



Government of **Western Australia**
Department of **Health**

Nutrition Monitoring Survey Series 2012

Key Findings



The Nutrition Monitoring Survey Series 2012

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Abbreviations

| | |
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| ABS | Australian Bureau of Statistics |
| NHMRC | National Health and Medical Research Council |
| NMSS | Nutrition Monitoring Survey Series |

Executive summary

The Western Australian Nutrition Monitoring Surveys Series (NMSS) has been conducted by the Department of Health, Western Australia (DHWA) since 1995. The NMSS provides information to inform planning and initiatives that promote the National Health and Medical Research Council's Dietary Guidelines for Australians (1). The Dietary Guidelines provide advice to the general public about healthy food choices and form the basis for most nutrition education initiatives throughout Australia.

The aim of the NMSS is to investigate the nutrition knowledge, attitudes and beliefs of Western Australian (WA) adults relating to the Dietary Guidelines. The survey measures attempts at dietary change and the barriers and promoters to making changes consistent with the dietary recommendations. It also measures attitudes towards a number of government public health nutrition activities. The NMSS was conducted in 1995, 1998, 2001, 2004, 2009 and 2012.

In 2012 computer-assisted telephone interviews were conducted in July/August using a stratified random sample of 1,548 adults aged 18 to 64 years drawn from the 2008 Electronic White Pages for Western Australia by area of residence.

This report presents the findings of the 2012 survey and provides the health sector and general public with important information about a number of aspects relating to food and nutrition behaviours, and barriers and enablers to healthy eating in Western Australia.

Key findings from this report include:

Achieving and maintaining a healthy weight

- Around two in five adults aged 18 to 64 years were a healthy weight (38.5%) and a similar percentage were overweight (37.8%).
- Almost one quarter (23.6%) were obese.
- Half of those who were overweight thought that their weight was 'about right'.
- Just over a third (35.8%) of 18 to 64 year olds said they were currently trying to lose weight.
- Females were significantly more likely to be trying to lose weight than males (42.1% compared with 29.7%).

Eating a variety of nutritious foods

Fruit

- The vast majority said that it was recommended to eat either two (55.8%) or more than two (38.9%) serves of fruit each day for good health.
- Two thirds (62.6%) consumed two or more pieces of fruit on the day prior to the survey.
- Across the population, the average fruit intake was 1.9 serves on the day prior to the interview.
- Males were significantly more likely to report not eating any fruit than females (22.1% compared with 12.6%).
- A third of those who ate half to one piece of fruit said they already eat enough.
- Over a third (36.7%) of 18 to 64 year olds said that they had tried to increase their fruit intake in the last year.

Vegetables

- Just over half (54.6%) said the recommended number of serves of vegetables to eat each day for good health was five (52.2%) or more than five (2.4%).
- Across the population, the average usual vegetable intake was only 2.7 serves a day.
- Only 11.6% said they usually ate five or more serves of vegetables a day. Nearly half (47.9%) only ate up to two serves. Despite this, three out of five (61.3%) said they already ate enough vegetables.
- A third of 18 to 64 year olds said they had tried to increase their vegetable intake over the last year. Females were significantly more likely to report trying to increase their vegetable intake than males (38.4% compared with 27.4%).

Grains and cereal foods

- Almost 70% ate bread on the day prior to the survey. Of those eating bread, 34.7% ate multigrain or wholegrain and 33.1% ate white bread.
- Half (52%) ate breakfast cereal on the day prior to the survey.
- A quarter (23%) ate rice and 17.8% ate pasta or spaghetti on the day prior to the survey. Of those eating rice, 13.6% ate brown rice; and 7.8% of those eating spaghetti ate wholemeal varieties.
- Two thirds said they had made no attempt to change their cereal intake over the last year.
- Females were significantly more likely say they had tried to decrease their cereal food intake over the last year than males (28.1% compared with 14.8%).
- Over half (57.4%) said that they already ate enough cereal foods and only 9.2% said they were trying to eat more.

Milk, yoghurt and cheese

- The vast majority (95.1%) said they had some dairy foods on the day prior to the survey, with most (88.2%) drinking milk of some kind. Of those who consumed milk, the mean intake was 1.3 cups or 325 mLs.
- Of those who drank milk, 95.9% had cows' milk and 56.4% chose the lower fat or skim milk varieties.
- Over a quarter (27.5%) ate yoghurt on the day prior to the survey. Just over half (56.7%) of those consuming yoghurt ate lower fat or skim milk varieties.
- Forty per cent ate cheese on the day prior to the survey. Only 20% of those who ate cheese chose low or reduced fat versions.
- Almost half (48.8%) said they already ate enough calcium-rich foods.
- Females were significantly more likely to report trying to increase the amount of calcium rich foods they ate than males (15.2% compared with 8.6%).

Water

- Most (95.8%) drank water on the day prior to the survey. Of those who consumed water, the mean intake was 1241 mLs and the majority (58.6%) drank water from the tap.
- People living in metropolitan Perth who drank water were significantly more likely to drink bottled water than those living in the rest of the state (32.5% compared with 22.3%).

Limiting intake of discretionary foods

Sugar sweetened/soft drinks

- The majority (67.7%) of people did not drink any sugar sweetened soft drinks or diet soft drinks on the day prior to the survey.
- Of the 22.4% who drank sugar sweetened soft drinks, the mean intake on that day was 492 mLs.
- Of the 11.0% who drank diet soft drinks, the mean intake was 488.1 mLs.
- Males were significantly more likely to have consumed sugar sweetened soft drinks or diet soft drinks than females (38.4% compared with 26.1%).
- People aged 18 to 34 years were significantly more likely to consume these drinks than those aged over 54 years (36.4% compared with 23.2%).

Fat and fatty foods

- Two out of five (40.5%) said they already eat a diet low in fat. Females were significantly more likely to say that they already eat a low fat diet than males (45.7% compared with 35.5%).
- Over half (55.2%) were currently trying to cut down on the amount of fat they eat; and 29.5% were trying to eat less fat and fatty foods.
- More than half (57.2%) had tried to cut down on fat and fatty foods in the last year.
- Females were significantly more likely to always try to avoid foods high in fat than males (25.3% compared with 17.4%). People aged 55 to 64 years were significantly more likely to always avoid food high in fat than younger age groups.

Encouraging breastfeeding

- The majority (74.4%) said it was very important for mothers to breastfeed babies.
- Of those able to specify a length of time that mothers should breastfeed, almost half (47.5%) said for 7-12 months and 32.1% said six months. A third (32.1%) thought it was important for babies to be exclusively breastfed for six months, with most of the remainder (52.7%) saying less than six months.
- 'Immunity' (56.6%) and 'vitamins and minerals or nutrition' (45.3%) were the most frequently identified benefits of breastfeeding for the baby.
- The majority identified 'bonding/security/love/emotion' (73.7%) and 'weight loss/getting back to pre-pregnancy weight' (28.6%) as the benefits of breastfeeding for the mother.
- Very few (4.6%) saw no benefits from breastfeeding for either the baby or the mother. Males were significantly more likely to report no benefits than females (7.2% compared with 1.9%).

Keeping food safe

- Twelve per cent of 18 to 64 year olds had experienced vomiting or diarrhoea that they suspected to be due to food poisoning in the last six months.
- Only 14.9% of those who suspected they had food poisoning had it confirmed by a nurse or doctor. Females were significantly more likely to have confirmed this with a doctor or nurse than males (21.3% compared with 7.6%).
- About forty per cent (39.5%) had a thermometer in their main refrigerator and 54.3% correctly identified 5° Celsius as the maximum safe temperature for a refrigerator.
- Almost two thirds (62.2%) never use an 'Esky' to transport food.

Access to food

- There were 3.2% who reported someone in their household had eaten less than they should in the last 12 months because they could not afford enough food.
- Twenty per cent agreed that access to adequate food in their neighbourhood (defined as within 1.6 kilometres from home) was lacking. People living outside the Perth metropolitan area were significantly more likely to have strongly agreed access to adequate food was lacking than those in Perth (16.5% compared with 4.9%).
- Most (86%) agreed a large selection of fruits and vegetables was available in their neighbourhood. People living outside the Perth metropolitan area were significantly more likely to 'strongly disagree' than those living in metropolitan Perth (10.1% compared with 2.9%).
- Half (50.4%) disagreed that a large selection of healthy take-away foods was available in their neighbourhood.

Making the healthy choice the easy choice

Meals prepared away from home

- The majority (69.8%) did not purchase a meal out on the day prior to the survey. However, 17.7% bought lunch, 10.4% bought dinner and breakfast was bought by only 1.5%.

Availability of healthy choices when buying a meal

- The majority (61.5%) 'always' or 'usually' try to choose healthy foods.
- Half (49.5%) said it was 'very important' to have healthy choices available when buying a meal.
- Females and those aged 55 to 64 years were significantly more likely to 'always' try to choose healthy foods when buying a meal than males and those in the younger age groups.
- Two thirds (66.7%) said there were enough healthy choices available the last time they bought a meal.

Food preparation skills

- Most (73.1%) said they 'can cook a wide variety of foods' or 'can cook almost anything'. However, the majority also agreed that knowing more ways of preparing healthy foods (74.8%) and knowing more about cooking (59.9%) would help them and their families to eat a healthier diet.

Other enablers of healthy eating

- There was agreement with a range of statements about potential factors that would make it easier for people and their families to eat a healthy diet:
- Detailed and easy to understand information on food labels (88.9%).
- Cheaper healthier foods (88%).
- If you could buy more healthy food snacks (82.6%).
- More health food options in take-away/fast food outlets (78.5%).
- Knowing more ways to prepare healthy foods (74.8%).
- More information to help to decide which foods are healthy (74.7%).
- Healthier foods being easier to find in supermarkets (69.3%).

1.0 Introduction

Poor diet, overweight and obesity are key modifiable risk factors common to most preventable chronic diseases. Monitoring population perceptions, attitudes and knowledge of key dietary recommendations is important when developing evidence-based policy responses to poor nutrition, including guiding the strategic direction for agencies involved in implementing these strategic responses. Monitoring dietary behaviours that have been linked to chronic disease can provide evidence to support and guide tailored public health nutrition interventions.

The Western Australian Nutrition Monitoring Surveys Series (NMSS) has been conducted by the Department of Health, Western Australia since 1995. The NMSS provides information to inform planning and initiatives that promote the National Health and Medical Research Council's (NHMRC's) Australian Dietary Guidelines (1). The Dietary Guidelines provide advice to the general public about healthy food choices and form the basis for most nutrition education initiatives throughout Australia.

The aim of the NMSS is to investigate the nutrition knowledge, attitudes and beliefs of Western Australian (WA) adults relating to the Dietary Guidelines. The survey also measures attempts at dietary change and the barriers and promoters to making changes consistent with dietary recommendations. It also measures attitudes towards a number of government public health nutrition activities. The triennial survey series were conducted in 1995, 1998, 2001, 2004, 2009 and 2012.

2.0 Methodology

2.1 Survey administration and sampling

The 2012 NMSS was conducted in July, August and September using a stratified random sample of adults aged 18 to 64 years drawn from the 2008 Electronic White Pages for Western Australia by area of residence.

The survey was conducted using computer-assisted telephone interviews. All sample households with an address were sent a primary approach letter explaining the purpose of the survey, how the sample was selected, who would be asked to do the survey and approximately how long it would take. Every household in the initial sample of 6500 was called up to 10 times to achieve contact. All households with an adult aged 18 to 64 years were considered part of the eligible sample and used to calculate response rates. Where households had more than one adult fulfilling the requirements for participation, the adult with the most recent birthday was selected for interview. No substitutes were permitted. After the initial contact, a further ten call backs were made to achieve an interview.

The survey questionnaire included 120 questions, with a mixture of set-option and open-ended questions. Dietary intake was assessed using brief questions about the food consumed on the day prior to the survey.

Duration of the interview was 35 minutes on average. Interviews were conducted between 6pm and 9pm on Monday to Fridays and between 10am and 9pm on Saturdays and Sundays over a four week period. Interviews were conducted on the weekends to ensure that the sample was not biased against working people. The survey was granted approval from the Western Australia Department of Health Human Research Ethics Committee.

Table 1: **Response rates, 18 to 64 years, WA NMSS 2012**

| 2012 Nutrition Monitoring Survey Response Rates | n |
|--|----------|
| Original sample using electronic White Pages | 6500 |
| Out of scope | 4008 |
| Eligible sample | 2492 |
| No response after 10 attempts | 614 |
| Eligible households contacted | 1878 |
| Refusals, incapacitated or unable to respond | 330 |
| Completed interview | 1548 |
| Response Rate 1: Completed interview / Eligible sample | 62.1% |
| Response Rate 2: Completed interview / Eligible households contacted | 82.4% |
| Response Rate 3: Completed / Completed+Refused | 90.0% |

2.2 Weighting the data

The data were weighted for sample design and probability of selection in 2012. Post survey adjustments were made to compensate for under or over representation of gender, age groups or areas of residence using the 2011 Estimated Resident Population for WA aged 18–64 years.

Open-ended questions were coded to a coding frame developed in conjunction with the Health Department for previous surveys. Analysis was conducted using the Stata SE 12.0 (StataCorp LP, College Station, Texas, USA) analysis package.

2.3 Limitations of the survey

There are a number of methods available for assessing diet including 24-hour recalls, food frequency questionnaires, food records and brief screeners. Food records and 24-hour recalls are the preferred method as they collect all foods eaten and are less susceptible to systematic bias (2). The method used in this survey was a brief screener relying on several questions only. The data is self-reported and therefore may be susceptible to social desirability bias (a person's tendency provide the most socially desirable response regardless of being true or not).

It should also be noted that self-reported brief screeners of dietary intake may not be an accurate reflection of normal or usual dietary intake. Self-reporting of a small number of food and beverages on the day prior to the survey cannot be used to assess overall dietary quality or nutrient intake. However, they can give an indication of adherence to Dietary Guideline recommendations for some food groups, for example, this survey includes measures of fruit, vegetables, dairy foods, grain and cereal foods, and discretionary foods (for example, soft drinks and diet soft drink) and water. The survey methodology (including specific questions and definition of serving sizes) should be considered when interpreting the amount of food and beverages consumed.

The value of the dietary data collected as part of this survey is that population self-reported consumption levels can be considered against attitudes, beliefs and demographic factors that may be the determinants of dietary intake. As the NMSS is a part of a surveillance system at a population level, the data can be used to track changes in self-reported consumption and associated factors over time.

3.0 How estimates are reported

3.1 Percentages

Frequency distributions are reported as percentages for the total sample as well as the following groupings, and gender within these groupings:

1. Gender (male, female).
2. Age (18-34 years, 35-44 years, 45-54 years, 55-64 years).
3. Residence (metropolitan area, rest of state).
4. Income per-annum (up to \$60,000, >\$60,000).
5. Household shopping responsibility (sole, shared).

Groupings 3, 4 and 5 are only reported if the comparisons are statistically significantly different from the population average.

The responses of WA adults interviewed during the 2012 Nutrition Monitoring Survey are displayed as a percentage of the total number of individuals interviewed (n=1548) and the number of respondents to each question is reported in tables. In some cases, where documented, the results are reported as a percentage of those who answered the question. Where this occurs, the total number of respondents is noted at the top left hand cell of the relevant table. In addition, due to budget limitations, the survey sample size and needed to be reduced during survey administration, and not all respondents were asked all questions. The number of respondents is noted in tables where this is the case.

3.2 Confidence intervals

Each table presents either the percentage of WA adults who answered a question or the mean intake, and the 95% confidence interval (CI). The 95% CI is the range between which the true estimate would lie 95 out of 100 times. Overlapping CIs indicate that there is probably no meaningful statistically significant difference in the estimates being compared. If the CIs do not overlap, then the estimates are considered to be statistically significantly different.

Along with determining statistically significant differences CIs can also be used to determine the level of stability around an estimate. The wider the CI is around an estimate the less precise that estimate is and more caution should be applied when using it. Information on how to determine whether or not a difference is statistically significant can be found at:

http://www.health.wa.gov.au/publications/pop_surveys.cfm

3.3 Using this report

This report has been generated to be used as a reference document and therefore contains little interpretative text. Statically significant differences between population characteristics are noted in text, for example, age, gender, income, area of residence, responsibility for household shopping and food preparation. The confidence intervals should be used to determine statistical significance if no text has been provided.

4.0 Demographics

The demographic characteristics of the sample who participated in the 2012 NMSS are shown in Tables 2, 3 and 4. These tables show the unweighted number and percentage in the original sample for selected demographic groups. Table totals do not always add up to 1548 as in some questions respondents replied with a 'don't know'. As there were 12% who reported that they 'didn't know' their household income, for this variable, this group was included in the Table 2.

Table 2: **Sample frequencies by gender, age, education and income, WA NMSS 2012**

| Sample description | Unweighted n | % |
|--------------------------------|--------------|------|
| Gender | | |
| Male | 543 | 35.1 |
| Female | 1005 | 64.9 |
| Total | 1548 | |
| Age Group | | |
| 18–34 years | 210 | 13.6 |
| 35–44 years | 377 | 24.4 |
| 45–54 years | 466 | 30.1 |
| 55–64 years | 495 | 32.0 |
| Total | 1548 | |
| Education | | |
| Less than high school | 211 | 13.7 |
| High School Certificate | 198 | 12.8 |
| Trade/Certificate/Diploma | 632 | 40.9 |
| Tertiary | 504 | 32.6 |
| Total | 1545 | |
| Annual household income | | |
| Up to \$60,000 | 346 | 22.4 |
| \$60,001,\$120,000 | 627 | 40.5 |
| Over \$120,000 | 397 | 25.6 |
| Don't Know or Refused | 178 | 11.5 |
| Total | 1548 | |

Table 3: **Sample frequencies by saving ability, employment status, living arrangements and country of birth, 18 to 64 years, WA NMSS 2012**

| Sample description | Unweighted n | % |
|--|---------------------|----------|
| Saving ability | | |
| Not enough or just enough money to get by until next pay | 256 | 16.9 |
| Have a bit of money left over each pay to spend or save | 507 | 33.5 |
| Have some money left each pay to save regularly | 751 | 49.6 |
| Total | 1514 | |
| Employment | | |
| Employed | 1140 | 73.7 |
| Unemployed | 37 | 2.4 |
| Home Duties | 171 | 11.1 |
| Retired | 131 | 8.5 |
| Other | 68 | 4.4 |
| Total | 1547 | |
| Living arrangements | | |
| Adults with children | 853 | 55.4 |
| Adults living with other(s) but no children | 539 | 35.0 |
| Adults living alone | 149 | 9.7 |
| Total | 1541 | |
| Country of birth | | |
| Born in Australia | 1122 | 72.5 |
| Born in UK/Ireland | 221 | 14.3 |
| Born in other country | 205 | 13.2 |
| Total | 1548 | |

Note: Values may not add to 100% due to rounding.

Table 4: Sample frequencies by area of residence and SEIFA quintile, 18 to 64 years, WA NMSS 2012

| Sample description | Unweighted n | % |
|--|--------------|------|
| Area of residence | | |
| Metropolitan Perth | 1011 | 65.3 |
| Rest of State | 537 | 34.7 |
| Total | 1548 | |
| SEIFA | | |
| SEIFA Quintile* 1 (Most disadvantaged) | 149 | 9.6 |
| SEIFA Quintile 2 | 239 | 15.4 |
| SEIFA Quintile 3 | 267 | 17.2 |
| SEIFA Quintile 4 | 504 | 32.6 |
| SEIFA Quintile 5 (Least disadvantaged) | 389 | 25.1 |
| Total | 1548 | |

5.0 Results

The National Health and Medical Research Council's Australian Dietary Guidelines are based on the best available scientific evidence and make recommendations about the types and amounts of foods, food groups and dietary patterns to promote health and wellbeing and reduce the risk of diet-related disease, see Figure 1 (1).

The Dietary Guidelines apply to healthy Australians, as well as to those with common diet-related risk factors such as being overweight. They do not apply to people who need special dietary advice for a medical condition, or to the frail elderly. The Guidelines are for use by health professionals, policy makers, educators, food manufacturers, food retailers and researchers.

The Guidelines were updated in 2013, noting this was after this survey was conducted.

5.1 Achieve and maintain a healthy weight

The first Dietary Guideline advises "To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs." (1) Excess body weight is associated with increased risk of chronic disease and early death. The NMSS measures the weight status of the population based on self-reported weight and height measurements. The survey also reports on the barriers and enablers to maintaining a healthy weight and actions taken to lose weight across the population.

Respondents were asked their height and weight (without shoes) which was used to derive their weight status. Body Mass Index (BMI) based on corrected estimates for overestimation of height and underestimation of weight (3) was calculated using the World Health Organization classification system:

Body Mass Index (kg/m²)

| | |
|----------------------|--------------|
| Underweight | <18.5 |
| Healthy weight | 18.5 to 24.9 |
| Overweight | 5.0 to 29.9 |
| Obese | >30.0 |
| Overweight and obese | = >25.0. |

Most respondents (97.5%) provided their height and weight. However, 22 females were pregnant (2.2% of females and 1.4% of total respondents) and are not included in further analysis. Ten respondents (1.2%) were underweight with their mean BMI close to a healthy weight; therefore they were combined with the 'healthy weight' group for further analysis.

