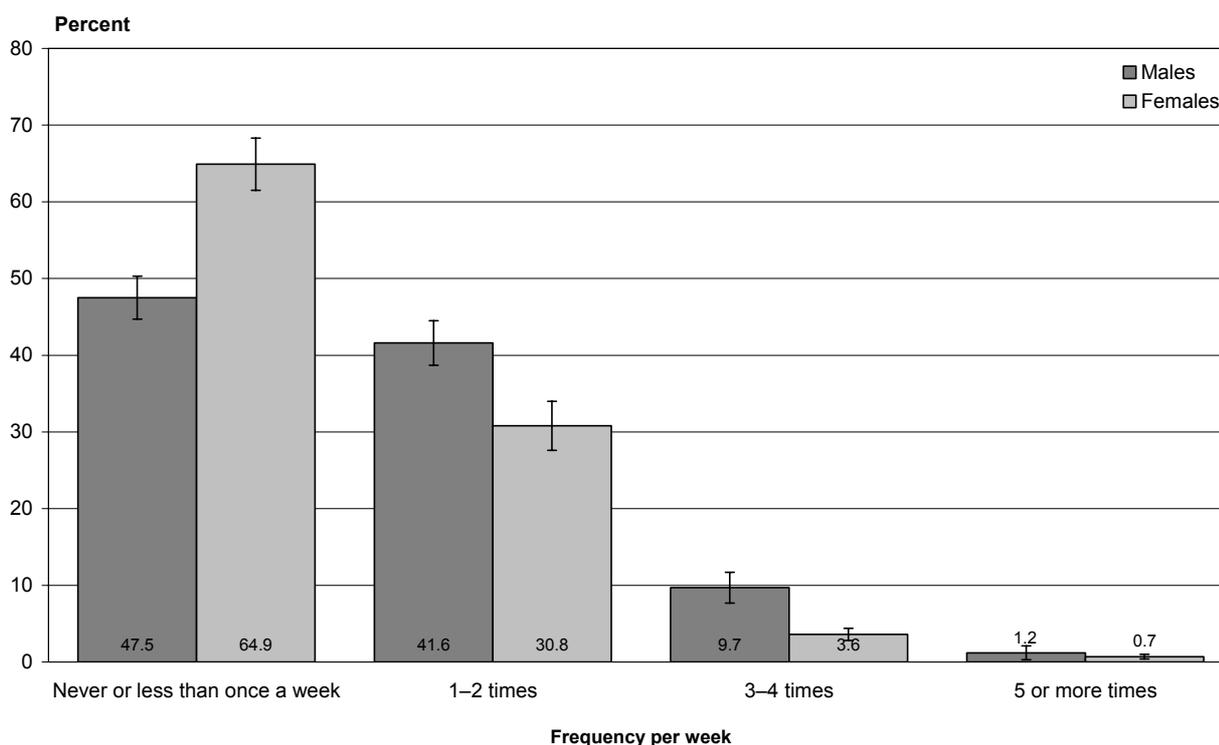
Hot chips

Survey question

How often do you eat hot chips, French fries, wedges, or kumara chips?

Hot chips, French fries, wedges or kumara chips were reported never eaten or eaten less than once a week by 56.5%, one or two times a week by over 36%, and three or more times a week by 7.5% (Figure 6.19).

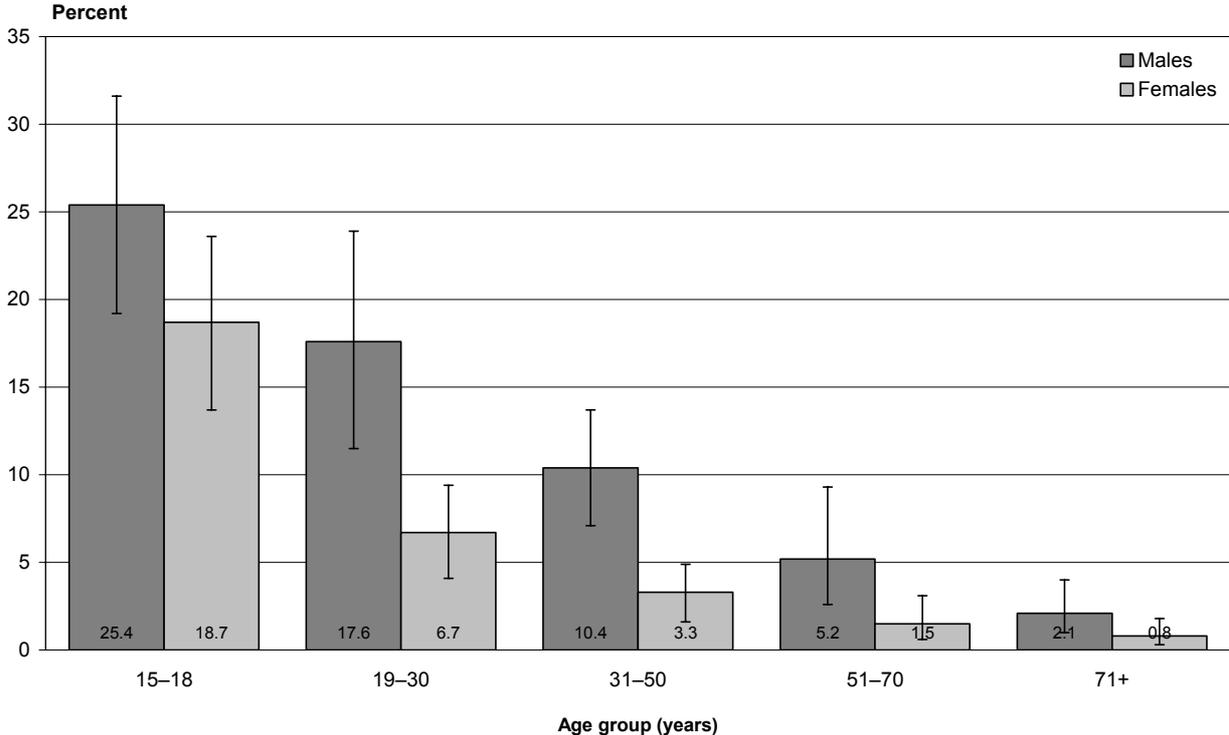
Figure 6.19: Frequency of eating hot chips, French fries, wedges or kumara chips, by sex



Males were more likely to report eating hot chips three or more times a week compared to females, for all age groups except 15–18 years and 71+ years (Figure 6.20).

Males and females aged 15–18 and 19–30 years were more likely to eat hot chips three or more times a week compared to other age groups.

Figure 6.20: Hot chips, French fries, wedges or kumara chips eaten 3 or more times a week, by age group and sex



Females living in the most deprived areas (NZDep2006 quintile 5) were more likely to report eating hot chips three or more times a week (9.2%) compared to females living in the least deprived areas (quintile 1: 1.1%). There were no differences in the proportion of those eating hot chips three or more times a week between males living in quintile 5 and males living in quintile 1. Overall, there was no gradient across NZDep2006 quintiles in those eating hot chips three or more times a week, after adjusting for age, sex and ethnic group.

6.5 Drinks

Excess energy intake from carbohydrate in the form of added sugars may contribute to overweight or obesity (World Cancer Research Fund and American Institute for Cancer Research 2007). Fruit juice and fruit drinks, soft drinks and energy drinks are high in sugar and energy. The World Cancer Research Fund has indicated that sugary drinks have independent effects on body fatness by promoting excess energy intake.

The *Food and Nutrition Guidelines* encourage adults to choose drinks that are low in sugar and to drink plenty of water every day. The *Guidelines* recommend limiting the consumption of fruit juice, cordial, energy and soft drinks because of their high sugar content.