Figure 1: Australian Dietary Guidelines 2013

| Guideline | |
|-----------|---|
| 1 | <p>To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.</p> <ul style="list-style-type: none"> Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly. Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight. |
| 2 | <p>Enjoy a wide variety of nutritious foods from these five groups every day:</p> <ul style="list-style-type: none"> Plenty of vegetables, including different types and colours, and legumes/beans Fruit Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, oats, quinoa and barley Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years) <p>And drink plenty of water.</p> |
| 3 | <p>Limit intake of foods containing saturated fats, added salt, added sugars and alcohol.</p> <p>a. Limit intake of foods high in saturated fats such as many biscuits, cakes, pastries, hi, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks</p> <ul style="list-style-type: none"> Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, as breads, nut butters/pastes and avocado Low-fat diets are not suitable for children under the age of 2 years. <p>b. Limit intake of foods and drinks containing added salt.</p> <ul style="list-style-type: none"> Read labels to choose lower sodium options are among similar foods. Do not add salt to foods in cooking or at the table. <p>c. Limit intake of foods and drinks containing added sugars such as confectionery, some sugar sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sport drinks.</p> <p>d. If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.</p> |
| 4 | Encourage, support and promote breastfeeding. |
| 5 | Care for your food; prepare and store it safely. |

Taken from Eat for Health. Australian Dietary Guidelines, 2013. Page v. (1)

5.1.1 Body Mass Index

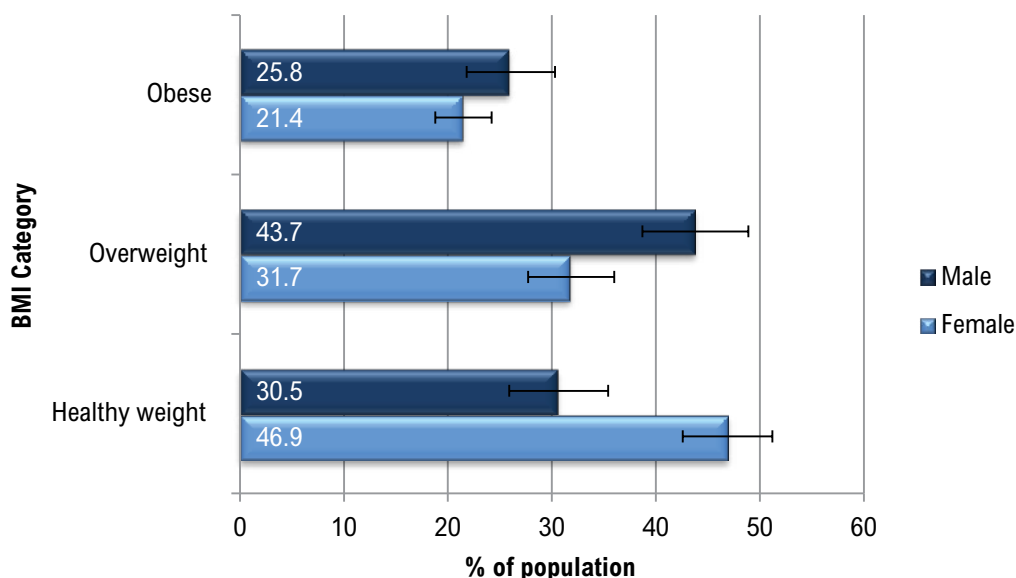
Across the population a similar percentage of respondents were a healthy weight and overweight, 38.5% and 37.8% respectively, and 23.6% were obese, shown in Table 5 and Figure 2. Female respondents were significantly more likely to be a healthy weight than males (46.9% compared with 30.5%). Males were significantly more likely to be overweight than females (43.7% compared with 31.7%).

Respondents aged 18 to 34 years were significantly less likely to be obese than those over 35 years.

Table 5: **Body Mass Index categories, 18 to 64 years, WA NMSS 2012**

| n=1509 | Healthy weight | | Overweight | | Obese | |
|----------------|----------------|--------------------|-------------|--------------------|-------------|--------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 59.3 | (52.0,66.2) | 31.3 | (25.0,38.5) | 9.3 | (5.8,14.8) |
| 35 to 44 yrs | 27.6 | (22.8,33.0) | 45.9 | (39.8,52.1) | 26.5 | (21.3,32.5) |
| 45 to 54 yrs | 25.9 | (21.9,30.3) | 36.4 | (31.4,41.6) | 37.7 | (32.7,43.0) |
| 55 to 64 yrs | 21.8 | (17.8,26.4) | 43.6 | (38.7,48.7) | 34.6 | (30.0,39.4) |
| Gender | | | | | | |
| Males | 30.5 | (25.9,35.4) | 43.7 | (38.7,48.9) | 25.8 | (21.8,30.3) |
| Females | 46.9 | (42.6,51.2) | 31.7 | (27.7,36.0) | 21.4 | (18.8,24.2) |
| Persons | 38.5 | (35.4,41.8) | 37.8 | (34.6,41.2) | 23.6 | (21.2,26.3) |

Figure 2: **Body Mass Index categories, by gender, 18 to 64 years, WA NMSS 2012**



5.1.2 Perception of current body weight

Respondents were asked to choose the description that best described their current body weight – ‘underweight’, ‘about right’, ‘somewhat overweight’ or ‘very overweight’, shown in Table 6 and Figures 3 and 4. Half (53%) said their current weight was ‘about right’, 37.8% said they were ‘somewhat overweight’ and only 5.8% said they were ‘very overweight’.

Females were significantly more likely to say they were ‘very overweight’ than males (7.5% compared with 2.5%), shown in Figure 3. Respondents aged 35 to 64 years were significantly more likely to say they were ‘very overweight’ than younger adults, shown in Figure 4.

Table 6: Perception of current body weight, 18 to 64 years, WA NMSS 2012

| n=1525 | Underweight | About right | Somewhat overweight | Very overweight |
|--------------|----------------------|-------------------------|-------------------------|----------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 4.8 (2.4,9.1) | 74.4 (67.5,80.2) | 20.2 (15.2,26.5) | 0.6 (0.1,3.0) |
| 35 to 44 yrs | 4.8 (2.6,8.6) | 46.3 (40.3,52.4) | 39.3 (33.4,45.4) | 9.6 (6.7,13.6) |
| 45 to 54 yrs | 2.3 (1.2,4.1) | 36.4 (31.5 ,41.6) | 54.0 (48.8,59.2) | 7.3 (5.2,10.3) |
| 55 to 64 yrs | 4.3 (2.5,7.4) | 34.8 (30.3,39.6) | 55.1 (50.1,59.9) | 5.8 (4.0,8.3) |
| Gender | | | | |
| Males | 5.0 (3.1,8.0) | 54.0 (49.2,58.8) | 38.4 (34.0,43.1) | 2.5 (1.5,4.3) |
| Females | 3.3 (1.9,5.5) | 52.1 (48.2,56.0) | 37.1 (33.6,40.9) | 7.5 (6.0,9.4) |
| Persons | 4.2 (2.9,5.9) | 53.1 (49.9,56.2) | 37.8 (34.9,40.8) | 5.0 (4.0,6.2) |

Figure 3: Perception of current body weight, by gender, 18 to 64 years, WA NMSS 2012

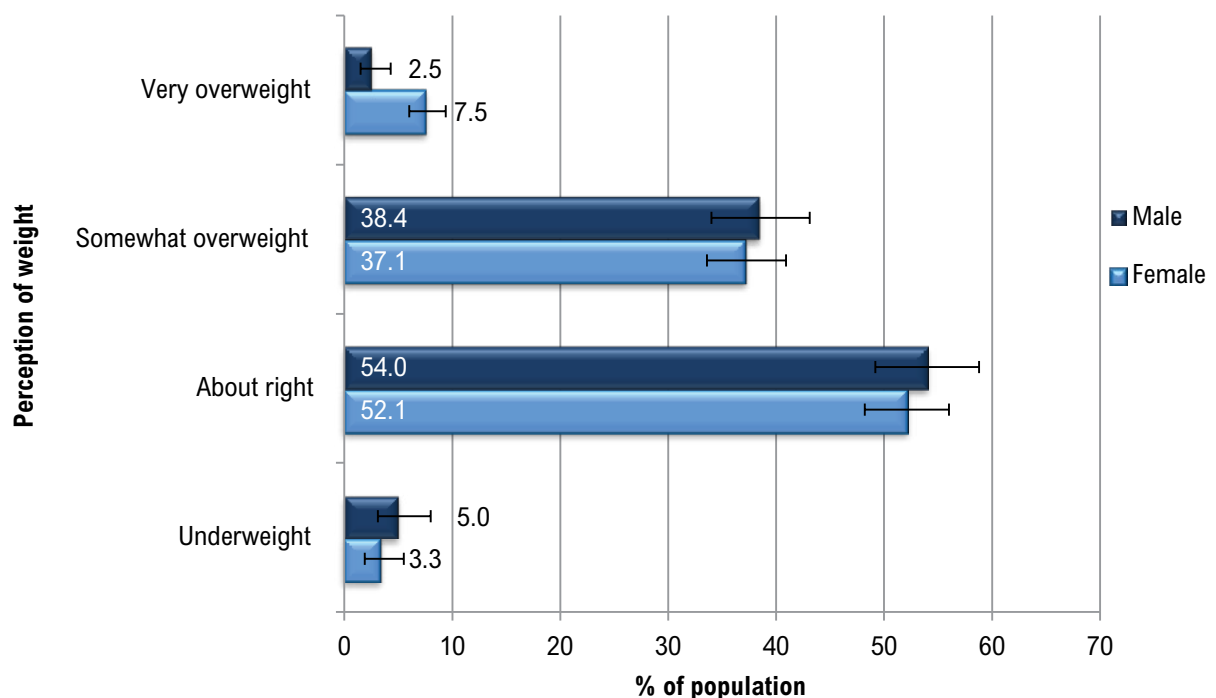
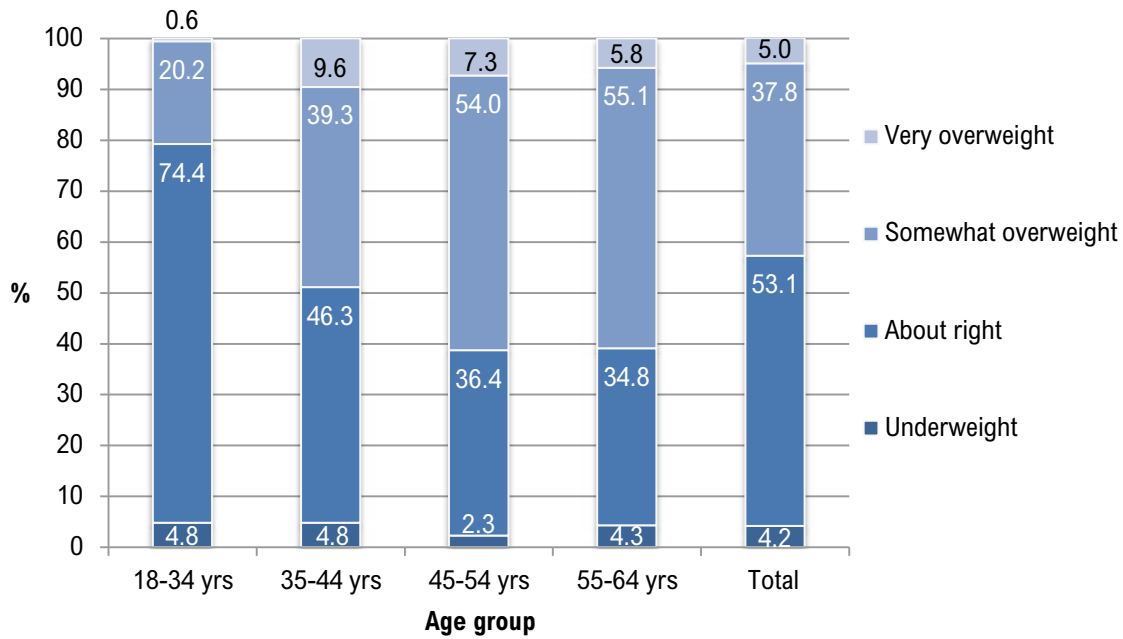


Figure 4: Perception of current body weight, by age, 18 to 64 years, WA NMSS 2012



5.1.3 Perception of current weight compared with Body Mass Index

Weight status, based on BMI category determined by respondents' self-reported height and weight, was compared with their own assessment of their current weight, shown in Table 7. Most (82.3%) respondents who were a healthy weight said their weight was 'about right'. Half (49.1%) of those who were classified as overweight saw themselves as 'about the right weight'. The majority (68.6%) of respondents who were obese said they were 'somewhat overweight'.

Table 7: Perceived weight by BMI category, 18 to 64 years, WA NMSS 2012

| n=1525 | Underweight | | About right | | Somewhat overweight | | Very overweight | |
|---------------------|-------------|------------------|-------------|--------------------|---------------------|--------------------|-----------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| BMI Category | | | | | | | | |
| Healthy weight | 10.1 | (6.9,14.6) | 82.3 | (77.4,86.3) | 7.6 | (5.4,10.6) | 0.0 | |
| Overweight | 0.3 | (0.1,0.9) | 49.2 | (43.8,54.6) | 49.1 | (43.8,54.5) | 1.4 | (0.6,3.3) |
| Obese | 0.3 | (0.0,2.4) | 12.6 | (8.4,18.5) | 68.6 | (62.5,74.1) | 18.4 | (14.7,22.9) |
| Total* | 4.1 | (2.8,5.9) | 53.2 | (50.1,56.4) | 37.8 | (34.9,40.9) | 4.9 | (3.9,6.1) |

*Excluding those who said they did not know or refused response

5.1.4 Current attempts to change weight

Respondents were asked to choose which of five statements best described their current thinking and behaviour about their weight, shown in Table 8. Nearly half (45.5%) were 'not thinking about changing their weight' and 35.8% were 'currently trying to lose weight'.

Females were significantly more likely to be 'currently trying to lose weight' than males (42.1% compared with 29.7%). Males were significantly more likely to say they were 'not thinking about trying to lose or gain weight' than females (52.1% compared with 38.8%).

Table 8: **Current attempts to change weight, WA adults, 18 to 64 years, WA NMSS 2012**

| n=1546 | Trying to lose weight | | Trying to gain weight | | Thinking about trying to lose weight | | Thinking about trying to gain weight | | Not thinking about loss/gain weight | |
|------------------|-----------------------|--------------------|-----------------------|------------------|--------------------------------------|--------------------|--------------------------------------|------------------|-------------------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 29.3 | (23.2,36.3) | 6.0 | (3.5,10.2) | 5.9 | (3.6,9.7) | 4.3 | (2.0,9.1) | 54.4 | (47.0,61.6) |
| 35 to 44 yrs | 34.6 | (29.2,40.4) | 2.4 | (1.0,5.3) | 17.5 | (13.1,22.9) | 1.0 | (0.3,3.6) | 44.6 | (38.7,50.6) |
| 45 to 54 yrs | 45.1 | (39.9,50.4) | 1.1 | (0.5,2.5) | 18.3 | (14.8,22.4) | 0.6 | (0.2,2.0) | 34.9 | (30.0,40.1) |
| 55 to 64 yrs | 40.4 | (35.7,45.3) | 2.6 | (1.4,4.8) | 16.0 | (12.8,19.8) | 0.8 | (0.2,3.2) | 40.2 | (35.4,45.1) |
| Gender | | | | | | | | | | |
| Males | 29.7 | (25.4,34.3) | 4.2 | (2.5,7.0) | 10.9 | (8.5,14.0) | 3.1 | (1.4,6.6) | 52.1 | (46.9,57.2) |
| Females | 42.1 | (37.7,46.7) | 2.9 | (1.6,5.0) | 15.0 | (12.6,17.7) | 1.3 | (0.5,3.0) | 38.8 | (34.4,43.4) |
| Persons | 35.8 | (32.7,39.0) | 3.6 | (2.4,5.2) | 12.9 | (11.1,14.9) | 2.2 | (1.2,4.0) | 45.5 | (42.1,49.0) |

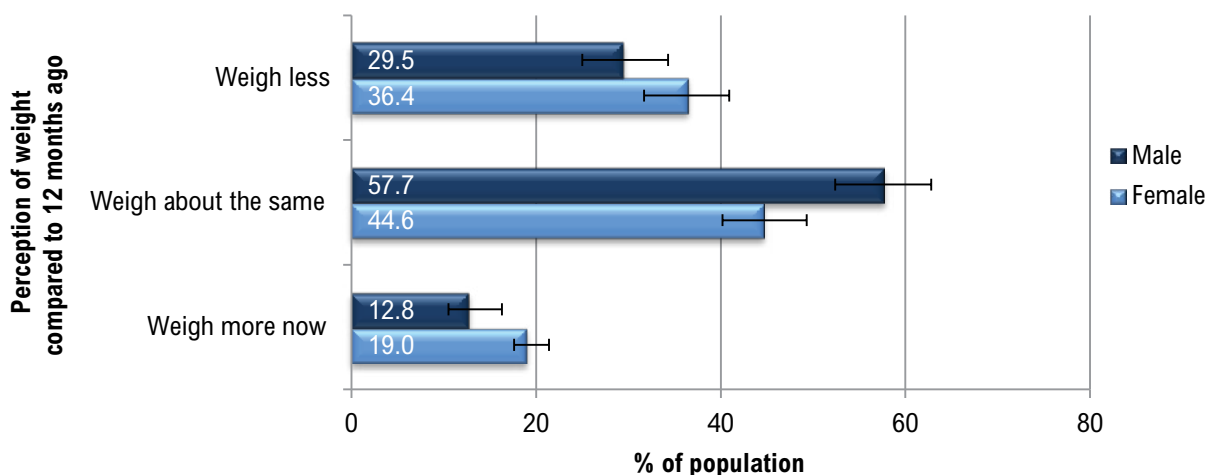
5.1.5 Perception of current weight compared with 12 months ago

Respondents were asked how their current weight compared with their weight 12 months prior, shown in Table 9 and Figure 5. One in three (32.9%) said that they weighed less now than 12 months ago, while 15.9% now weighed more.

Table 9: Perception of current weight compared with 12 months ago, 18 to 64 years, WA NMSS 2012

| n=1523 Age Group | Weigh more | | Weigh about the same | | Weigh less | |
|---------------------|-------------|--------------------|----------------------|--------------------|-------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 19.3 | (13.9,26.2) | 47.7 | (40.3,55.2) | 33.0 | (26.3,40.5) |
| 35 to 44 yrs | 12.9 | (9.4,17.5) | 53.7 | (47.5,59.7) | 33.4 | (27.9,39.4) |
| 45 to 54 yrs | 14.2 | (11.1,18.1) | 48.7 | (43.5,54.0) | 37.1 | (32.0,42.4) |
| 55 to 64 yrs | 14.0 | (11.0,17.7) | 59.3 | (54.5,63.8) | 26.7 | (22.7,31.1) |
| Total | | | | | | |
| Males | 12.8 | (9.6,17.0) | 57.7 | (52.2,63.0) | 29.5 | (24.9,34.5) |
| Females | 19.0 | (15.4,23.3) | 44.6 | (40.2,49.1) | 36.4 | (31.9,41.1) |
| Persons | 15.9 | (13.3,18.8) | 51.3 | (47.7,54.8) | 32.9 | (29.6,36.3) |

Figure 5: Perception of current weight compared with 12 months ago, by gender, 18 to 64 years, WA NMSS 2012



5.1.6 Attempts to change weight in the past 12 months

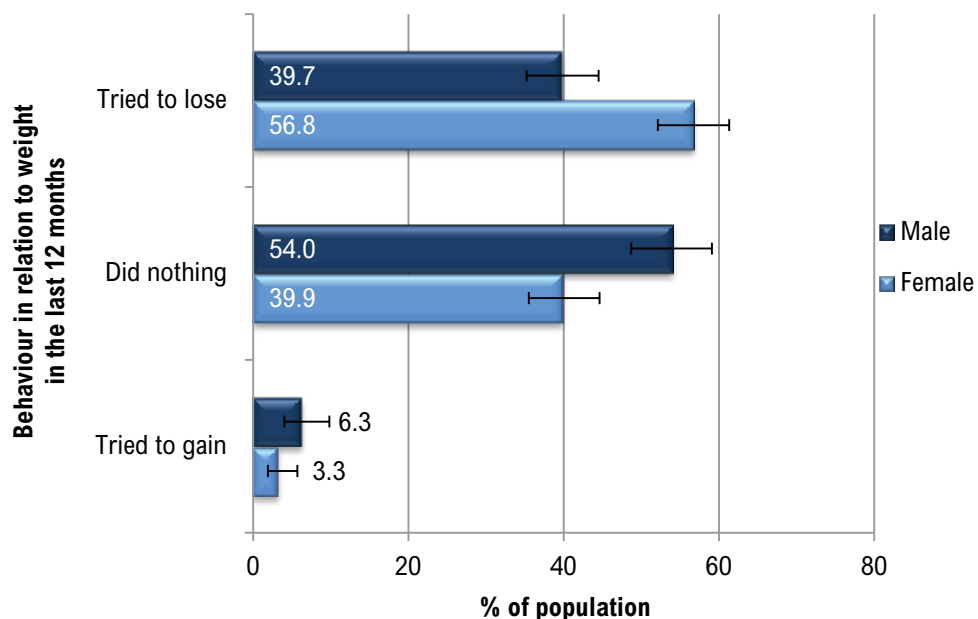
Respondents were asked if they had been trying to lose weight, gain weight or neither in the past 12 months, shown in Table 10 and Figure 6. Nearly half (48.1%) of respondents said that they had tried to lose weight in the last 12 months. Females were significantly more likely to say that they had tried to lose weight than males (56.8% compared with 39.7%).

Only 4.8% of respondents had tried to gain weight in the past 12 months. Respondents living in the metropolitan Perth were significantly more likely to have tried to gain weight than those living in the rest of the state (5.7% compared with 1.1%). Respondents aged 18 to 34 years were significantly more likely to have tried to gain weight than those over 35 years.

Table 10: Attempts to change weight in the last 12 months, 18 to 64 years, WA NMSS 2012

| n=1526 | Tried to gain | | Did nothing | | Tried to lose | |
|--------------------------|---------------|------------------|-------------|--------------------|---------------|--------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 9.4 | (6.0,14.3) | 54.2 | (46.7,61.4) | 36.5 | (30.0,43.5) |
| 35 to 44 yrs | 2.6 | (1.1,5.7) | 44.4 | (38.5,50.5) | 53.0 | (46.9,59.1) |
| 45 to 54 yrs | 1.4 | (0.7,2.9) | 38.2 | (33.2,43.4) | 60.4 | (55.2,65.4) |
| 55 to 64 yrs | 1.8 | (0.9,3.7) | 45.6 | (40.7,50.5) | 52.7 | (47.7,57.5) |
| Area of Residence | | | | | | |
| Perth Metro | 5.8 | (4.0,8.4) | 46.0 | (41.9,50.2) | 48.2 | (44.3,52.1) |
| Rest of State | 1.1 | (0.5,2.5) | 50.9 | (45.5,56.3) | 48.0 | (42.6,53.4) |
| Gender | | | | | | |
| Males | 6.3 | (4.0,9.8) | 54.0 | (48.7,59.1) | 39.7 | (35.2,44.5) |
| Females | 3.3 | (1.9,5.7) | 39.9 | (35.5,44.6) | 56.8 | (52.1,61.3) |
| Persons | 4.8 | (3.4,6.8) | 47.1 | (43.6,50.5) | 48.1 | (44.8,51.4) |

Figure 6: Attempts to change weight in the last 12 months, 18 to 64 years, by gender, WA NMSS 2012



5.2 Eating a variety of nutritious foods

The second Dietary Guideline advises people to “Enjoy a wide variety of nutritious foods from these five food groups every day” (1). The Guideline encourages people to eat a dietary pattern based on plenty of foods from the five food groups: (i) vegetables, legumes/beans; (ii) fruit; (iii) grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties; (iv) lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans; and (v) milk, yoghurt, cheese and/or their alternatives, mostly reduced fat. The Guideline also advises people to drink plenty of water. The Australian Guide to Healthy Eating is Australia’s food selection guide and highlights the types of foods in the five food groups and gives an idea of the proportion of the diet they should represent (see Figure 7).

Figure 7: The Australian Guide to Healthy Eating



Taken from Eat for Health. Australian Dietary Guideline, 2013. Page 10. (1)

5.2.1 Fruit and vegetables

The 2013 Dietary Guidelines provide updated recommendations for the amount of fruit and vegetables needed each day for good health. The Guidelines recommend at least two serves of fruit per day for both males and females. The recommended minimum number of serves of vegetables per day for adults is five for women and between five and six for men (depending on age). However, the survey was collected prior to the new guidelines, when the recommendations were for at least two serves of fruit and five serves of vegetables per day for both male and female adults. Survey information is reported against these earlier recommendations.

Trends in knowledge of the recommended amount of fruit and vegetables (4), self-reported intake and attitudes and beliefs among Western Australian for earlier surveys in this series are published elsewhere (5).

5.2.2 Fruit

Knowledge of daily recommendations

Respondents were asked the recommended number of serves of fruit that people should eat each day. They were told a serve of fruit was equal to one medium piece of fruit or half cup of cooked or canned fruit. Knowledge of the recommended number of servings of fruit per day is shown in Table 11 and Figure 8.

Just over half (55.8%) of respondents nominated two serves, with a further 38.9% nominating more than two serves. There were 4.1% respondents who said the recommendation was one serve and 1.2% said they did not know. The mean number of serves of fruit that respondents thought was recommended every day was 2.6 (95% CI [2.5, 2.6]).

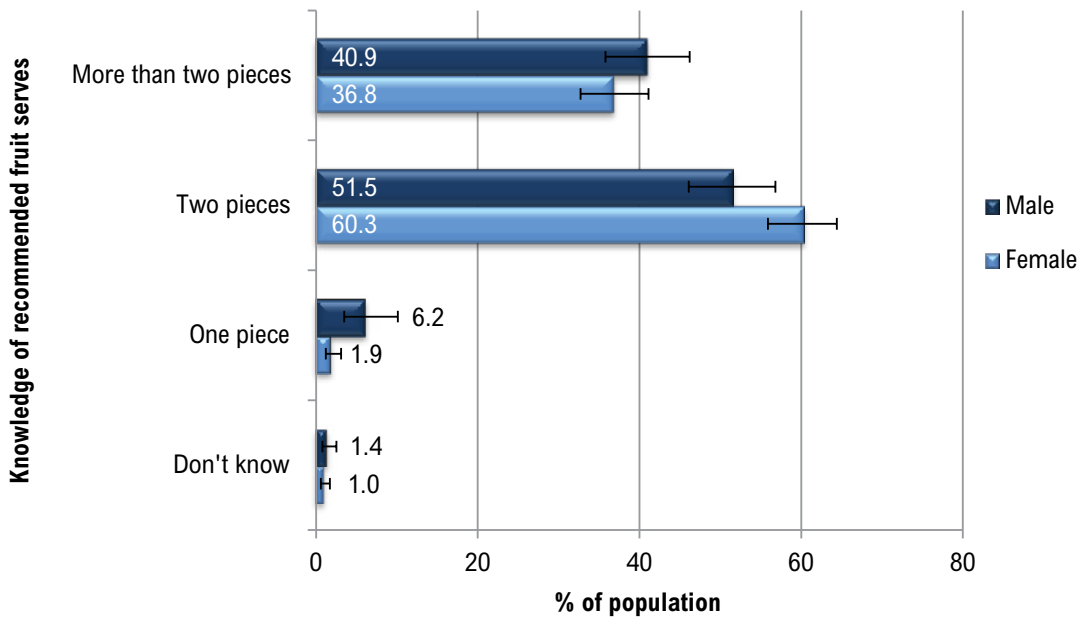
Males were significantly more likely than females to say one serve or less was the recommended amount (6.2% compared with 1.9%). Adults aged 18 to 34 years were significantly less likely to report more than two serves of fruit than adults over 45 years.

Table 11: Knowledge of recommended serves of fruit per day, 18 to 64 years, WA NMSS 2012

| n=1547 | Don't know | One serve | Two serves | More than two serves |
|-----------|----------------------|----------------------|-------------------------|-------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18–34 yrs | 0.0 | 5.8 (2.9,11.1) | 63.0 (55.4,69.9) | 31.2 (24.6,38.7) |
| 35–44 yrs | 0.8 (0.3,2.2) | 2.0 (0.9,4.7) | 58.4 (52.3,64.3) | 38.7 (33.0,44.8) |
| 45–54 yrs | 2.1 (1.0,4.1) | 2.6 (1.4,4.6) | 50.2 (45.0,55.4) | 45.2 (40.0,50.4) |
| 55–64 yrs | 3.4 (2.0,5.8) | 4.8 (3.1,7.6) | 43.3 (38.5,48.2) | 48.4 (43.6,53.3) |
| Gender | | | | |
| Males | 1.4 (0.8,2.5) | 6.2 (3.8,10.1) | 51.5 (46.1,56.8) | 40.9 (35.8,46.2) |
| Females | 1.0 (0.6,1.7) | 1.9 (1.2,3.1) | 60.3 (55.9,64.4) | 36.8 (32.7,41.1) |
| Persons | 1.2 (0.8,1.8) | 4.1 (2.7,6.1) | 55.8 (52.3,59.2) | 38.9 (35.6,42.3) |

Note: A serve was described as equal to one medium piece of fruit or half cup of cooked or canned fruit.

Figure 8: Knowledge of recommended serves of fruit per day, 18 to 64 years, WA NMSS 2012



Fruit eaten on day prior to the survey

Respondents were also asked how many pieces of fruit they ate on the day prior to the survey. They were told that a piece of fruit was equal to an apple, a small bunch of grapes, three prunes, a quarter of a rock melon or half a cup of stewed, pureed or canned fruit. Fruit eaten on the day prior to the survey is shown in Table 12 and Figure 9.

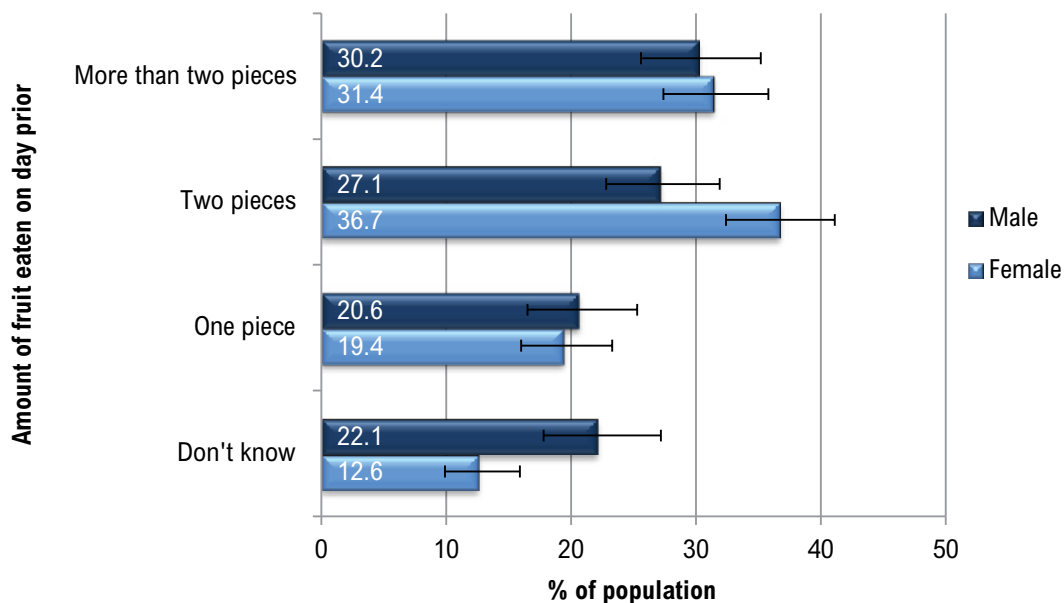
Table 12: Amount of fruit eaten day on prior to survey, 18 to 64 years, WA NMSS 2012

| n=1548 | None | | One piece | | Two pieces | | More than two pieces | |
|------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|----------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18–34 yrs | 20.1 | (14.6,27.0) | 23.1 | (17.3,30.0) | 29.4 | (23.3,36.4) | 27.4 | (21.2,34.7) |
| 35–44 yrs | 20.4 | (15.8,25.9) | 21.5 | (16.9,26.9) | 32.4 | (27.1,38.2) | 25.7 | (20.7,31.4) |
| 45–54 yrs | 15.1 | (11.6,19.3) | 15.8 | (12.4,19.9) | 35.5 | (30.6,40.7) | 33.7 | (28.9,38.8) |
| 55–64 yrs | 10.6 | (8.0,14.0) | 16.3 | (13.0,20.2) | 31.9 | (27.5,36.7) | 41.2 | (36.5,46.1) |
| Total | | | | | | | | |
| Males | 22.1 | (17.8,27.2) | 20.6 | (16.5,25.3) | 27.1 | (22.8,31.9) | 30.2 | (25.6,35.2) |
| Females | 12.6 | (9.9,15.9) | 19.4 | (16.0,23.3) | 36.7 | (32.4,41.1) | 31.4 | (27.4,35.8) |
| Persons | 17.4 | (14.8,20.4) | 20.0 | (17.2,23.0) | 31.8 | (28.8,35.0) | 30.8 | (27.7,34.1) |

Nearly two thirds (62.6%) consumed two or more pieces of fruit on the day prior to the survey (68.1% of females and 57.3% of males). Seventeen per cent did not eat any fruit on the day prior to the survey. Across the total sample, an average of 1.9 (95% CI [1.8, 2.0]) pieces of fruit were eaten on the day prior to the survey. Among those who ate fruit, the mean intake was 2.3 (95% CI [2.3, 2.4]) pieces.

Males were significantly more likely to report not eating any fruit than females (22.1% compared with 12.6%). Younger respondents aged 18 to 44 years were significantly more likely to report not eating any fruit than respondents aged 55 to 64 years (20.1% compared with 10.6%).

Figure 9: Amount of fruit eaten on day prior, 18 to 64 years, WA NMSS 2012



Perception of adequacy of current fruit intake

Respondents were asked which of four statements best described how they felt about their current fruit intake and whether they were thinking about or trying to eat more fruit, shown in Table 13. Approximately half (48.7%) of all respondents thought that they already ate enough fruit. Respondents over 55 years of age were significantly more likely to say they already ate enough fruit compared to younger age groups.

Table 13: Perception of adequacy of current fruit intake, 18 to 64 years, WA NMSS 2012

| n=1548 | Already eat enough fruit | | Not thinking about eating more fruit | | Thinking about eating more fruit | | Trying to eat more fruit | |
|------------------|--------------------------|--------------------|--------------------------------------|-------------------|----------------------------------|--------------------|--------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18–34 yrs | 43.7 | (36.5,51.1) | 11.4 | (7.3,17.3) | 25.9 | (19.6,33.5) | 19.0 | (14.0,25.3) |
| 35–44 yrs | 41.6 | (35.7,47.7) | 10.6 | (7.3,15.1) | 23.7 | (18.7,29.5) | 24.2 | (19.6,29.5) |
| 45–54 yrs | 52.2 | (46.9,57.5) | 11.5 | (8.5,15.3) | 16.6 | (13.1,20.9) | 19.7 | (15.8,24.3) |
| 55–64 yrs | 65.0 | (60.2,69.5) | 8.5 | (6.0,11.8) | 10.8 | (8.3,14.0) | 15.7 | (12.5,19.7) |
| Total | | | | | | | | |
| Males | 46.3 | (41.1,51.6) | 13.1 | (9.6,17.7) | 22.1 | (17.7,27.3) | 18.5 | (14.7,23.0) |
| Females | 51.3 | (46.9,55.7) | 8.2 | (6.4,10.5) | 19.5 | (15.9,23.7) | 21.1 | (17.9,24.6) |
| Persons | 48.7 | (45.3,52.2) | 10.7 | (8.6,13.2) | 20.8 | (17.9,24.1) | 19.7 | (17.2,22.6) |

Perception of adequacy of fruit intake compared with intake on the day prior

Only half (51.1%) of respondents who reported eating two pieces of fruit on the day prior to the survey said they already eat enough fruit, shown in Table 14. Fifteen per cent of respondents who ate no fruit said they already ate enough and 32.1% said they were not thinking of eating more.

Table 14: Perception of adequacy of fruit intake compared with intake on the day prior, 18 to 64 years, WA NMSS 2012

| n=1548 | Already eat enough fruit | | Not thinking about eating more fruit | | Thinking about eating more fruit | | Trying to eat more fruit | |
|---|--------------------------|--------------------|--------------------------------------|-------------------|----------------------------------|--------------------|--------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Amount of fruit eaten on the day prior | | | | | | | | |
| None | 15.0 | (9.7,22.4) | 32.1 | (23.9,41.5) | 34.6 | (26.0,44.3) | 18.3 | (12.2,26.7) |
| ½ to 1 piece | 32.5 | (25.3,40.6) | 13.2 | (8.6,19.9) | 29.3 | (21.8,38.2) | 25.0 | (19.0,32.1) |
| 2 pieces | 51.1 | (45.2,57.0) | 6.8 | (4.3,10.7) | 19.7 | (15.1,25.4) | 22.3 | (17.9,27.4) |
| > 2 pieces | 75.9 | (70.2,80.8) | 1.0 | (0.5,2.0) | 8.6 | (5.5,13.3) | 14.5 | (10.8,19.2) |
| Total sample | 48.7 | (45.3,52.2) | 10.7 | (8.6,13.2) | 20.8 | (17.9,24.1) | 19.7 | (17.2,22.6) |

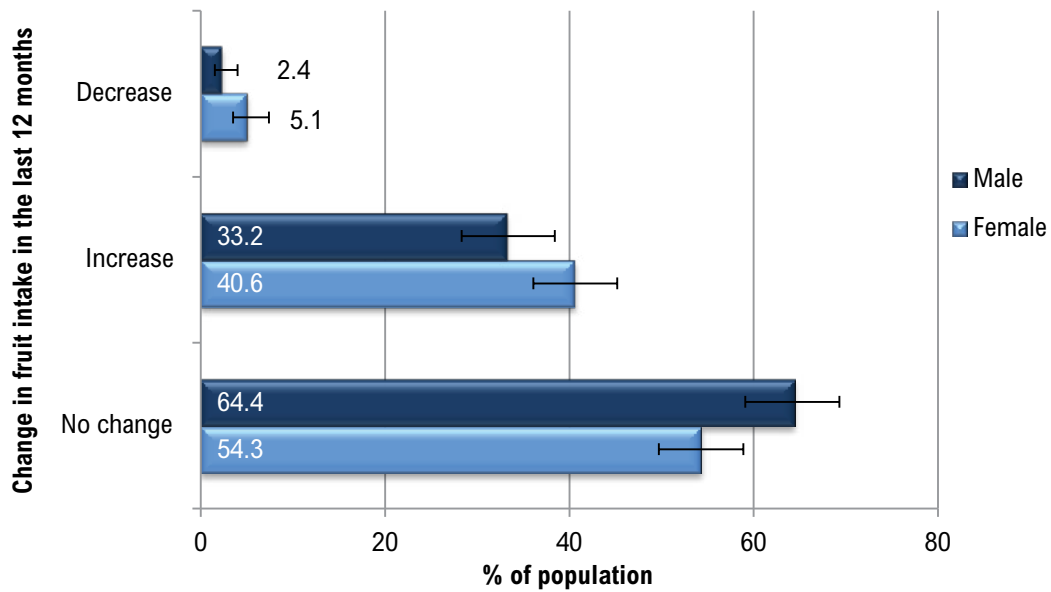
Attempts to change in fruit intake in the last year

Respondents were asked if they had tried to change the amount of fruit they ate in the past 12 months, shown in Table 15 and Figure 10. Over half (59.4%) of respondents said they had not tried to change the amount of fruit they eat. Over one in three (36.8%) had tried to increase the amount they ate. Males were significantly more likely to report not trying to make a change than females (64.4% compared to 54.3%). Respondents 55 to 64 years of age were significantly less likely to say they attempted to increase their fruit intake in the last 12 months than all younger age groups.