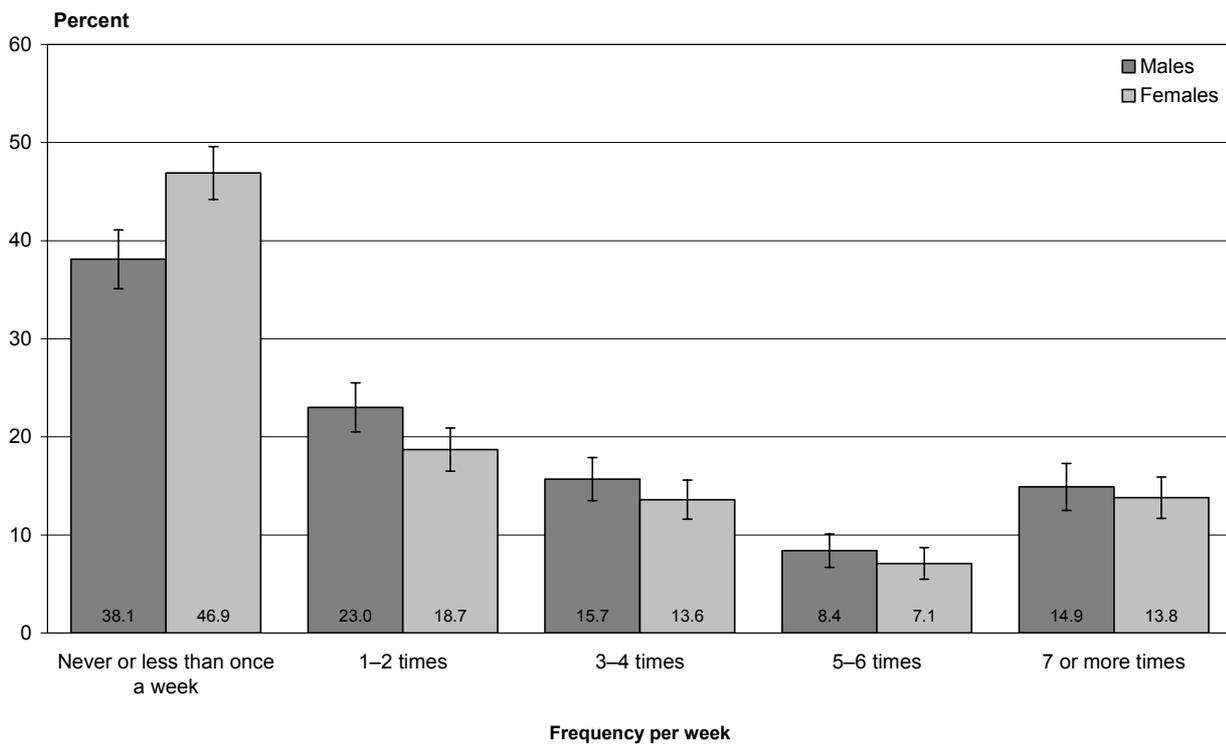
Survey questions

How often do you drink fruit juices and drinks? Do not include diet or diabetic varieties.

How often do you drink soft drinks or energy drinks? Do not include diet varieties.

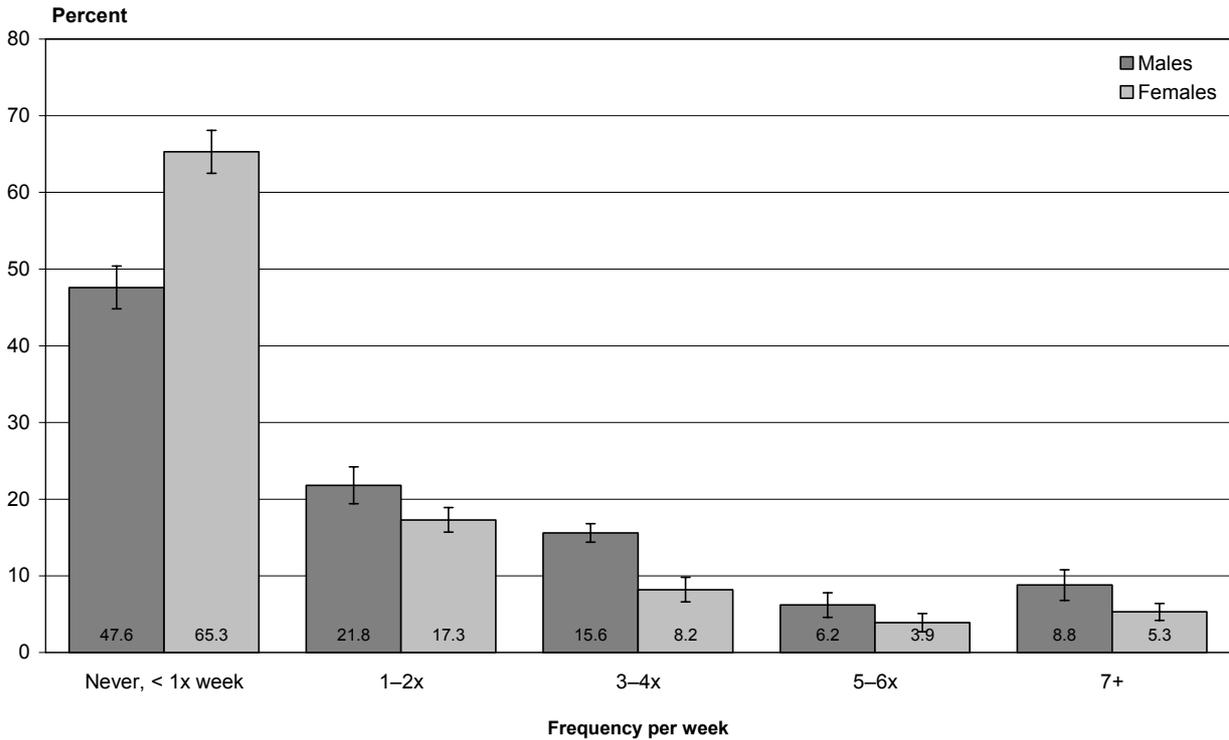
Fruit juice or fruit drinks were reported to be consumed never or less than once a week by 42.6% of the total population aged 15 years and over, consumed three or more times a week by 36.6%, and consumed daily by 14.3% (Figure 6.21).