Table 15: Attempts to change fruit intake in the last 12 months, 18 to 64 years, WA NMSS 2012

| n=1544 | No attempt to change | | Tried to increase | | Tried to decrease | |
|------------------|----------------------|--------------------|-------------------|--------------------|-------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | |
| 18–34 yrs | 58.6 | (51.1,65.7) | 39.5 | (32.4,47.0) | 2.0 | (0.7,5.3) |
| 35–44 yrs | 54.2 | (48.0,60.2) | 41.2 | (35.3,47.4) | 4.6 | (2.7,7.8) |
| 45–54 yrs | 56.4 | (51.1,61.6) | 38.1 | (33.1,43.3) | 5.5 | (3.6,8.3) |
| 55–64 yrs | 71.7 | (67.1,75.8) | 23.8 | (19.9,28.2) | 4.5 | (2.9,6.9) |
| Total | | | | | | |
| Males | 64.4 | (59.1,69.3) | 33.2 | (28.3,38.4) | 2.4 | (1.5,4.0) |
| Females | 54.3 | (49.7,58.9) | 40.6 | (36.1,45.2) | 5.1 | (3.5,7.4) |
| Persons | 59.4 | (55.9,62.8) | 36.8 | (33.5,40.3) | 3.8 | (2.8,5.1) |

Figure 10: Attempts to change fruit intake in the last 12 months, 18 to 64 years, WA NMSS 2012



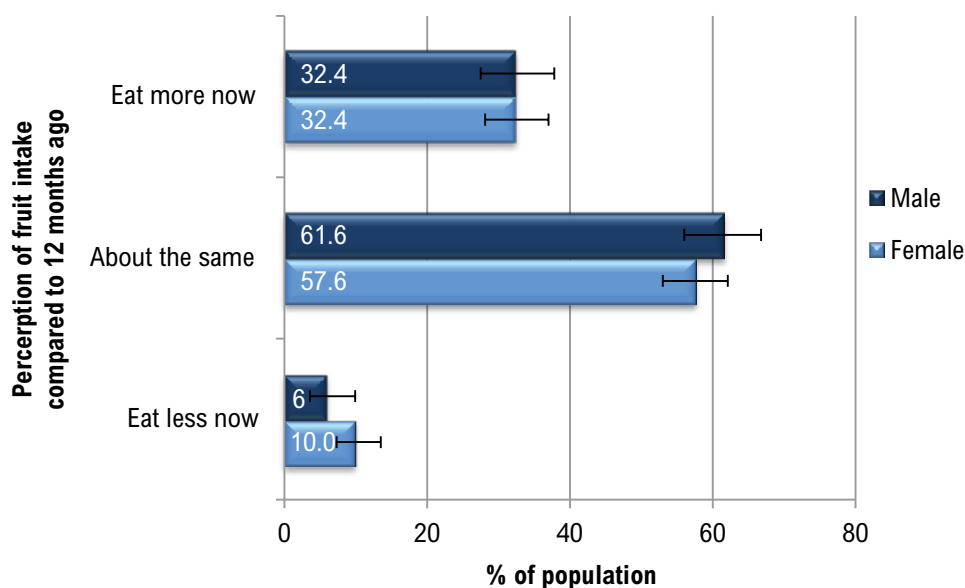
Comparison of current fruit intake with a year prior

Respondents were asked how their current fruit intake compared with their intake 12 months prior, shown in Table 16 and Figure 11. A third (32.4%) of respondents said they 'eat more fruit now', 59.6% said they 'eat about the same' amount and 8% said they 'eat less now' than they did a year ago. Respondents aged 55 to 64 years were significantly more likely to say they ate about the same amount of fruit as a year ago than any other age group.

Table 16: Amount of fruit eaten now compared with 12 months prior, 18 to 64 years, WA NMSS 2012

| n=1546 | Eat less now | About the same | Eat more now |
|----------------|-----------------------|-------------------------|-------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 10.1 (6.0,16.3) | 49.5 (41.9,57.2) | 40.4 (33.1,48.1) |
| 35 to 44 yrs | 6.4 (4.0,10.0) | 61.6 (55.5,67.4) | 32.0 (26.6,38.0) |
| 45 to 54 yrs | 7.8 (5.4,11.3) | 63.4 (58.1,68.4) | 28.8 (24.2,33.8) |
| 55 to 64 yrs | 5.5 (3.7,8.2) | 74.9 (70.4,78.9) | 19.6 (16.0,23.8) |
| Total | | | |
| Males | 6.0 (3.6,9.9) | 61.6 (56.0,66.8) | 32.4 (27.5,37.8) |
| Females | 10.0 (7.3,13.5) | 57.6 (53.0,62.1) | 32.4 (28.1,37.0) |
| Persons | 8.0 (6.0,10.4) | 59.6 (56.0,63.1) | 32.4 (29.1,35.9) |

Figure 11: Amount of fruit eaten now compared with 12 months prior by gender, 18 to 64 years, WA NMSS 2012



5.2.3 Vegetables

Knowledge of daily recommendations

Respondents were asked the recommended number of servings of vegetables that people should eat each day. They were told that one serve of vegetables is equal to one medium potato, half a cup of cooked vegetables or one cup of salad vegetables. Knowledge of the recommended number of servings of vegetables by age and gender is shown in Table 17.

Just over half (54.6%) of respondents believed the recommendation was to eat five (52.2%) or more than five (2.4%) servings of vegetables every day, shown in Table 17. The mean number of serves of vegetables that respondents thought were recommended every day was 4.1 (95% CI [4.0, 4.2]). Females were significantly more likely to report a higher mean recommended intake than males (4.4 (95% CI [4.3, 4.5]) compared with 3.9 (95% CI [3.7, 4.0]) serves).

Females were significantly more likely to say five serves a day was the recommended amount of vegetables than males (62.0% compared with 42.6%).

Table 17: Knowledge of recommended serves of vegetables per day, 18 to 64 years, WA NMSS 2012

| n=1547 | Don't know | Up to two | Three to four | Five | Over five |
|----------------|----------------------|------------------------|-------------------------|-------------------------|----------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 0.5 (0.1,2.4) | 9.1 (5.5,14.8) | 32.4 (25.5,40.2) | 55.8 (48.2,63.1) | 2.1 (0.8,5.2) |
| 35 to 44 yrs | 0.4 (0.1,1.9) | 9.8 (6.4,14.7) | 31.3 (26.0,37.3) | 55.4 (49.3,61.3) | 3.0 (1.5,6.0) |
| 45 to 54 yrs | 1.7 (0.7,3.8) | 17.4 (13.6,21.9) | 29.4 (24.8,34.5) | 48.6 (43.5,53.7) | 3.0 (1.6,5.4) |
| 55 to 64 yrs | 2.4 (1.2,4.7) | 11.0 (8.3,14.6) | 40.7 (35.9,45.7) | 44.3 (39.6,49.0) | 1.5 (0.7,3.4) |
| Total | | | | | |
| Males | 1.4 (0.8,2.7) | 15.7 (12.3,19.9) | 37.7 (32.5,43.2) | 42.6 (37.4,48.1) | 2.5 (1.4,4.7) |
| Females | 0.7 (0.3,1.4) | 6.9 (4.9,9.6) | 28.2 (24.2,32.5) | 62.0 (57.5,66.3) | 2.2 (1.3,3.8) |
| Persons | 1.1 (0.7,1.8) | 11.4 (9.3,13.8) | 33.0 (29.7,36.5) | 52.2 (48.7,55.6) | 2.4 (1.6,3.6) |

Serves of vegetables usually eaten daily

Respondents were asked how many serves of vegetables they usually eat each day. They were told that a serve of vegetables is equal to half a cup of cooked vegetables or one cup of salad. They were reminded to include salad, fresh, frozen, canned, raw and cooked vegetables. Vegetables usually eaten each day are shown in Table 18.

Across the total sample, the mean number of serves of vegetables usually eaten each day was 2.7 (95% CI [2.6, 2.8]). Females ate significantly more vegetables than males (2.9 (95% CI [2.8, 3.1]) compared with 2.5 (95% CI [2.4, 2.7]) serves).

Only 11.6% of respondents reported usually eating five or more serves of vegetables each day. Females were significantly more likely to say they usually ate five or more serves of vegetables than males (15.0% compared with 8.4%). Males were significantly more likely to say they usually ate up to two serves of vegetables per day than women (53.3% compared with 42.3%).

Although most respondents said they usually ate vegetables every day, the number of serves of vegetables eaten was significantly less than what they reported as being recommended, shown in Tables 17 and 18.

Table 18: Serves of vegetables usually eaten daily, 18 to 64 years, WA NMSS 2012

| n=1544 | None | | Up to two serves | | Three to four serves | | Five serves | | Over five serves | |
|----------------|------------|------------------|------------------|--------------------|----------------------|--------------------|-------------|-------------------|------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 0.6 | (0.1,3.1) | 45.9 | (38.5,53.5) | 38.2 | (31.1,45.8) | 9.1 | (5.6,14.5) | 6.2 | (3.5,10.7) |
| 35 to 44 yrs | 2.1 | (0.8,5.0) | 46.0 | (40.0,52.2) | 43.4 | (37.4,49.6) | 6.4 | (4.2,9.7) | 2.1 | (1.1,3.9) |
| 45 to 54 yrs | 0.3 | (0.1,1.1) | 53.4 | (48.4,58.3) | 37.7 | (32.9,42.9) | 7.3 | (5.3,10.0) | 1.2 | (0.6,2.4) |
| 55 to 64 yrs | 0.8 | (0.4,2.0) | 47.9 | (43.1,52.8) | 40.1 | (35.4,45.0) | 8.1 | (6.0,10.8) | 3.1 | (1.8,5.3) |
| Total | | | | | | | | | | |
| Males | 0.8 | (0.3,2.1) | 53.3 | (47.9,58.6) | 37.5 | (32.5,42.8) | 4.7 | (2.9,7.4) | 3.7 | (1.9,6.9) |
| Females | 1.0 | (0.4,2.4) | 42.3 | (37.9,46.8) | 41.7 | (37.3,46.3) | 11.3 | (8.5,14.8) | 3.7 | (2.4,5.6) |
| Persons | 0.9 | (0.5,1.7) | 47.9 | (44.4,51.4) | 39.6 | (36.2,43.1) | 7.9 | (6.2,10.1) | 3.7 | (2.5,5.4) |

Perception of adequacy of current vegetable intake

Respondents were asked which of four statements best described how they felt about their current vegetable intake and whether they were thinking about or trying to eat more vegetables, shown in Tables 19 and 20.

More than three out of five (61.3%) respondents thought that they already ate enough vegetables.

Respondents over 54 years of age were significantly more likely to say they already ate enough vegetables than those aged 44 years or younger (72.7% of 55 to 64 years compared with 55.6% of 18 to 34 year olds and 57.6% of 35 to 44 year olds).

Table 19: Perception of adequacy of current vegetable intake, 18 to 64 years, WA NMSS 2012

| n=1548 | Already eat enough vegetables | | Not thinking about eating more vegetables | | Thinking about eating more vegetables | | Trying to eat more vegetables | |
|------------------|-------------------------------|--------------------|---|------------------|---------------------------------------|--------------------|-------------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18 to 34 yrs | 55.6 | (48.1,62.9) | 7.1 | (3.8,12.9) | 14.9 | (10.3,21.0) | 22.3 | (16.7,29.2) |
| 35 to 44 yrs | 57.6 | (51.4,63.5) | 6.4 | (3.9,10.4) | 13.4 | (9.7,18.2) | 22.6 | (17.9,28.1) |
| 45 to 54 yrs | 66.1 | (60.9,70.9) | 5.6 | (3.4,9.1) | 9.5 | (6.8,12.9) | 18.9 | (15.1,23.3) |
| 55 to 64 yrs | 72.7 | (68.1,76.8) | 4.6 | (2.9,7.2) | 8.2 | (5.9,11.3) | 14.6 | (11.5,18.4) |
| Total | | | | | | | | |
| Males | 60.0 | (54.7,65.2) | 8.9 | (6.0,13.0) | 12.5 | (9.4,16.6) | 18.6 | (14.7,23.1) |
| Females | 62.5 | (57.9,66.9) | 3.5 | (2.1,5.6) | 11.9 | (9.1,15.5) | 22.1 | (18.4,26.3) |
| Persons | 61.3 | (57.7,64.7) | 6.2 | (4.5,8.5) | 12.2 | (10.0,14.9) | 20.3 | (17.6,23.3) |

Perception of adequacy of vegetable intake compared with amount usually eaten

Although 61.3% of respondents believed they already eat enough vegetables, only 11.6% of respondents reported usually eating five or more serves of vegetables each day (Table 18). Over half (55.8%) of those who usually ate two or fewer serves a day felt they already ate enough vegetables (Table 20). Of the respondents who did not usually eat any vegetables, 43.5% said they were not currently thinking about eating more.

Table 20: Perception of adequacy of vegetable intake compared with the amount usually eaten, 18 to 64 years, WA NMSS 2012

| n=1547 | Already eat enough vegetables | | Not thinking about eating more vegetables | | Thinking about eating more vegetables | | Trying to eat more vegetables | |
|----------------------------|-------------------------------|--------------------|---|------------------|---------------------------------------|--------------------|-------------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Usual serves of vegetables | | | | | | | | |
| None | 9.3 | (2.4,30.5) | 43.5 | (17.5,73.7) | 35.4 | (11.4,69.9) | 11.8 | (3.5,32.7) |
| Up to two | 55.8 | (50.6,60.8) | 8.5 | (5.7,12.6) | 14.5 | (11.1,18.7) | 21.3 | (17.4,25.7) |
| Three to four | 63.5 | (57.9,68.7) | 4.0 | (2.1,7.5) | 11.2 | (8.2,15.2) | 21.3 | (17.0,26.4) |
| Five | 76.2 | (63.9,85.3) | 2.0 | (0.7,5.5) | 3.5 | (1.4,8.2) | 18.4 | (10.1,31.0) |
| More than five | 90.1 | (67.3,97.6) | 0.0 | | 6.9 | (1.0,35.2) | 3.0 | (0.7,11.6) |
| Total sample | 61.3 | (57.7,64.7) | 6.2 | (4.5,8.5) | 12.2 | (10.0,14.9) | 20.3 | (17.6,23.3) |

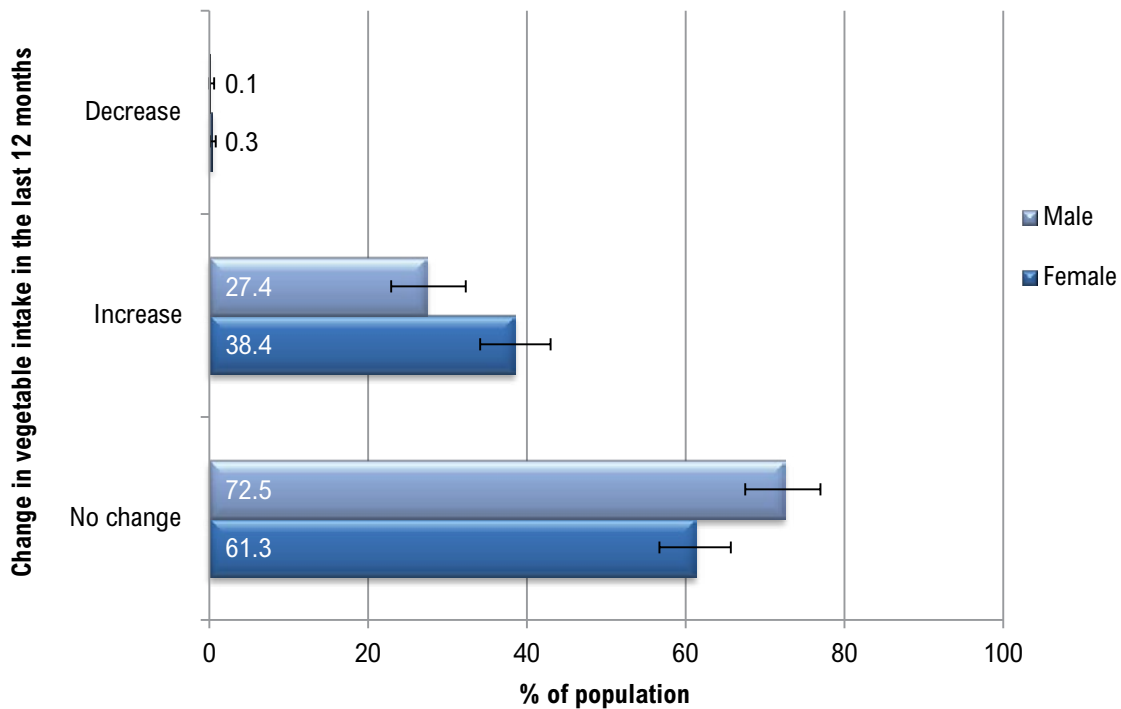
Attempts to change vegetable intake in the last year

Respondents were asked if they had tried to change the amount of vegetables they ate in the past 12 months, shown in Table 21 and Figure 12. About a third (32.8%) of respondents said they had tried to increase their vegetable intake over the last year. Females were significantly more likely to have said that they had tried to increase their vegetable intake than males (38.4% compared with 27.4%).

Table 21: Attempts to change vegetable intake in the last 12 months, 18 to 64 years, WA NMSS 2012

| n=1534 | No attempt to change | | Tried to increase | | Tried to decrease | |
|----------------|----------------------|--------------------|-------------------|--------------------|-------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | |
| 18 to 34 yrs | 62.4 | (55.1,69.2) | 37.6 | (30.8,44.9) | 0.0 | |
| 35 to 44 yrs | 65.3 | (59.5,70.8) | 34.5 | (29.1,40.4) | 0.1 | (0.0,0.8) |
| 45 to 54 yrs | 68.3 | (63.2,72.9) | 31.7 | (27.1,36.8) | 0.0 | |
| 55 to 64 yrs | 77.9 | (73.5,81.7) | 21.3 | (17.5,25.7) | 0.8 | (0.3,2.5) |
| Total | | | | | | |
| Males | 72.5 | (67.5,77.0) | 27.4 | (22.9,32.5) | 0.1 | (0.0,0.6) |
| Females | 61.3 | (56.7,65.7) | 38.4 | (34.1,43.0) | 0.3 | (0.1,0.8) |
| Persons | 67.0 | (63.6,70.2) | 32.8 | (29.6,36.2) | 0.2 | (0.1,0.4) |

Figure 12: Attempts to change vegetable intake in the last 12 months, 18 to 64 years, WA NMSS 2012



Comparison of current vegetable intake with a year prior

Respondents were asked how their current vegetable intake compared with their intake 12 months prior, shown in Table 22. The majority (71%) reported that they ate about the same amount of vegetables now as they did a year ago. Female respondents were significantly more likely to say they were currently eating more vegetables than a year ago than males (29.8% compared with 20.7%). Respondents aged 55 to 64 years were significantly less likely to eat more vegetables than they were a year ago than those aged 18 to 54 years (16.3% compared with 25.2% to 28.6%).

Table 22: Amount of vegetables eaten now compared with 12 months prior, 18 to 64 years, WA NMSS 2012

| n=1546 Age Group | Eat less now | | About the same | | Eat more now | |
|---------------------|--------------|------------------|----------------|--------------------|--------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 6.0 | (3.2,11.1) | 65.4 | (58.1,72.0) | 28.6 | (22.6,35.4) |
| 35 to 44 yrs | 1.0 | (0.3,3.4) | 72.8 | (67.3,77.7) | 26.2 | (21.4,31.6) |
| 45 to 54 yrs | 2.2 | (1.1,4.2) | 72.6 | (67.6,77.1) | 25.2 | (20.9,30.1) |
| 55 to 64 yrs | 4.2 | (2.6,6.9) | 79.5 | (75.2,83.2) | 16.3 | (13.0,20.2) |
| Total | | | | | | |
| Males | 3.5 | (1.8,6.4) | 75.8 | (70.8,80.2) | 20.7 | (16.7,25.4) |
| Females | 4.1 | (2.3,7.0) | 66.1 | (61.7,70.3) | 29.8 | (25.9,34.0) |
| Persons | 3.8 | (2.5,5.7) | 71.0 | (67.8,74.1) | 25.2 | (22.3,28.3) |

5.2.4 Grains and cereal foods

The Dietary Guidelines recommend eating a wide variety of foods from the grain (cereal) foods group, mostly wholegrain and/or high cereal fibre varieties. This guideline encourages consumption of plain cereal grain foods, for example, bread, pasta, rice and noodles, which form the basis for many meals. As the Guidelines recommend limiting the intake of foods that are energy dense, high in saturated fat, added salt and added sugar, cereal foods such as muffins, pastries and sweetened biscuits are not included in this food group.

Bread

Respondents were asked if they ate any bread yesterday, and if they did, what type of bread they mainly ate, shown in Table 23. Almost 70% of respondents ate bread on the day prior to the survey. Of those who ate bread the most common types eaten were multigrain or wholegrain bread (34.7%) and white (33.1%). One quarter of those who ate bread chose brown or wholemeal bread. Respondents residing in metropolitan Perth were significantly less likely to have eaten white bread than those living in the rest of the state (30.7% compared with 41.8%).