Figure 6.21: Frequency of drinking fruit juice and fruit drinks, by sex



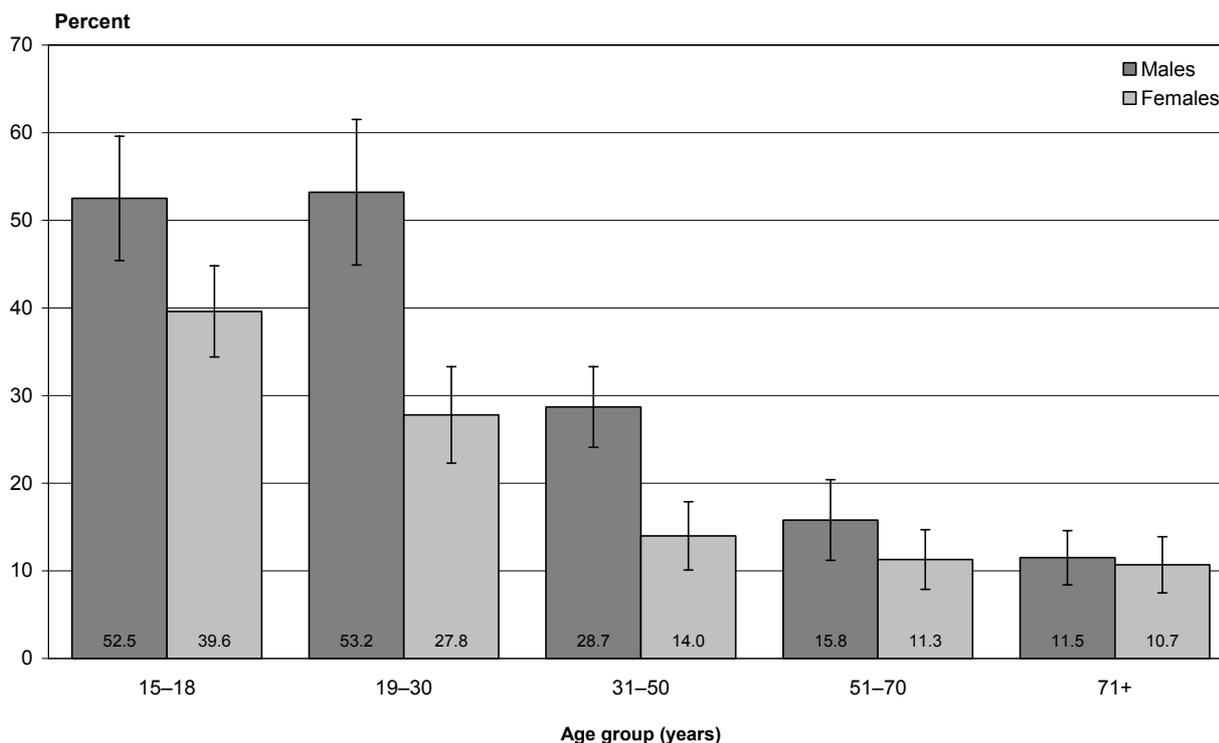
Soft drinks or energy drinks were reported to be consumed never or less than once a week by 56.8% of the total population aged 15 years and over, consumed three or more times a week by 23.7%, and consumed daily by 7.0% (Figure 6.22).

Figure 6.22: Frequency of drinking soft drinks and energy drinks, by sex



Males and females aged 15–18 and 19–30 years were more likely to drink fruit juice and fruit drinks three or more times a week compared to those in the older age groups. These patterns were also seen for soft drinks or energy drinks (Figure 6.23). The proportion of those drinking fruit juice and fruit drinks daily was similar across age groups.

Figure 6.23: Soft drink and energy drink intake 3+ days a week, by age group and sex



Among females there were no differences in the reported frequency of drinking fruit juice and fruit drinks by neighbourhood deprivation. Males living in the least deprived areas (NZDep2006 quintile 1) were more likely to drink juice three or more times a week (41.9%) than males living in the most deprived areas (quintile 5: 31.0%).

Males and females living in the most deprived areas (NZDep2006 quintile 5) were more likely to drink soft drinks and energy drinks three or more times a week (males 37.2%; females 24.8%) than males and females living in the least deprived areas (quintile 1: males 25.9%; females 13.9%). Overall, there was an increase in those drinking soft drinks and energy drinks three or more times a week across increasing neighbourhood deprivation, after adjusting for age, sex and ethnic group.

Table 6.16: Frequency of fast food, hot chips, fruit juice/fruit drinks and soft drinks/energy drinks, by age group, NZDep2006 and sex

		Fast food or takeaways eaten 3+ times a week (prevalence), (95% CI)	Hot chips etc eaten 3+ times a week (prevalence), (95% CI)	Fruit juice or fruit drinks consumed 3+ times a week (prevalence), (95% CI)	Soft drinks or energy drinks consumed 3+ times a week (prevalence), (95% CI)
Total population		5.8 (4.9–6.7)	7.5 (6.3–8.6)	36.6 (34.5–38.7)	23.7 (22.1–25.4)
By age group (years)					
Males	15–18	14.4 (9.3–19.5)	25.4 (19.1–31.6)	43.9 (38.0–49.8)	52.5 (45.4–59.6)
	19–30	20.3 (14.3–26.3)	17.6 (11.5–23.8)	48.6 (40.9–56.3)	53.2 (44.9–61.5)
	31–50	6.1 (3.3–8.9)	10.4 (7.1–13.7)	37.3 (31.7–42.9)	28.7 (24.2–33.3)
	51–70	1.6 (0.4–4.3)	5.2 (2.6–9.3)	34.9 (28.7–41.2)	15.8 (11.1–20.4)
	71+	0.4 (0.1–1.1)	2.1 (1.0–4.0)	31.1 (26.7–35.5)	11.5 (8.4–14.6)
	Total	7.9 (6.2–9.6)	10.9 (8.8–13.0)	38.9 (36.1–41.7)	30.5 (27.9–33.2)
Females	15–18	17.2 (12.5–21.9)	18.7 (13.7–23.6)	48.5 (43.1–53.9)	39.6 (34.4–44.8)
	19–30	8.1 (5.6–10.6)	6.7 (4.1–9.4)	42.2 (35.0–49.4)	27.8 (22.2–33.3)
	31–50	2.2 (0.9–3.4)	3.3 (1.6–4.9)	31.2 (26.2–36.2)	14.0 (10.2–17.9)
	51–70	0.8 (0.2–2.1)	1.5 (0.6–3.1)	30.1 (24.8–35.3)	11.3 (7.9–14.7)
	71+	0.3 (0.0–1.1)	0.8 (0.3–1.8)	33.3 (29.0–37.6)	10.7 (7.4–13.9)
	Total	3.8 (3.1–4.5)	4.3 (3.4–5.2)	34.5 (31.4–37.5)	17.4 (15.4–19.4)
By NZDep2006 quintile					
Males	1	5.8 (2.3–11.6)	8.6 (4.4–14.6)	41.9 (36.0–47.7)	25.9 (19.4–32.5)
	2	10.1 (6.0–15.7)	10.6 (6.2–14.9)	42.9 (34.7–51.2)	32.1 (25.2–39.1)
	3	4.5 (2.1–8.4)	11.4 (6.3–16.6)	39.6 (31.2–48.0)	25.4 (18.4–32.4)
	4	6.8 (3.8–9.8)	11.5 (6.4–16.5)	37.5 (31.4–43.6)	33.8 (26.6–40.9)
	5	13.2 (8.9–17.5)	13.2 (9.6–16.7)	31.0 (26.2–35.9)	37.2 (32.1–42.3)
Females	1	2.5 (0.8–5.7)	1.1 (0.5–2.1)	33.7 (26.9–40.6)	13.9 (9.3–18.6)
	2	2.5 (1.4–4.2)	3.5 (1.7–6.2)	38.9 (33.0–44.8)	12.4 (8.0–16.8)
	3	2.0 (0.8–4.1)	3.5 (1.4–7.1)	31.5 (24.2–38.8)	16.8 (10.9–22.6)
	4	4.4 (2.7–6.1)	4.2 (1.9–6.5)	36.0 (29.6–42.4)	19.8 (15.5–24.2)
	5	8.1 (5.8–10.3)	9.2 (6.7–11.7)	31.5 (26.2–36.9)	24.8 (20.5–29.1)

Notes:

Hot chips includes French fries, wedges and kumara chips.

Fruit juices and drinks does not include diet or diabetic varieties.

Soft drinks and energy drinks does not include diet varieties.