Table 23: Types of bread mainly eaten on the day prior, 18 to 64 years, WA NMSS 2012

| n=1073 | Brown or wholemeal bread | | Multigrain or wholegrain bread | | White bread with extra fibre | | White bread | | Other | |
|--------------------------|--------------------------|--------------------|--------------------------------|--------------------|------------------------------|------------------|-------------|--------------------|------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 26.1 | (18.8,35.0) | 35.6 | (27.4,44.7) | 3.3 | (1.4,7.6) | 33.3 | (25.8,41.9) | 1.7 | (0.4,6.4) |
| 35 to 44 yrs | 23.0 | (15.4,26.6) | 31.9 | (25.8,38.7) | 7.9 | (4.9,12.6) | 39.3 | (32.8,46.3) | 0.5 | (0.1,1.9) |
| 45 to 54 yrs | 31.6 | (18.2,28.5) | 34.2 | (28.6,40.3) | 6.9 | (4.3,11.0) | 34.5 | (28.7,40.8) | 1.4 | (0.6,3.4) |
| 55 to 64 yrs | 25.1 | (26.4,37.3) | 37.1 | (31.7,42.8) | 6.8 | (4.3,10.5) | 22.7 | (18.0,28.1) | 1.8 | (0.8,4.0) |
| Area of residence | | | | | | | | | | |
| Perth Metro | 25.5 | (21.4,30.2) | 36.6 | (31.9,41.7) | 5.7 | (4.1,7.9) | 30.7 | (26.3,35.4) | 1.5 | (0.6,3.4) |
| Rest of State | 23.6 | (18.0,30.4) | 27.9 | (23.1,33.1) | 5.7 | (3.3,9.5) | 41.8 | (35.4,48.5) | 1.0 | (0.5,2.3) |
| Total | | | | | | | | | | |
| Males | 23.1 | (18.4,28.7) | 33.1 | (27.5,39.3) | 5.5 | (3.5,8.6) | 37.0 | (31.4,43.1) | 1.1 | (0.3,4.1) |
| Females | 27.2 | (22.3,32.7) | 36.4 | (31.1,41.9) | 5.9 | (4.1,8.4) | 29.0 | (24.3,34.1) | 1.6 | (0.7,3.5) |
| Persons | 25.1 | (21.6,29.0) | 34.7 | (30.8,38.8) | 5.7 | (4.3,7.6) | 33.1 | (29.4,37.0) | 1.4 | (0.7,2.8) |

Base: those who ate bread yesterday.

Rice

Respondents were asked if they ate any rice yesterday, and if they did, whether it was white or brown rice, shown in Table 24. Only 23% of respondents said that they ate rice on the day prior to the survey. Of those who ate rice, 86.4% ate white rice and 13.6% ate brown rice.

Table 24: Type of rice consumed on the day prior, 18 to 64 years, WA NMSS 2012

| n=357 | White rice | Brown rice |
|----------------|-------------------------|------------------------|
| Age Group | % 95% CI | % 95% CI |
| 18 to 34 yrs | 87.7 (73.8,94.7) | 12.3 (5.3,26.2) |
| 35 to 44 yrs | 88.7 (79.3,94.2) | 11.3 (5.8,20.7) |
| 45 to 54 yrs | 80.6 (70.6,87.8) | 19.4 (12.2,29.4) |
| 55 to 64 yrs | 87.6 (78.4,93.3) | 12.4 (6.7,21.6) |
| Total | | |
| Males | 85.6 (77.1,91.3) | 14.4 (8.7,22.9) |
| Females | 87.2 (79.4,92.3) | 12.8 (7.7,20.6) |
| Persons | 86.4 (81.0,90.5) | 13.6 (9.5,19.0) |

Base: those who ate rice yesterday.

Pasta or spaghetti

Respondents were asked how many cups of cooked pasta or spaghetti they ate yesterday, and if they ate any, whether it was regular or wholemeal, shown in Table 25. Only 17.8% of respondents said they ate pasta or spaghetti on the day prior to the survey. Of those who ate pasta or spaghetti, 92.2% ate regular types and only 7.8% ate wholemeal varieties.

Table 25: Type of pasta or spaghetti eaten on the day prior, 18 to 64 years, WA NMSS 2012

| n=276 | Regular pasta or spaghetti | Wholemeal pasta or spaghetti |
|----------------|----------------------------|------------------------------|
| Age Group | % 95% CI | % 95% CI |
| 18 to 34 yrs | 91.4 (79.5,96.7) | 8.6 (3.3,20.5) |
| 35 to 44 yrs | 93.2 (78.4,98.1) | 6.8 (1.9,21.6) |
| 45 to 54 yrs | 92.9 (84.2,97.0) | 7.1 (3.0,15.8) |
| 55 to 64 yrs | 91.5 (82.6,96.1) | 8.5 (3.9,17.4) |
| Total | | |
| Males | 92.2 (82.4,96.8) | 7.8 (3.2,17.6) |
| Females | 92.1 (87.0,95.3) | 7.9 (4.7,13.0) |
| Persons | 92.2 (87.2,95.3) | 7.8 (4.7,12.8) |

Base: those who ate pasta or spaghetti yesterday.

Breakfast cereal

Respondents were asked how many cups of breakfast cereal they ate yesterday, shown in Table 26. About half (52%) of respondents ate breakfast cereal on the day prior to the survey.

Table 26: **Breakfast cereal eaten on the day prior to the survey, 18 to 64 years, WA NMSS 2012**

| n=1548 | Ate breakfast cereal on day prior | |
|------------------|-----------------------------------|--------------------|
| | % | 95% CI |
| Age Group | | |
| 18 to 34 yrs | 52.8 | (45.4,60.1) |
| 35 to 44 yrs | 47.5 | (41.5,53.6) |
| 45 to 54 yrs | 50.4 | (45.2,55.6) |
| 55 to 64 yrs | 57.9 | (53.0,62.6) |
| Total | | |
| Males | 54.6 | (49.2,59.8) |
| Females | 49.4 | (44.9,53.8) |
| Persons | 52.0 | (48.5,55.4) |

Perception of adequacy of current cereal foods intake

Respondents were asked which of four statements best described how they felt about their current intake of cereal foods and whether they were thinking about or trying to eat more cereal foods, shown in Table 27. Over half (57.4%) of all respondents said that they already ate enough cereal foods and only 9.2% said they were trying to eat more.

Table 27: **Perception of the adequacy of current cereal food intake, 18 to 64 years, WA NMSS 2012**

| n=1534 | Already eat enough cereal foods | | Not thinking about eating more cereal foods | | Thinking about eating more cereal foods | | Trying to eat more cereal foods | |
|------------------|---------------------------------|--------------------|---|--------------------|---|-------------------|---------------------------------|-------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18 to 34 yrs | 54.8 | (47.0,62.4) | 25.1 | (18.9,32.6) | 9.1 | (5.5,14.5) | 11.0 | (7.1,16.7) |
| 35 to 44 yrs | 53.1 | (47.0,59.2) | 29.7 | (24.3,35.7) | 7.2 | (4.7,10.8) | 10.1 | (6.9,14.5) |
| 45 to 54 yrs | 59.8 | (54.5,64.9) | 24.1 | (20.0,28.8) | 7.9 | (5.5,11.4) | 8.2 | (5.6,11.8) |
| 55 to 64 yrs | 65.7 | (60.9,70.2) | 23.6 | (19.7,28.0) | 5.4 | (3.7,7.9) | 5.3 | (3.4,8.3) |
| Total | | | | | | | | |
| Males | 56.3 | (50.8,61.7) | 25.0 | (20.5,30.1) | 9.2 | (6.3,13.1) | 9.5 | (6.8,13.3) |
| Females | 58.5 | (53.8,63.0) | 26.4 | (22.4,30.7) | 6.3 | (4.6,8.5) | 8.8 | (6.3,12.2) |
| Persons | 57.4 | (53.8,60.9) | 25.7 | (22.6,29.0) | 7.8 | (6.0,10.0) | 9.2 | (7.3,11.6) |

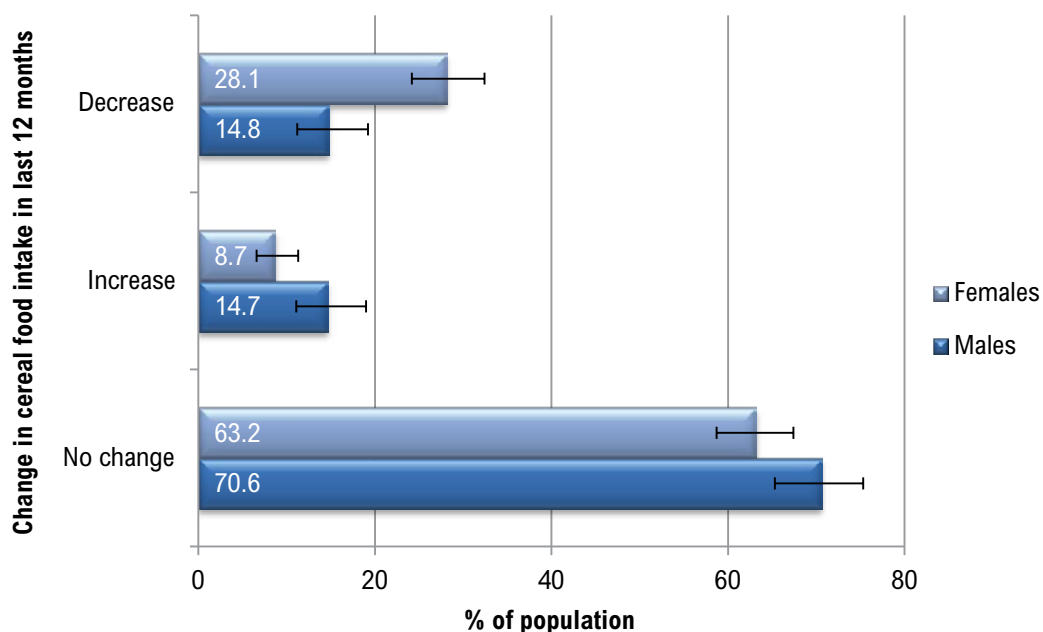
Attempts to change cereal food intake in the last year

Respondents were asked if they had tried to change the amount of cereal foods they ate in the past 12 months, shown in Table 28 and Figure 13. Two thirds (66.9%) of respondents said they had made no attempt to change their cereal intake over the last year. Females were significantly more likely to say they had tried to decrease their cereal food intake than males (28.1% compared with 14.8%).

Table 28: Attempts to change cereal food intake in the last 12 months, 18 to 64 years, WA NMSS 2012

| n=1541 Age Group | No attempt to change | | Tried to increase | | Tried to decrease | |
|---------------------|----------------------|--------------------|-------------------|-------------------|-------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 63.0 | (55.6,69.9) | 12.2 | (8.1,18.0) | 24.8 | (19.0,31.6) |
| 35 to 44 yrs | 69.6 | (63.7,74.9) | 10.6 | (7.3,15.1) | 19.8 | (15.5,24.9) |
| 45 to 54 yrs | 66.3 | (61.1,71.2) | 13.4 | (10.0,17.6) | 20.3 | (16.4,24.9) |
| 55 to 64 yrs | 73.0 | (68.5,77.1) | 10.1 | (7.3,13.7) | 16.9 | (13.8,20.5) |
| Total | | | | | | |
| Males | 70.6 | (65.3,75.3) | 14.7 | (11.1,19.0) | 14.8 | (11.2,19.2) |
| Females | 63.2 | (58.7,67.4) | 8.7 | (6.6,11.3) | 28.1 | (24.2,32.4) |
| Persons | 66.9 | (63.5,70.2) | 11.7 | (9.6,14.2) | 21.3 | (18.6,24.4) |

Figure 13: Attempts to change cereal food intake in the last 12 months, 18 to 64 years, WA NMSS 2012



Comparison of current cereal food intake with a year prior

Respondents were asked how their current cereal food intake compared with their intake 12 months prior, shown in Table 29. The majority (68.3%) of respondents said they ate about the same amount now as they did a year ago, and only 10.2% said they now eat more.

Table 29: Comparison of current cereal food intake with intake 12 months prior, 18 to 64 years, WA NMSS 2012

| n=1546 | Eat less now | | About the same | | Eat more now | |
|------------------|---------------------|--------------------|-----------------------|--------------------|---------------------|-------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 23.9 | (18.0,30.9) | 64.7 | (57.2,71.6) | 11.4 | (7.4,17.1) |
| 35 to 44 yrs | 21.2 | (16.9,26.2) | 69.1 | (63.3,74.3) | 9.7 | (6.6,14.2) |
| 45 to 54 yrs | 20.8 | (17.0,25.2) | 68.0 | (62.9,72.6) | 11.2 | (8.2,15.1) |
| 55 to 64 yrs | 17.7 | (14.4,21.5) | 75.6 | (71.2,79.5) | 6.7 | (4.6,9.8) |
| Total | | | | | | |
| Males | 16.0 | (12.2,20.7) | 72.5 | (67.2,77.3) | 11.5 | (8.3,15.6) |
| Females | 27.3 | (23.4,31.4) | 63.9 | (59.4,68.4) | 8.8 | (6.6,11.7) |
| Persons | 21.5 | (18.8,24.6) | 68.3 | (64.9,71.5) | 10.2 | (8.2,12.6) |

5.2.5 Milk, yoghurt and cheese

The Dietary Guidelines recommend eating a wide variety of foods from the milk, yoghurt, cheese and their alternatives food group, mostly reduced fat varieties. As a group, these foods are the major source of calcium for most Australians. The survey asks about consumption of milk, yoghurt and cheese on the day prior, shown in Table 30. Most (95.1%) respondents consumed some dairy foods or alternatives on the day prior to the survey.

Table 30: Percentage consuming dairy foods and alternatives on the day prior, 18 to 64 years, WA NMSS 2012

| n=1544 | Milk | | Yoghurt | | Cheese | | No dairy | |
|---|-------------|--------------------|-------------|--------------------|-------------|--------------------|------------|------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 88.9 | (83.4,92.8) | 24.2 | (18.4,31.0) | 40.3 | (32.8,48.3) | 6.3 | (3.5,11.2) |
| 35 to 44 yrs | 88.5 | (83.6,92.0) | 26.2 | (21.2,31.8) | 47.2 | (40.2,54.4) | 3.4 | (1.7,6.9) |
| 45 to 54 yrs | 87.4 | (83.5,90.5) | 31.3 | (26.7,36.4) | 37.4 | (31.8,43.4) | 4.8 | (2.9,7.6) |
| 55 to 64 yrs | 87.2 | (83.4,90.3) | 32.0 | (27.7,36.7) | 30.3 | (25.5,35.6) | 4.0 | (2.5,6.4) |
| Area of residence | | | | | | | | |
| Metropolitan Perth | 88.0 | (85.0,90.4) | 27.3 | (23.8,31.1) | 37.1 | (32.8,41.7) | 4.9 | (3.3,7.2) |
| Rest of State | 89.1 | (84.8,92.2) | 28.3 | (24.1,33.0) | 48.1 | (42.1,54.2) | 5.2 | (2.8,9.5) |
| Annual household income (n=1366) | | | | | | | | |
| Up to \$60,000 | 87.9 | (80.1,92.9) | 16.8 | (12.8,21.8) | 32.8 | (24.9,41.8) | 9.0 | (4.4,17.3) |
| Over \$60,000 | 87.9 | (84.9,90.3) | 30.5 | (26.8,34.5) | 39.9 | (35.2,44.7) | 4.4 | (2.9,6.5) |
| Total | | | | | | | | |
| Males | 87.6 | (83.7,90.7) | 23.5 | (19.5– 28.1) | 43.0 | (37.3,48.9) | 4.8 | (2.7,8.1) |
| Females | 88.8 | (85.8,91.2) | 31.7 | (27.6,36.0) | 35.8 | (31.3,40.7) | 5.1 | (3.5,7.5) |
| Persons | 88.2 | (85.8,90.3) | 27.5 | (24.6,30.6) | 39.5 | (35.8,43.3) | 4.9 | (3.5,6.9) |

Milk

Respondents were asked how many cups of any type of milk they consumed yesterday including milk used in cereal, tea, coffee, other drinks or cooking, including powdered milk. The majority (88.2%) of respondents reported drinking milk on the day prior to the survey, shown in Table 31.

Amount and type of milk consumed

Across the total sample the mean amount of milk consumed on the day prior to the survey was 1.3 (95% CI [1.2, 1.3]) cups; and 1.5 (95% CI [1.4, 1.5]) cups among those who consumed milk on the previous day.

The percentage of respondents consuming different types of milk on the day prior to the survey are shown in Table 31. Among those consuming milk, cow's milk (95.9%) was the most common. Lower fat or skim milk varieties were more likely to be chosen than full-fat versions (56.4% compared with 39.5%).

Males were significantly more likely to drink whole (full fat) cow's milk than females (47.6% compared with 31.1%). Females were significantly more likely to consume skim cow's milk than males (20% compared with 12.2%). Respondents living in metropolitan Perth were significantly less likely to consume whole cow's milk than those living in the rest of the state (36.4% compared with 50.5%).

Table 31: Type of milk consumed on day prior, 18 to 64 years, WA NMSS 2012

| n=1364 | Whole cow's milk | Low fat cow's milk | Skim cow's milk | Whole other | Low fat other | Skim other |
|--------------------------|-------------------------|-------------------------|-------------------------|----------------------|----------------------|----------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 42.7 (35.1,50.7) | 38.0 (30.5,46.2) | 15.3 (10.5,21.7) | 1.3 (0.3,5.4) | 1.6 (0.5,4.6) | 1.1 (0.3,3.7) |
| 35 to 44 yrs | 37.3 (33.9,46.4) | 42.9 (36.6,49.4) | 14.4 (10.2,20.0) | 0.6 (0.2,2.0) | 1.7 (0.7,3.9) | 0.5 (0.1,1.6) |
| 45 to 54 yrs | 34.1 (32.0,42.9) | 42.6 (37.1,48.3) | 15.7 (12.0,20.3) | 1.3 (0.5,3.3) | 1.9 (1.0,3.8) | 1.2 (0.5,3.0) |
| 55 to 64 yrs | 39.5 (29.3,39.3) | 39.9 (34.9,45.0) | 20.4 (16.5,25.0) | 1.2 (0.5,2.7) | 2.5 (1.2,4.9) | 2.0 (1.0,3.9) |
| Area of residence | | | | | | |
| Perth Metro | 36.4 (32.2,40.8) | 42.3 (37.9,46.8) | 17.1 (14.1,20.6) | 1.3 (0.6,2.9) | 1.7 (1.0,2.9) | 1.1 (0.6,2.2) |
| Rest of State | 50.5 (44.4,56.6) | 33.4 (28.0,39.4) | 12.3 (9.0,16.6) | 0.4 (0.2,1.1) | 2.2 (0.9,5.5) | 1.2 (0.5,2.4) |
| Total | | | | | | |
| Males | 47.6 (41.9,53.3) | 38.9 (33.4,44.8) | 12.2 (9.0,16.3) | 0.3 (0.1,1.1) | 0.5 (0.2,1.3) | 0.5 (0.2,1.3) |
| Females | 31.1 (26.8,35.7) | 41.9 (37.3,46.7) | 20.0 (16.3,24.3) | 2.0 (0.9,4.5) | 3.2 (1.9,5.3) | 3.2 (0.9,3.4) |
| Persons | 39.5 (35.9,43.2) | 40.4 (36.8,44.2) | 16.0 (13.5,18.9) | 1.1 (0.6,2.3) | 1.8 (1.1,2.9) | 1.1 (0.7,2.0) |

Base: those who consumed milk yesterday.

Yoghurt

Respondents were asked how many cups yoghurt they ate yesterday and about the type and fat content of the yoghurt they ate. Only 27.5% of respondents consumed yoghurt on the day prior to the survey, shown in Table 30. Respondents with an annual household income of \$60,000 and over were significantly more likely to eat yoghurt on the day prior to the survey than those earning less (30.5% compared with 16.8%).

Amount and type of yoghurt consumed

Across the total sample the mean amount of yoghurt consumed on the day prior to the survey was 0.3 (95% CI [0.2, 0.3]) of a cup; or 0.9 (95% CI [0.8, 1.0]) of a cup for yoghurt consumers. Of those consuming yoghurt, 56.7% ate low fat or skim milk types, shown in Table 32.

Table 32: Main type of yoghurt consumed on the day prior, 18 to 64 years, WA NMSS 2012

| n=475 Age Group | Whole cows milk yoghurt | | Low fat yoghurt | | Skim milk yoghurt | | Whole fat other milk | | Low fat other milk | | Skim other milk | |
|--------------------|-------------------------|--------------------|-----------------|--------------------|-------------------|------------------|----------------------|------------------|--------------------|------------------|-----------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 39.7 | (25.0,56.6) | 50.6 | (35.2,65.8) | 5.4 | (1.8,14.6) | 4.3 | (1.4,12.5) | 0.0 | | 0.0 | |
| 35 to 44 yrs | 32.0 | (39.1,62.3) | 45.6 | (34.1,57.5) | 2.1 | (0.9,5.3) | 1.6 | (0.3,7.6) | 0.0 | | 0.0 | |
| 45 to 54 yrs | 31.9 | (23.8,41.4) | 53.3 | (43.5,62.8) | 8.1 | (4.5,13.9) | 4.6 | (1.6,12.9) | 0.4 | (0.1,3.0) | 1.6 | (0.2,10.4) |
| 55 to 64 yrs | 39.2 | (24.4,40.6) | 52.3 | (43.4,61.1) | 8.8 | (5.0,15.1) | 5.9 | (2.6,13.1) | 1.0 | (0.3,3.3) | 0.0 | |
| Total | | | | | | | | | | | | |
| Males | 41.2 | (30.3,52.9) | 50.2 | (38.8,61.6) | 3.4 | (1.6,6.9) | 4.5 | (2.2,8.9) | 0.0 | | 0.7 | (0.1,4.6) |
| Females | 37.1 | (29.1,46.0) | 50.4 | (42.4,58.5) | 8.3 | (4.8,13.9) | 3.6 | (1.3,9.2) | 0.6 | (0.2,1.6) | 0.0 | |
| Persons | 39.2 | (32.3,46.5) | 50.3 | (43.3,57.4) | 5.8 | (3.8,8.9) | 4.1 | (2.3,7.2) | 0.3 | (0.1,0.8) | 0.3 | (0.1,2.4) |

Base: those who ate yoghurt yesterday.

Cheese

Respondents were asked how much cheese they ate yesterday, and if they ate cheese, whether it was mainly regular, reduced fat or low fat, shown in Table 33. About forty per cent of respondents ate cheese on the day prior to the survey (Table 30). Respondents aged 35 to 44 years were significantly more likely to have eaten cheese than those aged 55 to 64 years (47.2% compared with 30.3%).

Amount and type of cheese consumed

Across the total sample the mean amount of cheese consumed on the day prior to the survey was 1.2 (95% CI [1.1, 1.3]) servings of 30-40 grams or 2.2 (95% CI [2.0, 2.3]) servings if those not consuming cheese were excluded. The percentage of respondents consuming different types of cheese on the day prior to the survey is shown in Table 33. Of those consuming cheese, only 20% ate low fat or reduced fat cheese.

Table 33: Main type of cheese consumed on the day prior, 18 to 64 years, WA NMSS 2012

| n=839 | Low fat cheese (e.g. ricotta, cottage) | Reduced fat cheese | Regular cheese |
|------------------|---|---------------------------|-------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 12.6 (6.6,22.7) | 12.7 (7.0,22.1) | 74.7 (64.4,82.8) |
| 35 to 44 yrs | 10.8 (2.9,10.1) | 7.5 (4.4,12.4) | 87.0 (81.2,91.3) |
| 45 to 54 yrs | 10.1 (6.6,17.3) | 6.7 (4.1,10.7) | 82.4 (75.7,87.6) |
| 55 to 64 yrs | 10.2 (6.6,15.1) | 10.4 (6.7,15.8) | 79.5 (73.2,84.6) |
| Total | | | |
| Males | 7.1 (4.2,12.0) | 7.8 (4.6,13.0) | 85.1 (78.9,89.7) |
| Females | 13.3 (8.6,20.1) | 12.0 (7.9,17.8) | 74.7 (68.0,80.4) |
| Persons | 10.2 (7.3,14.1) | 9.8 (7.1,13.5) | 80.0 (75.5,83.7) |

Base: those who consumed cheese yesterday.

Perception of adequacy of current calcium-rich foods intake

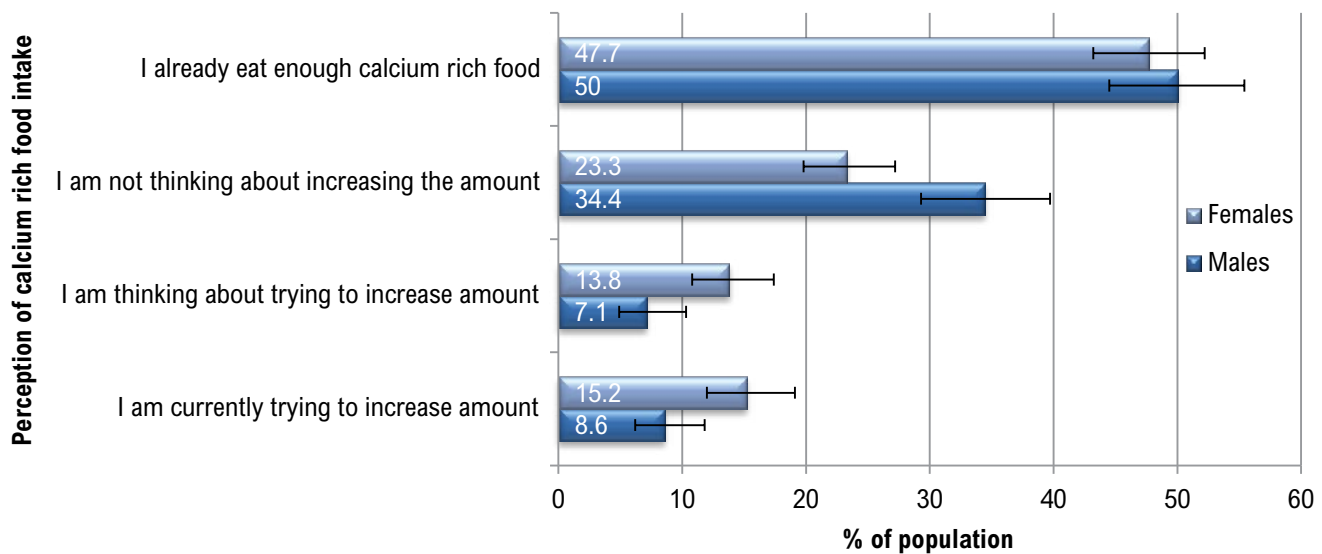
Respondents were asked which of four statements best described how they felt about their current intake of calcium rich foods and whether they were thinking about or trying to increase the amount they ate, shown in Table 34 and Figure 14.

Almost half (48.8%) of respondents said they already ate enough calcium-rich foods. Females were significantly more likely to say they were trying to increase the amount of calcium rich foods they ate than males (15.2% compared with 8.6%). Respondents living in metropolitan Perth were significantly more likely to be trying to increase the amount of calcium rich foods they ate compared with those living in the rest of the state – 13.1% (95% CI [10.6, 16.2]) compared with 7.2% (95% CI [5.3, 9.7]).

Table 34: Perception of current calcium-rich food intake, 18 to 64 years, WA NMSS 2012

| n=1532 | Already eat enough calcium rich food | Not thinking about increasing calcium rich food eaten | Thinking about increasing calcium rich foods eaten | Trying to increase calcium rich foods |
|----------------|--------------------------------------|---|--|---------------------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 50.7 (43.0,58.3) | 28.2 (21.9,35.4) | 8.2 (4.7,13.9) | 12.9 (8.8,18.6) |
| 35 to 44 yrs | 45.6 (39.6,51.7) | 29.8 (24.3,36.0) | 12.9 (9.6,17.3) | 11.7 (8.3,16.1) |
| 45 to 54 yrs | 46.4 (41.1,51.7) | 30.9 (26.3,36.0) | 11.6 (8.6,15.4) | 11.1 (8.3,14.9) |
| 55 to 64 yrs | 51.9 (47.0,56.9) | 27.0 (22.7,31.7) | 10.7 (8.0,14.2) | 10.4 (7.9,13.6) |
| Total | | | | |
| Males | 50.0 (44.5,55.4) | 34.4 (29.3,39.7) | 7.1 (4.9,10.3) | 8.6 (6.2,11.8) |
| Females | 47.7 (43.2,52.2) | 23.3 (19.8,27.2) | 13.8 (10.8,17.4) | 15.2 (12.0,19.1) |
| Persons | 48.8 (45.3,52.4) | 28.9 (25.8,32.2) | 10.4 (8.5,12.7) | 11.8 (9.8,14.3) |

Figure 14: Perception of calcium rich food intake, by gender, 18 to 64 years, WA NMSS 2012



5.2.6 Water

In addition to eating a wide variety of nutritious foods the Dietary Guidelines recommend drinking plenty of water. Respondents were asked how many cups, glasses, millilitres (mL) or litres (L) of plain water they drank yesterday, and if so, whether the water was from a tap, filtered or bottled.

Most (95.8%) respondents consumed water on the day prior to the survey, shown in Table 35. Respondents aged 18 to 34 years were significantly more likely to have drunk water on the day prior to the survey than those aged 45 to 64 years (99.2% compared with 94.8% and 92.2%).

Table 35: **Water consumption on the day prior, 18 to 64 years, WA NMSS 2012**

| n=1546 | Consumed water |
|------------------|-------------------------|
| Age Group | % 95% CI |
| 18 to 34 yrs | 99.2 (96.6,99.8) |
| 35 to 44 yrs | 93.5 (89.4,96.1) |
| 45 to 54 yrs | 94.8 (92.3,96.5) |
| 55 to 64 yrs | 92.2 (89.2,94.4) |
| Total | |
| Males | 94.9 (92.8,96.5) |
| Females | 96.6 (95.4,97.5) |
| Persons | 95.8 (94.6,96.7) |

Amount and sources of plain drinking water

The mean intake of water on the day prior to the survey was 1241.4 (95% CI [1184.2, 1298.6]) mLs of plain water from the tap, 1175.5 (95% CI [1113.8, 1237.2]) mLs filtered water or 1305.0 (1209.8, 1400.6) mLs bottled water. The median amount of water consumed on the day prior to the survey was 1000mL from all sources.

Among those who drank water the day prior to the survey, the majority (58.6%) drank water from the tap. Respondents living in metropolitan Perth were significantly more likely to have drink bottled water than those living in the rest of the state (32.5% compared with 22.3%), shown in Table 36.

Table 36: **Source of water consumed on day prior, 18 to 64 years, WA NMSS 2012**

| n=1454 | Tap water | Filtered water | Bottled water |
|--------------------------|-------------------------|------------------------|-------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 59.4 (52.0,66.4) | 11.1 (7.2,16.6) | 29.6 (23.2,36.8) |
| 35 to 44 yrs | 58.7 (52.4,64.7) | 11.0 (7.7,15.4) | 30.4 (24.9,36.5) |
| 45 to 54 yrs | 55.1 (49.6,60.5) | 10.2 (7.5,13.7) | 34.7 (29.7,40.1) |
| 55 to 64 yrs | 61.0 (55.8,65.9) | 12.6 (9.4,16.6) | 26.5 (22.2,31.3) |
| Area of residence | | | |
| Perth Metro | 56.5 (52.3,60.6) | 10.9 (8.6,13.8) | 32.5 (28.7,36.6) |
| Rest of state | 66.0 (60.6,71.1) | 11.7 (8.3,16.3) | 22.3 (18.1,27.0) |
| Total | | | |
| Males | 60.5 (55.3,65.5) | 9.7 (7.1,13.0) | 29.8 (25.2,34.9) |
| Females | 56.6 (51.9,61.1) | 12.6 (9.7,16.3) | 30.8 (26.7,35.3) |
| Persons | 58.6 (55.1,62.0) | 11.1 (9.1,13.5) | 30.3 (27.2,33.7) |

Base: those who drank water yesterday.

5.3 Discretionary foods

The third Australian Dietary Guideline recommends people “Limit intake of foods containing saturated fat, added salt, added sugars and alcohol”. These foods are commonly called discretionary foods and are high in energy (kilojoules) and low in nutrients.

5.3.1 Soft drinks

Respondents were asked about the type and amount of sugar sweetened drinks they consumed on the day prior to the survey, that is, soft drinks, energy drinks, sports drinks, flavoured mineral water and vitamin water. These are called sugar sweetened soft drinks in the discussion below. They also were asked how much diet (artificially sweetened) soft drink they consumed on the day prior to the survey, shown in Table 37.

The majority (67.7%) of respondents did not consume either sugar sweetened soft drinks or diet soft drinks on the day prior to the survey. Males were significantly more likely to have consumed these drinks than females (38.4% compared with 26.1%). Adults aged between 18 to 34 years were significantly more likely to have consumed them than those aged over 54 years (36.4% compared with 23.2%).

Across the total sample the mean amount of sugar sweetened drinks and diet soft drinks consumed on the day prior to the survey was 171.0 (95% CI [147.7, 194.3]) mLs. Among the 32.3% who consumed these drinks, the mean intake was 530.0 (95% CI [477.4, 582.5]) mLs.

Table 37: **Sugar sweetened and diet soft drinks consumed on day prior, 18 to 64 years, WA NMSS 2012**

| n=1548 | Sugar sweetened soft drink* | | Diet soft drink | | Total soft drink | |
|------------------|-----------------------------|--------------------|-----------------|-------------------|------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | |
| 18 to 34 yrs | 29.6 | (23.2,36.9) | 8.0 | (4.8,13.0) | 36.4 | (29.6,43.8) |
| 35 to 44 yrs | 23.2 | (18.2,29.0) | 13.2 | (9.4,18.2) | 35.4 | (29.6,41.5) |
| 45 to 54 yrs | 16.8 | (13.2,21.2) | 14.0 | (10.7,18.1) | 29.1 | (24.5,34.1) |
| 55 to 64 yrs | 12.0 | (9.0,15.9) | 11.5 | (8.7,15.1) | 23.2 | (19.2,27.8) |
| Total | | | | | | |
| Males | 29.2 | (24.3,34.6) | 9.9 | (7.3,13.3) | 38.4 | (33.1,43.9) |
| Females | 15.3 | (12.2,19.0) | 12.2 | (9.6,15.4) | 26.1 | (22.5,30.1) |
| Persons | 22.4 | (19.4,25.6) | 11.0 | (9.1,13.3) | 32.3 | (29.1,35.7) |

*Sugar sweetened soft drinks includes soft drinks, energy drinks, sports drinks, flavoured mineral water and vitamin water.

Sugar sweetened soft drinks

Respondents were asked how many cans, bottles, glasses or cups of soft drink, energy drinks, sports drinks, flavoured mineral water or vitamin water they drank yesterday. They were also asked to report on the size of the container, for example, two 375 ml cans of RedBull® or 1 litre bottle of Coke®.

Only 22.4% of respondents drank sugar sweetened soft drinks on the day prior to the survey, shown in Table 37. Males were significantly more likely to have consumed sugar sweetened soft drinks on the day prior than females (29.2% compared with 15.3%). Adults aged between 18 to 34 years were significantly more likely to have consumed these drinks than those aged over 45 years (29.6% of those aged 18 to 34 years compared with 16.8% of 45 to 54 year olds and 12.0% of those aged 55 to 64 years).

Across the total sample the mean amount of sugar sweetened soft drinks consumed on the day prior to the survey was 117 (95% CI [95.9, 138.3]) mLs. Among the 22.4% who drank sugar sweetened soft drinks, the mean intake was 492 (95% CI [449.0, 534.1]) mLs.

Diet or artificially sweetened soft drink

Diet or artificially sweetened soft drink contains no sugar. Respondents were asked how much diet soft drink they drank yesterday and asked to estimate the amount by indicating how large the size of the container they drank was, for example, 375 ml can. Only 11.0% of respondents consumed diet soft drink on the day prior to the survey, shown in Table 37.

Across the total sample the mean amount of diet soft drink consumed on the day prior to the survey was 53.6 (95% CI [42.0, 65.1]) mLs. Among the 11.0% who did drink diet soft drink, the mean intake was 488.1 (95% CI [442.0, 534.3]) mLs.

5.3.2 Fat and fatty foods

Perception of adequacy of current fat and fatty food intake

Respondents were asked which of four statements best described how they felt about their current intake of fat and fatty foods and whether they were thinking about or trying to cut down the amount they ate, shown in Table 38.

Two out of five (40.5%) respondents said they 'already eat a diet low in fat' and 29.5% said they were 'trying to eat less fat and fatty foods'. Females were significantly more likely to say that they were 'already eating a low fat diet' than males (45.7% compared with 35.5%). Males were significantly more likely to say they were 'not currently thinking about cutting down on the amount of fat and fatty foods' they eat than females (16.9% compared with 6.6%). Respondents aged 55 years and over, were significantly less likely to be 'currently thinking about cutting down on the amount of fat and fatty foods' they eat than 35-44 year olds (11.8% compared with 24.1%).

Table 38: Perception of current intake of fat and fatty foods, 18 to 64 years, WA NMSS 2012

| n=1542 | Already eat a low fat diet | | Not thinking about cutting down fat and fatty foods | | Thinking about cutting down fat and fatty foods | | Trying to eat less fat and fatty foods | |
|------------------|----------------------------|--------------------|---|-------------------|---|--------------------|--|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18 to 34 yrs | 40.1 | (32.9,47.8) | 15.6 | (10.7,22.2) | 17.3 | (12.3,23.8) | 27.0 | (21.0,34.0) |
| 35 to 44 yrs | 33.6 | (28.3,39.3) | 10.4 | (7.1,14.9) | 24.1 | (19.1,29.9) | 32.0 | (26.6,37.9) |
| 45 to 54 yrs | 41.5 | (36.5,46.8) | 8.8 | (6.0,12.7) | 18.4 | (14.7,22.7) | 31.3 | (26.7,36.4) |
| 55 to 64 yrs | 49.1 | (44.2,54.1) | 9.1 | (6.7,12.4) | 11.8 | (9.0,15.2) | 30.0 | (25.6,34.7) |
| Total | | | | | | | | |
| Males | 35.5 | (30.4,40.9) | 16.9 | (13.0,21.7) | 20.3 | (16.3,24.8) | 27.4 | (23.0,32.2) |
| Females | 45.7 | (41.3,50.2) | 6.6 | (4.5,9.7) | 15.9 | (12.8,19.5) | 31.8 | (27.7,36.1) |
| Persons | 40.5 | (37.1,44.0) | 11.8 | (9.5,14.6) | 18.1 | (15.5,21.0) | 29.5 | (26.5,32.8) |

Current attempts to cut down the amount of fat eaten

Respondents were asked if they were trying to cut down the amount of fat that they eat, shown in Table 39. For this question over half (55.2%) of respondents said that they were trying to cut down on the amount of fat they eat.

Table 39: **Currently trying to cut down fat intake, 18 to 64 years, WA NMSS 2012**

| n=1544 Age Group | No | | Yes | |
|---------------------|-------------|--------------------|-------------|--------------------|
| | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 48.0 | (40.7,55.4) | 52.0 | (44.6,59.3) |
| 35 to 44 yrs | 41.4 | (35.7,47.4) | 58.6 | (52.6,64.3) |
| 45 to 54 yrs | 40.5 | (35.5,45.8) | 59.5 | (54.2,64.5) |
| 55 to 64 yrs | 47.3 | (42.4,52.2) | 52.7 | (47.8,57.6) |
| Total | | | | |
| Males | 48.1 | (42.8,53.5) | 51.9 | (46.5,57.2) |
| Females | 41.4 | (37.2,45.7) | 58.6 | (54.3,62.8) |
| Persons | 44.8 | (41.4,48.3) | 55.2 | (51.7,58.6) |

Avoiding foods high in fat

Respondents were asked how often they tried to avoid eating foods high in fat, shown in Table 40. One fifth (21.3%) of respondents 'always' tried to avoid foods high in fat. Females were significantly more likely to report 'always' trying to avoid foods high in fat than males (25.3% compared with 17.4%). Respondents aged 55 to 64 years were significantly more likely to report 'always' trying to avoid food high in fat than younger age groups.

Table 40: How often people try to avoid foods high in fat, 18 to 64 years, WA NMSS 2012

| n=1543 | Always avoid high fat foods | | Often avoid high fat foods | | Sometimes avoid high fat foods | | Rarely avoid high fat foods | | Never avoid high fat foods | |
|------------------|-----------------------------|--------------------|----------------------------|--------------------|--------------------------------|--------------------|-----------------------------|------------------|----------------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 15.5 | (10.8,21.7) | 40.7 | (33.4,48.4) | 30.4 | (23.9,37.8) | 8.3 | (5.0,13.5) | 5.1 | (2.6,9.9) |
| 35 to 44 yrs | 14.1 | (10.6,18.5) | 49.2 | (43.1,55.3) | 26.5 | (21.3,32.5) | 4.6 | (2.6,8.1) | 5.6 | (3.4,9.2) |
| 45 to 54 yrs | 26.3 | (21.9,31.3) | 41.9 | (36.8,47.1) | 23.1 | (18.9,27.8) | 4.0 | (2.3,6.9) | 4.7 | (2.9,7.7) |
| 55 to 64 yrs | 37.2 | (32.5,42.1) | 39.8 | (35.2,44.7) | 15.3 | (12.1,19.1) | 3.3 | (1.8,5.8) | 4.4 | (2.6,7.2) |
| Total | | | | | | | | | | |
| Males | 17.4 | (14.1,21.1) | 40.1 | (34.9,45.6) | 27.6 | (22.9,32.9) | 8.0 | (5.3,11.7) | 6.9 | (4.6,10.3) |
| Females | 25.3 | (21.6,29.4) | 45.4 | (40.9,49.9) | 22.9 | (19.2,27.1) | 3.3 | (2.0,5.5) | 3.0 | (1.8,4.9) |
| Persons | 21.3 | (18.8,24.0) | 42.7 | (39.2,46.2) | 25.3 | (22.3,28.7) | 5.7 | (4.1,7.8) | 5.0 | (3.6,6.9) |

Attempts to cut down fat and fatty food in last year

Respondents were asked if they have tried to cut down on the amount of fat and fatty food in their diet in the past 12 months, shown in Table 41. Just over half of respondents (57.2%) said they had tried to cut down on fat and fatty foods in the last 12 months.

Table 41: **Tried to cut down on amount of fat and fatty foods in the last year, 18 to 64 years, WA NMSS 2012**

| n=1544 Age Group | No | | Yes | |
|---------------------|-------------|--------------------|-------------|--------------------|
| | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 44.7 | (37.4,52.2) | 55.3 | (47.8,62.6) |
| 35 to 44 yrs | 40.9 | (35.1,46.9) | 59.1 | (53.1,64.9) |
| 45 to 54 yrs | 39.5 | (34.4,44.8) | 60.5 | (55.2,65.6) |
| 55 to 64 yrs | 45.2 | (40.4,50.1) | 54.8 | (49.9,59.6) |
| Total | | | | |
| Males | 46.4 | (41.0,51.9) | 53.6 | (48.1,59.0) |
| Females | 39.1 | (34.9,43.5) | 60.9 | (56.5,65.1) |
| Persons | 42.8 | (39.4,46.3) | 57.2 | (53.7,60.6) |

Comparison of fat and fatty food intake compared with a year ago

Respondents were asked if they currently eat more, less or about the same of fat and fatty foods now than they did 12 months ago, shown Table 42. Around half (52.1%) of respondents said they eat 'about the same amount' of fat and fatty foods now as they did a year prior and 44.7% said they 'eat less' now. Respondents aged 18 to 34 years were significantly more likely to 'eat more' fat and fatty foods now than a year prior than those aged 45 to 54 years (5.2% compared with 1.3%).

Table 42: **Comparison of fat and fatty food eaten now compared to 12 months ago, 18 to 64 years, WA NMSS 2012**

| n=1546 Age Group | Eat less now | | About the same | | Eat more now | |
|---------------------|--------------|--------------------|----------------|--------------------|--------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 39.6 | (32.4,47.3) | 55.1 | (47.4,62.7) | 5.2 | (2.5,10.7) |
| 35 to 44 yrs | 47.0 | (41.0,53.2) | 50.0 | (43.9,56.1) | 2.9 | (1.4,6.2) |
| 45 to 54 yrs | 50.3 | (45.0,55.5) | 48.4 | (43.1,53.7) | 1.3 | (0.7,2.5) |
| 55 to 64 yrs | 46.0 | (41.1,50.9) | 52.6 | (47.7,57.5) | 1.4 | (0.6,3.3) |
| Total | | | | | | |
| Males | 42.3 | (37.1,47.7) | 53.7 | (48.3,59.1) | 4.0 | (1.9,7.9) |
| Females | 47.1 | (42.5,51.7) | 50.5 | (42.5,51.7) | 2.4 | (1.3,4.5) |
| Persons | 44.7 | (41.2,48.2) | 52.1 | (48.5,55.7) | 3.2 | (1.9,5.3) |

Mono or polyunsaturated fat use when preparing food

Respondents were asked when using fat or oil in food preparation, how often it was mono or polyunsaturated fats, shown in Table 43. The majority (44.7%) of respondents 'always' choose mono or polyunsaturated fat when preparing food with fat or oil. Respondents aged 55 to 64 year olds were significantly more likely to 'always' use mono or polyunsaturated fat than those aged 18 to 34 years (56.6% compared with 36.2). Sixteen per cent of respondents said that they did not understand the terms mono or polyunsaturated fats.

Table 43: Mono or polyunsaturated fat use when preparing food, 18 to 64 years, WA NMSS 2012

| n=1548 | Always | Often | Some-times | Rarely | Never | Don't use fat or oil | Don't understand term | Can't remember |
|----------------|-------------------------|------------------------|------------------------|----------------------|----------------------|----------------------|-------------------------|----------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 36.2 (29.1,44.0) | 8.8 (5.2,14.4) | 13.9 (9.5,19.9) | 6.8 (3.9,11.5) | 5.2 (2.9,9.1) | 1.9 (0.7,5.2) | 19.0 (13.6,25.9) | 8.3 (5.0,13.5) |
| 35 to 44 yrs | 46.9 (40.9,53.0) | 10.9 (7.6,15.4) | 7.5 (5.2,10.8) | 7.4 (4.6,11.8) | 4.8 (2.9,7.8) | 3.7 (1.8,7.4) | 15.5 (11.6,20.6) | 3.2 (1.6,6.1) |
| 45 to 54 yrs | 48.1 (42.8,53.4) | 13.0 (9.8,17.0) | 9.2 (6.6,12.6) | 5.0 (3.0,8.1) | 3.2 (2.0,5.1) | 2.4 (1.2,4.8) | 14.7 (11.4,18.9) | 4.5 (2.8,7.2) |
| 55 to 64 yrs | 56.6 (51.7,61.4) | 12.7 (9.7,16.3) | 7.1 (5.1,9.8) | 2.5 (1.4,4.4) | 3.3 (2.1,5.3) | 1.8 (1.0,3.5) | 11.6 (8.6,15.3) | 4.4 (2.7,6.9) |
| Total | | | | | | | | |
| Males | 44.6 (39.3,50.0) | 11.4 (8.4,15.2) | 7.8 (5.3,11.2) | 6.1 (4.0,9.3) | 3.8 (2.2,6.5) | 2.9 (1.6,5.4) | 15.8 (12.0,20.4) | 7.6 (5.1,11.1) |
| Females | 44.8 (40.4,49.3) | 10.2 (7.9,13.2) | 12.9 (9.9,16.6) | 5.4 (3.5,8.2) | 4.9 (3.5,6.9) | 1.9 (1.1,3.1) | 16.2 (12.9,20.2) | 3.7 (2.2,6.1) |
| Persons | 44.7 (41.2,48.2) | 10.8 (8.9,13.2) | 10.3 (8.3,12.7) | 5.8 (4.3,7.8) | 4.3 (3.2,5.9) | 2.4 (1.6,3.7) | 16.0 (13.4,19.0) | 5.7 (4.1,7.7) |

5.4 Breastfeeding

The fourth Australian Dietary Guideline advises people to “Encourage, support and promote breastfeeding.” Breastfeeding provides short-term and long-term benefits for the infant and mother. It is recommended that infants should be exclusively breastfed until around 6 months of age and then continue being breastfed until at least 12 months as solid foods are introduced.

Trends in attitudes, knowledge and beliefs about breastfeeding among West Australian adults between 1995 and 2012 are published elsewhere. (6, 7).

5.4.1 Perception of the importance of breastfeeding

Respondents were asked how important they thought it was for mothers to breastfeed their babies, shown in Table 44. The majority (74.4%) of respondents thought it was ‘very important’ for mothers to breastfeed their baby. Respondents aged 55 to 64 years were significantly more likely to rate breastfeeding as ‘very important’ than those aged 18 to 34 years (81.2% compared with 67.9%).

Table 44: Perception of importance for mothers to breastfeed their babies, 18 to 64 years, WA NMSS 2012

| n=1513 | Not at all /not very important / neither important nor unimportant | | Somewhat important | | Very important | |
|------------------|--|------------------|--------------------|--------------------|----------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | |
| 18 to 34 yrs | 10.5 | (6.6,16.2) | 21.6 | (15.7,28.9) | 67.9 | (60.1,74.8) |
| 35 to 44 yrs | 6.6 | (4.1,10.3) | 13.7 | (9.8,18.7) | 79.8 | (74.3,84.4) |
| 45 to 54 yrs | 5.8 | (3.9,8.6) | 19.3 | (15.3,23.9) | 74.9 | (70.0,79.3) |
| 55 to 64 yrs | 4.2 | (2.6,6.5) | 14.6 | (11.5,18.5) | 81.2 | (77.1,84.7) |
| Total | | | | | | |
| Males | 7.7 | (5.1,11.4) | 19.1 | (14.8,24.3) | 73.2 | (67.7,78.1) |
| Females | 7.3 | (5.1,10.4) | 17.1 | (13.9,20.8) | 75.6 | (71.3,79.4) |
| Persons | 7.5 | (5.7,9.8) | 18.1 | (15.3,21.3) | 74.4 | (70.9,77.6) |

5.4.2 Breastfeeding duration

Respondents were asked how long they thought mothers should breastfeed their babies, reported in days, months or years, shown in Table 45. Most (78.1%) gave a specific length of time they thought mothers should breastfeed and 14.6% said that they did not know. Respondents aged 18 to 34 years were significantly more likely to say that they did not know how long mothers should breastfeed their babies compared to those 35 years and older (22.3% compared with 9.8%, 10.3%). Females were significantly less likely to say they did not know the length of time mothers should breastfeed their babies than males (10.0% compared with 19.0%).

Table 45: Percentage who specified a length of time mothers should breastfeed, 18 to 64 years, WA NMSS 2012

| n=1539 | Unable to specify a length of time | | Specified a length of time | | As long as possible | | Don't know | |
|------------------|------------------------------------|------------------|----------------------------|--------------------|---------------------|------------------|-------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18 to 34 yrs | 1.6 | (0.6,4.3) | 71.7 | (64.3,78.0) | 4.4 | (2.2,8.7) | 22.3 | (16.5,29.4) |
| 35 to 44 yrs | 0.9 | (0.2,3.8) | 81.5 | (76.1,85.9) | 8.4 | (5.5,12.6) | 9.2 | (6.1,13.7) |
| 45 to 54 yrs | 1.4 | (0.6,3.2) | 82.2 | (77.9,85.9) | 6.6 | (4.5,9.8) | 9.8 | (7.1,13.3) |
| 55 to 64 yrs | 1.0 | (0.5,2.2) | 82.8 | (78.8,86.2) | 5.9 | (4.0,8.7) | 10.3 | (7.7,13.6) |
| Total | | | | | | | | |
| Males | 1.0 | (0.5,2.2) | 74.0 | (68.8,78.5) | 6.0 | (4.0,9.0) | 19.0 | (14.9,23.9) |
| Females | 1.6 | (0.7,3.6) | 82.3 | (78.2,85.7) | 6.1 | (4.4,8.4) | 10.0 | (7.2,13.8) |
| Persons | 1.3 | (0.7,2.3) | 78.1 | (74.8,81.0) | 6.1 | (4.7,7.8) | 14.6 | (12.0,17.6) |

Length of time babies should be breastfed

The length of time respondents said mothers should breastfeed their babies was categorized into under six months, six months, seven to 12 months and over 12 months to enable comparison with the recommendation of exclusive breastfeeding until around six months of age and then continued breastfeeding until at least 12 months, shown in Table 46. These results include respondents who originally said 'as long as possible' and were then asked to give a specific length of time.

Of all the respondents who specified a length of time, nearly half (47.5%) said mothers should breastfeed for seven to 12 months and 6.8% said for less than six months. Respondents with sole responsibility for food shopping were significantly more likely to say seven to 12 months than those with shared food shopping responsibility (51.5% compared with 43.4%).

Table 46: Length of time mothers should breastfeed, 18 to 64 years, WA NMSS 2012

| Age Group | Under 6 months | | 6 months | | 7–12 months | | Over 12 months | |
|----------------|----------------|------------------|-------------|--------------------|-------------|--------------------|----------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 8.9 | (4.7,16.1) | 24.4 | (17.6,32.7) | 44.2 | (35.5,53.3) | 22.4 | (15.5,31.4) |
| 35 to 44 yrs | 6.7 | (3.8,11.5) | 29.6 | (23.9,36.2) | 47.2 | (40.6,53.9) | 16.4 | (12.0,22.0) |
| 45 to 54 yrs | 5.5 | (3.5,8.7) | 23.2 | (18.9,28.2) | 54.5 | (48.7,60.1) | 16.7 | (12.8,21.5) |
| 55 to 64 yrs | 4.6 | (2.9,7.3) | 34.2 | (29.1,39.6) | 46.3 | (41.0,51.7) | 14.9 | (11.4,19.2) |
| Total | | | | | | | | |
| Males | 6.8 | (3.9,11.6) | 26.9 | (21.5,33.0) | 43.9 | (37.7,50.3) | 22.4 | (17.4,28.4) |
| Females | 7.2 | (4.8,10.6) | 27.2 | (23.4,31.3) | 51.1 | (43.4,58.8) | 14.6 | (10.8,19.3) |
| Persons | 7.0 | (4.9,9.8) | 27.0 | (23.7,30.7) | 47.5 | (43.4,51.6) | 18.5 | (15.3,22.3) |

Base: Those who specified a time, including those who originally said as long as possible.

Exclusive breastfeeding duration

These respondents were then asked the length of time it was important for babies to be exclusively breastfed without any other fluids, including water and infant formula, or any solid foods. Nearly a third (32.1%) of respondents thought babies should be exclusively breastfed for six months, 52.7% said less than six months and 6.7% did not give a time, shown in Table 47.

Table 47: Length of time it is important for babies to be exclusively breastfed (without any other fluids or solids), 18 to 64 years, WA NMSS 2012

| n=1296 | No time given | | Under 6 months | | 6 months | | Over 6 months | |
|----------------|---------------|------------------|----------------|--------------------|-------------|--------------------|---------------|-------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 8.0 | (4.5,14.0) | 47.8 | (38.9,56.8) | 34.8 | (26.7,43.9) | 9.4 | (5.2,16.6) |
| 35 to 44 yrs | 4.9 | (2.5,9.3) | 52.9 | (46.1,59.6) | 33.1 | (27.1,39.8) | 9.0 | (5.6,14.1) |
| 45 to 54 yrs | 5.9 | (3.9,8.9) | 59.1 | (53.2,64.7) | 28.0 | (23.1,33.5) | 7.0 | (4.3,11.0) |
| 55 to 64 yrs | 6.8 | (4.6,10.0) | 55.4 | (49.9,60.8) | 29.9 | (25.1,35.3) | 7.9 | (5.3,11.5) |
| Total | | | | | | | | |
| Males | 7.6 | (4.9,11.6) | 50.4 | (43.9,56.9) | 30.6 | (24.9,36.9) | 11.4 | (8.0,16.0) |
| Females | 5.7 | (3.8,8.6) | 55.0 | (50.0,59.9) | 33.7 | (28.9,38.8) | 5.6 | (3.3,9.4) |
| Persons | 6.7 | (4.9,9.0) | 52.7 | (48.5,56.8) | 32.1 | (28.3,36.2) | 8.5 | (6.3,11.4) |

5.4.3 Benefits of breastfeeding for babies

Respondents were asked what they thought the benefits of breastfeeding were for babies and were asked to think of all the possible benefits, shown in Table 48 and Figure 15.

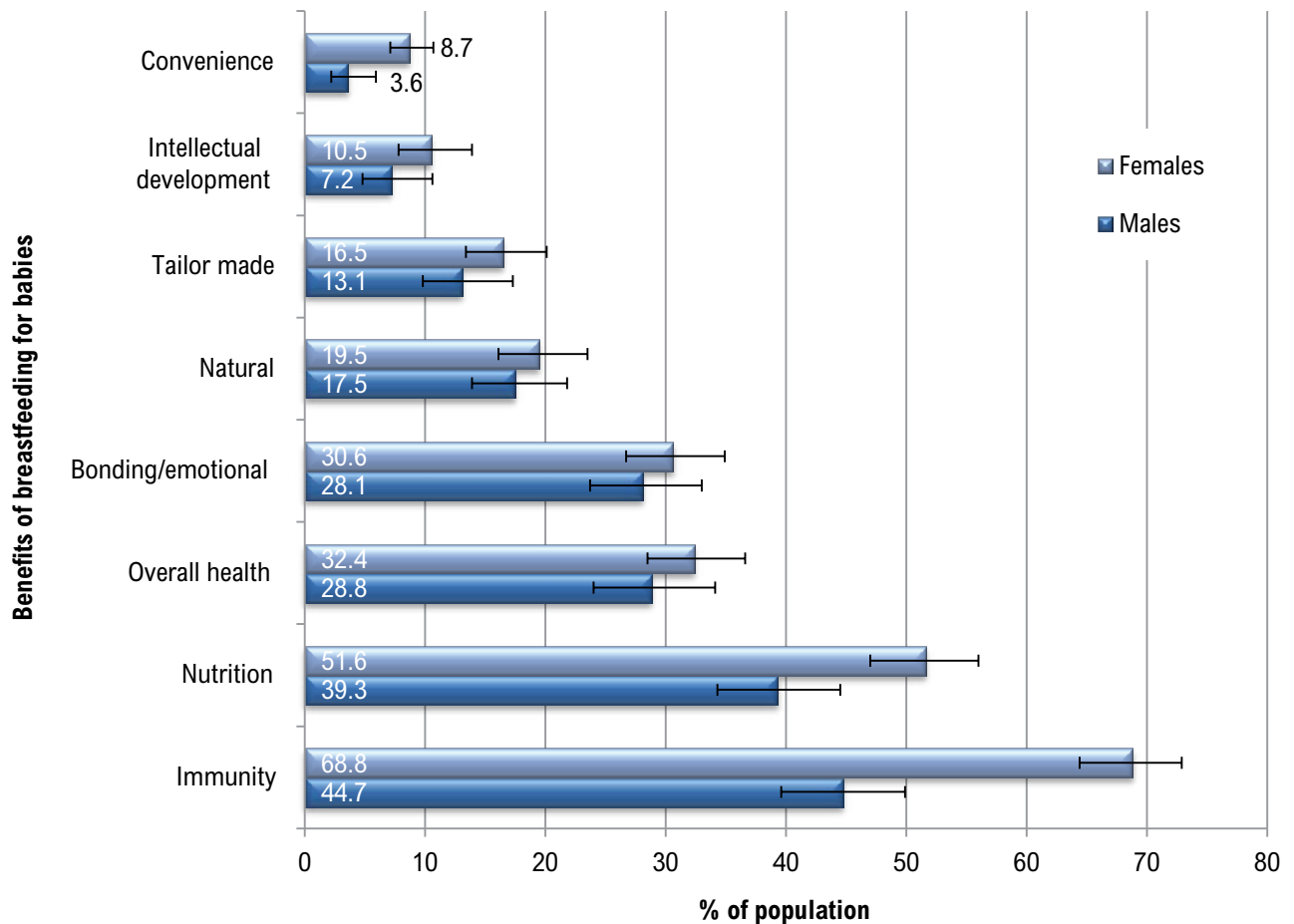
The most frequently mentioned benefit was 'immunity' (56.6%), followed by 'vitamins and minerals or nutrition' (45.3%). Females were significantly more likely than males to have said 'immunity' (68.8% compared with 44.7%), 'vitamins and minerals/nutrition' (51.6% compared with 39.3%) and 'convenient/easier' (8.7% compared with 3.6%).

Respondents aged 55 to 64 years were significantly more likely to have reported 'immunity' as a benefit of breastfeeding for babies than adults aged 18 to 34 years (64.9% compared with 49.3%). Respondents aged 35 to 44 years were significantly more likely to have reported 'vitamins and minerals/nutrition' as a benefit for babies than respondents aged 55–64 years (53.4% compared with 37%). Respondents living in metropolitan Perth were significantly more likely than those living in the rest of the state to have reported 'vitamins and minerals/nutrition' (6.9% (95% CI [42.7, 51.0]) compared with 39.7% (95% CI [34.7, 45.0])) and 'no chemicals/natural' (19.6% (95% CI [16.5, 23.1]) compared with 14.7% (95% CI [11.5, 18.5])).

Table 48: Perceived benefits of breastfeeding for babies, 18 to 64 years, WA NMSS 2012

| Benefits of breastfeeding | Persons | | Males | | Females | | 18–34 yrs | | 35–44 yrs | | 45–54 yrs | | 55–64 yrs | |
|----------------------------------|---------|-------------|-------|-------------|---------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Immunity | 56.6 | (53.2,59.9) | 44.7 | (39.6,49.9) | 68.8 | (64.4,72.9) | 49.3 | (42.2,56.4) | 59.8 | (53.8,65.6) | 59.7 | (54.4,64.7) | 64.9 | (60.0,69.4) |
| Vitamins and minerals/ nutrition | 45.3 | (41.9,48.8) | 39.3 | (34.3,44.5) | 51.6 | (47.0,56.0) | 46.6 | (39.5,53.9) | 53.4 | (47.3,59.4) | 41.2 | (36.1,46.5) | 37.0 | (32.4,41.8) |
| Health benefits/ good for baby | 30.6 | (27.4,33.9) | 28.8 | (24.0,34.1) | 32.4 | (28.5,36.6) | 27.4 | (21.1,34.8) | 34.1 | (28.5,40.1) | 32.7 | (27.9,37.8) | 30.5 | (26.1,35.3) |
| Bonding/ security/ love | 29.4 | (26.3,32.6) | 28.1 | (23.7,33.0) | 30.6 | (26.7,34.9) | 24.8 | (18.8,31.9) | 35.8 | (30.1,41.9) | 29.8 | (25.2,34.8) | 30.8 | (26.5,35.3) |
| No chemicals/ natural | 18.5 | (16.0,21.3) | 17.5 | (13.9,21.8) | 19.5 | (16.1,23.5) | 17.8 | (12.7,24.4) | 13.4 | (9.9,17.9) | 20.7 | (16.7,25.4) | 23.9 | (19.8,28.4) |
| Tailor made/ perfect food | 14.8 | (12.4,17.5) | 13.1 | (9.8,17.3) | 16.5 | (13.4,20.1) | 12.5 | (8.1,18.9) | 14.5 | (10.8,19.2) | 15.8 | (12.3,20.0) | 18.8 | (15.0,23.3) |
| Better development/ intelligence | 8.8 | (6.9,11.1) | 7.2 | (4.8,10.6) | 10.5 | (7.8,13.9) | 10.2 | (6.4,15.8) | 9.6 | (6.6,13.8) | 6.6 | (4.6,9.3) | 7.2 | (4.9,10.6) |
| Convenience/ easier | 6.1 | (4.9,7.5) | 3.6 | (2.2,5.9) | 8.7 | (7.1,10.7) | 2.6 | (1.2,5.4) | 6.3 | (4.0,9.8) | 10.0 | (7.3,13.7) | 8.9 | (6.7,11.7) |
| Don't know | 1.3 | (1.2,1.3) | 1.2 | (1.1,1.3) | 1.3 | (1.2,1.4) | 11.3 | (7.3,17.1) | 2.9 | (1.4,6.1) | 3.1 | (1.8,5.2) | 4.6 | (3.0,7.1) |

Figure 15: Perceived benefits of breastfeeding for babies, by gender, 18 to 64 years, WA NMSS 2012



5.4.4 Benefits of breastfeeding for mothers

Respondents were asked what they thought the benefits of breastfeeding were for mothers, and asked to think of all the possible benefits, shown in Table 49 and Figure 16. The most frequent response (73.7%) was ‘bonding/security/love/emotion’ followed by ‘weight loss/getting back to pre-pregnancy weight’ (28.6%). Almost thirteen per cent (12.7%) said there were no benefits to the mother related to breastfeeding.

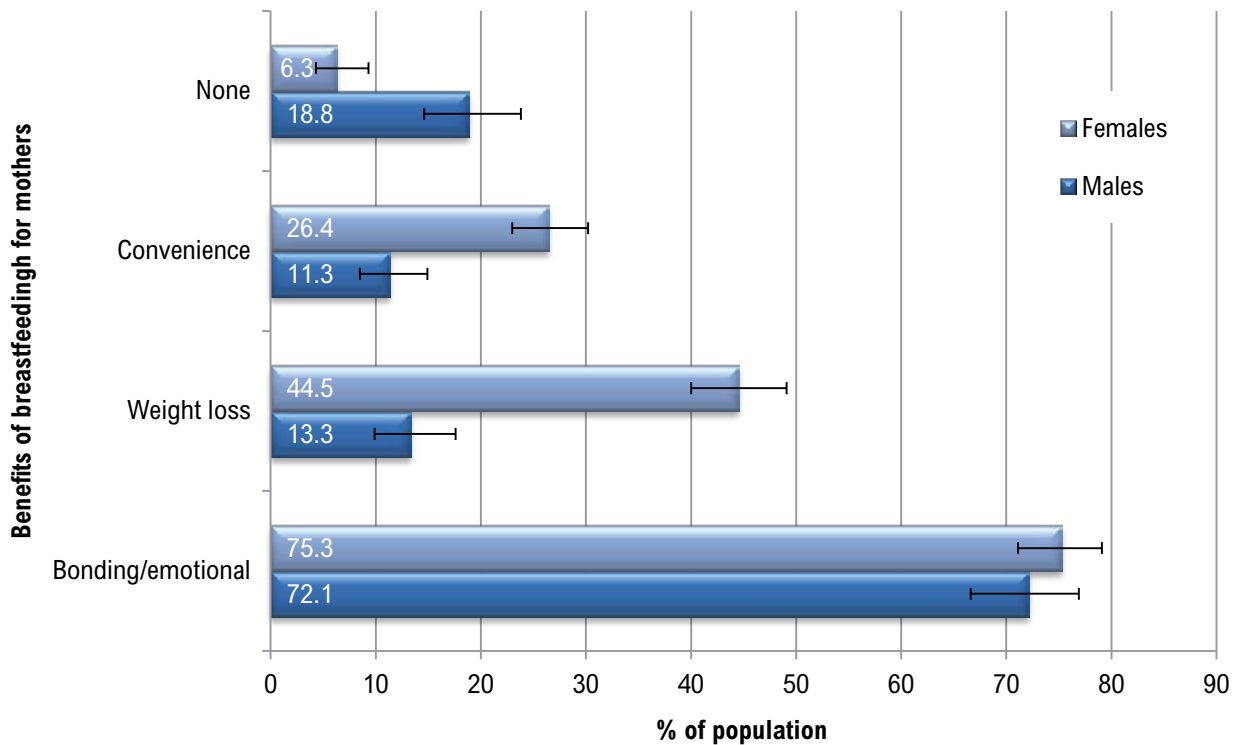
Males were significantly more likely to believe there are no benefits of breastfeeding for mothers than females (18.8% compared with 6.3%). Females were significantly more likely than males to mention ‘weight loss/getting back to pre-pregnancy weight’ (44.5% compared with 13.3%) and ‘convenient/easier’ (26.4% compared with 11.3%) were benefits for mothers from breastfeeding.

Respondents aged 35 to 44 years were significantly more likely to believe ‘weight loss/get to pre-pregnancy weight’ is a benefit for mothers than those aged 55 to 64 years (33.6% compared with 21.5%). Respondents aged 45 to 64 years were significantly more likely to say ‘convenient/easier’ than those aged 18 to 34 years (22.2% to 25.1% compared with 12.6% of 18 to 34 year olds).

Table 49: Perceived benefits of breastfeeding for mothers, 18 to 64 years, WA NMSS 2012

| Benefits of breastfeeding | Persons | | Males | | Females | | 18–34 yrs | | 35–44 yrs | | 45–54 yrs | | 55–64 yrs | |
|-----------------------------------|---------|-------------|-------|-------------|---------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Bonding /security /love/emotional | 73.7 | (70.3,76.8) | 72.1 | (66.6,76.9) | 75.3 | (71.1,79.1) | 69.2 | (61.5,75.9) | 74.9 | (69.2,79.9) | 77.4 | (72.6,81.5) | 77.6 | (73.2,81.4) |
| Weight loss/ pre-pregnancy weight | 28.6 | (25.7,31.7) | 13.3 | (9.9,17.6) | 44.5 | (40.0,49.1) | 30.6 | (24.6,37.4) | 33.6 | (28.5,39.0) | 25.6 | (21.7,29.9) | 21.5 | (17.9,25.7) |
| Convenience / easier | 18.8 | (16.5,21.3) | 11.3 | (8.5,14.9) | 26.4 | (23.0,30.2) | 19.2 | (13.8,26.0) | 7.9 | (5.0,12.3) | 8.5 | (6.0,11.8) | 9.6 | (6.9,13.1) |
| None | 12.7 | (10.3,15.6) | 18.8 | (14.6,23.8) | 6.3 | (4.3,9.3) | 12.6 | (8.5,18.3) | 21.1 | (16.9,26.2) | 22.2 | (18.5,26.5) | 25.1 | (21.4,29.1) |
| Prevents cancer | 2.9 | (2.0,4.0) | 2.1 | (1.1,3.8) | 3.7 | (2.4,5.6) | 1.8 | (0.6,5.2) | 3.9 | (2.3,6.6) | 1.9 | (0.9,3.7) | 2.6 | (1.5,4.5) |
| Overall health benefits | 2.4 | (1.6,3.6) | 1.8 | (0.8,4.0) | 3.1 | (2.1,4.6) | 1.5 | (0.5,4.2) | 4.9 | (2.8,8.5) | 3.2 | (1.8,5.6) | 2.9 | (1.7,4.9) |
| Breastfeeding is cheap | 1.4 | (0.8,2.4) | 0.8 | (0.2,2.9) | 2.1 | (1.3,3.6) | 1.5 | (0.5,4.6) | 1.3 | (0.5,3.1) | 1.5 | (0.8,2.8) | 1.4 | (0.7,2.8) |
| Prevents diabetes | 0.2 | (0.1,0.6) | 0.3 | (0.1,1.1) | 0.2 | (0.1,0.6) | 0.1 | (0.0,0.8) | 0.1 | (0.0,0.8) | 0.1 | (0.0,0.7) | 0.8 | (0.2,3.1) |

Figure 16: Perceived benefits of breastfeeding for mothers, by gender, 18 to 64 years, WA NMSS 2012



5.4.5 No benefits of breastfeeding to either baby or mother

Table 50 shows that 4.6% of respondents said there were no benefits from breastfeeding for either the baby or the mother. Males were significantly more likely to report no benefits than females (7.2% compared with 1.9%).

Table 50: Percentage who said there were no benefits of breastfeeding to either the baby or the mother, 18 to 64 years, WA NMSS 2012

| n=71 | No benefits to either baby or mother |
|----------------|--------------------------------------|
| Age Group | % 95% CI |
| 18 to 34 yrs | 7.0 (4.0,12.0) |
| 35 to 44 yrs | 2.3 (1.0,5.6) |
| 45 to 54 yrs | 2.8 (1.6,4.9) |
| 55 to 64 yrs | 4.2 (2.7,6.6) |
| Total | |
| Males | 7.2 (4.7,10.8) |
| Females | 1.9 (1.0,3.7) |
| Persons | 4.6 (3.2,6.5) |

5.5 Food safety

The fifth Australian Dietary Guideline advises people to “Care for your food; prepare and store it safely.” Trends in self-reported food poisoning and knowledge of food handling practices by Western Australian adults analysed using the 1998 to 2009 Nutrition Monitoring Survey Series are published elsewhere.(8)

5.5.1 Food poisoning

Respondents were asked if they had experienced vomiting and/or diarrhoea in the last six months which they suspected may have been food poisoning. If so, they were asked whether a doctor or nurse had positively identified it as food poisoning, shown in Table 51.

Twelve per cent of all respondents had symptoms that they suspected to be due to food poisoning in the last six months. Of these, 14.9% had it confirmed by a nurse or doctor. Females were significantly more likely to have confirmed the food poisoning with a doctor or nurse than males (21.3% compared with 7.6%).

Table 51: Food poisoning in the last six months, 18 to 64 years, WA NMSS 2012

| n=907 Age Group | Had symptoms of food poisoning | | Had symptoms confirmed by a doctor or nurse** | |
|--------------------|--------------------------------|-------------------|---|--------------------|
| | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 16.4 | (9.9,25.8) | 28.6 | (19.8,39.2) |
| 35 to 44 yrs | 11.5 | (6.8,18.8) | 9.3 | (3.3,23.2) |
| 45 to 54 yrs | 8.9 | (5.7,13.8) | 4.2 | (0.6,25.4) |
| 55 to 64 yrs | 8.6 | (5.0,14.2) | 11.4 | (2.6,38.5) |
| Total | | | | |
| Males | 10.9 | (6.8,17.0) | 7.6 | (2.6,20.2) |
| Females | 13.8 | (9.6,19.5) | 21.3 | (14.9,29.4) |
| Persons | 12.3 | (9.2,16.3) | 14.9 | (10.3,21.1) |

*Base is only those respondents who had reported symptoms of food poisoning (n=99).

5.5.2 Storing food safely, refrigerator temperature

Respondents were asked if they have a thermometer in their main refrigerator at home. Two in five (39.5%) respondents said they had a thermometer in their main refrigerator, shown in Table 52. Respondents living in metropolitan Perth were significantly more likely to have a thermometer in their refrigerator than those living in the rest of the state (42.2% compared with 28.1%).

Table 52: Home refrigerator thermometers, 18 to 64 years, WA NMSS 2012

| n=907 | Have a thermometer in main refrigerator at home |
|--------------------------|--|
| Age Group | % 95% CI |
| 18 to 34 yrs | 44.8 (33.6,56.6) |
| 35 to 44 yrs | 41.8 (33.0,51.2) |
| 45 to 54 yrs | 30.9 (24.4,38.2) |
| 55 to 64 yrs | 33.1 (26.3,40.7) |
| Area of residence | |
| Perth Metro | 42.2 (35.7,49.0) |
| Rest of state | 28.1 (23.2,33.6) |
| Total | |
| Males | 38.4 (30.8,46.5) |
| Females | 39.9 (33.0,47.2) |
| Persons | 39.1 (33.9,44.6) |

Respondents were asked the maximum temperature a refrigerator should operate at to keep food in good condition. Half (54.3%) correctly identified up to 5° Celsius, shown in Table 53. Females were significantly more likely to say they did not know the temperature a refrigerator should operate at than males (45% compared to 27.8%).

Table 53: Maximum temperature a refrigerator should operate at to keep food in good condition, 18 to 64 years, WA NMSS 2012

| n=908* | Up to 5o Celsius | Over 5o Celsius | Don't know |
|------------------|-------------------------|------------------------|-------------------------|
| Age Group | % 95% CI | % 95% CI | % 95% CI |
| 18 to 34 yrs | 53.3 (41.8,64.5) | 8.7 (3.9,18.3) | 38.0 (28.1,49.0) |
| 35 to 44 yrs | 58.7 (49.7,67.1) | 14.2 (8.9,22.0) | 27.1 (20.4,35.1) |
| 45 to 54 yrs | 56.0 (48.4,63.4) | 7.0 (4.1,11.5) | 37.0 (30.0,44.6) |
| 55 to 64 yrs | 48.8 (41.1,56.5) | 8.1 (4.6,14.1) | 43.1 (35.7,50.7) |
| Total | | | |
| Males | 60.0 (51.5,68.1) | 12.1 (7.4,19.3) | 27.8 (21.1,35.6) |
| Females | 48.4 (41.9,54.9) | 6.7 (4.7,9.4) | 45.0 (38.6,51.5) |
| Persons | 54.3 (48.9,59.6) | 9.5 (6.7,13.2) | 36.2 (31.5,41.3) |

5.5.3 Transporting food safely

Respondents were asked how often they put cold or frozen food into an 'Esky' to transport it home from the shop. More than three in five (62.2%) said they 'never' use an 'Esky' to transport food, shown in Table 54. Respondents aged 55 to 64 years were significantly more likely to 'always' use an 'Esky' than those aged less than 55 years. Respondents living in metropolitan Perth were significantly more likely to 'never' use an 'Esky' to transport food than those in the rest of the state (66.1% compared with 48.1%).

Table 54: Transporting cold and frozen food in an 'Esky' from shops to home, 18 to 64 years, WA NMSS 2012

| n=908 Age Group | Always | | Usually | | Sometimes | | Usually not | | Never | |
|--------------------------|-------------|--------------------|------------|-------------------|-------------|-------------------|-------------|------------------|-------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 7.8 | (3.6,16.2) | 6.3 | (2.6,14.5) | 10.7 | (5.9,18.8) | 4.1 | (2.0,8.0) | 71.1 | (60.4,79.8) |
| 35 to 44 yrs | 12.6 | (8.4,18.4) | 10.1 | (5.9,16.7) | 7.2 | (4.3,11.8) | 9 | (4.4,17.6) | 61.2 | (52.1,69.5) |
| 45 to 54 yrs | 13.5 | (9.4,19.0) | 5.8 | (3.3,10.2) | 11.7 | (7.2,18.4) | 7.7 | (4.4,13.1) | 61.3 | (53.3,68.6) |
| 55 to 64 yrs | 25.5 | (19.4,32.6) | 6.7 | (4.0,10.8) | 14.6 | (9.9,20.9) | 8.3 | (4.7,14.2) | 45.0 | (37.5,52.7) |
| Area of residence | | | | | | | | | | |
| Perth Metro | 10.5 | (7.5,14.7) | 6.9 | (4.3,10.9) | 11.1 | (8.0,15.3) | 5.4 | (3.4,8.4) | 66.1 | (60.0,71.7) |
| Rest of State | 22.8 | (18.5,27.7) | 7.9 | (5.4,11.5) | 9.7 | (6.7,13.9) | 11.5 | (7.6,17.1) | 48.1 | (41.7,54.5) |
| Total | | | | | | | | | | |
| Males | 12.8 | (8.5,18.9) | 6.8 | (3.7,12.2) | 8 | (5.0,12.5) | 7.6 | (4.7,12.2) | 64.7 | (57.0,71.7) |
| Females | 13.6 | (10.9,16.8) | 7.4 | (4.7,11.3) | 13.7 | (9.6,19.1) | 5.7 | (3.9,8.4) | 59.6 | (53.5,65.4) |
| Persons | 13.2 | (10.5,16.5) | 7.1 | (4.9,10.2) | 10.8 | (8.2,14.2) | 6.7 | (4.8,9.2) | 62.2 | (57.3,66.9) |

5.6 Access to healthy food

Respondents were asked about access and availability of food in relation to where they live, defined as within one mile or 1.6km from home.

5.6.1 Access to adequate food

Respondents were asked if they agreed, disagreed or neither agreed nor disagreed with the statement 'there is a lack of access to adequate food – shopping is a problem' in their neighbourhood, shown in Table 55.

Most (77.9%) 'disagreed' or 'strongly disagreed' with the statement. Respondents living outside the Perth metropolitan area were significantly more likely to 'strongly agree' that there was a lack of access to adequate food than those in the Perth metropolitan area (16.5% compared with 4.9%).

Table 55: Lack of access to adequate food – shopping is a problem, 18 to 64 years, WA NMSS 2012

| n=1543 | Strongly agree | | Agree | | Neither agree nor disagree | | Disagree | | Strongly disagree | |
|--------------------------|----------------|------------------|-------------|--------------------|----------------------------|------------------|-------------|--------------------|-------------------|--------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 6.5 | (3.9,10.5) | 12.2 | (8.1,18.0) | 1.2 | (0.5,3.2) | 52.8 | (45.3,60.2) | 27.3 | (21.1,34.7) |
| 35 to 44 yrs | 8.6 | (5.8,12.6) | 13.7 | (10.0,18.5) | 4.4 | (2.5,7.6) | 43.8 | (38.0,49.8) | 29.5 | (24.5,35.1) |
| 45 to 54 yrs | 6.8 | (4.9,9.4) | 13.7 | (10.4,17.9) | 2.6 | (1.3,5.0) | 45.5 | (40.3,50.8) | 31.4 | (26.7,36.5) |
| 55 to 64 yrs | 8.9 | (6.7,11.9) | 10.5 | (7.9,13.7) | 1.9 | (1.0,3.5) | 44.1 | (39.4,49.0) | 34.6 | (30.1,39.3) |
| Area of residence | | | | | | | | | | |
| Perth Metro | 4.9 | (3.4,7.1) | 11.2 | (8.8,14.1) | 1.8 | (1.1,3.0) | 50.6 | (46.4,54.8) | 31.4 | (27.7,35.4) |
| Rest of State | 16.5 | (13.3,20.3) | 17.4 | (13.0,22.9) | 4.2 | (2.6,6.6) | 37.2 | (32.1,42.6) | 24.8 | (20.2,29.9) |
| Total | | | | | | | | | | |
| Males | 6.9 | (5.0,9.5) | 14.8 | (11.4,18.8) | 2.5 | (1.5,4.1) | 47.3 | (42.0,52.6) | 28.5 | (23.8,33.7) |
| Females | 8.0 | (5.9,10.6) | 10.3 | (7.8,13.4) | 2.1 | (1.3,3.5) | 48.2 | (43.7,52.7) | 31.4 | (27.6,35.5) |
| Persons | 7.4 | (6.0,9.2) | 12.6 | (10.4,15.1) | 2.3 | (1.6,3.3) | 47.7 | (44.2,51.2) | 29.9 | (26.9,33.2) |

5.6.2 Selection of fruits and vegetables available

Respondents were asked if they agreed, disagreed or neither agreed nor disagreed with the statement that in their neighbourhood 'a large selection of fruits and vegetables are available', shown in Table 56.

Most (86%) 'agreed' or 'strongly agreed' that a large selection of fruits and vegetables was available. Respondents living outside of the Perth metropolitan area were significantly more likely to 'strongly disagree' that there was a large selection of fruits and vegetables available than those living in Metropolitan Perth (10.1% compared with 2.9%).

Table 56: Large selection of fruits and vegetables are available, 18 to 64 years, WA NMSS 2012

| n=1547 | Strongly agree | | Agree | | Neither agree nor disagree | | Disagree | | Strongly disagree | |
|--------------------------|----------------|--------------------|-------------|--------------------|----------------------------|------------------|------------|------------------|-------------------|------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 29.5 | (22.9,37.0) | 57.4 | (49.7,64.8) | 2.9 | (1.1,7.5) | 7.0 | (4.3,11.2) | 3.3 | (1.6,6.4) |
| 35 to 44 yrs | 36.5 | (31.0,42.4) | 49.3 | (43.4,55.3) | 2.4 | (1.1,5.0) | 6.2 | (4.0,9.3) | 5.6 | (3.4,9.0) |
| 45 to 54 yrs | 39.0 | (33.9,44.3) | 44.1 | (38.9,49.4) | 1.5 | (0.6,3.8) | 10.3 | (7.4,14.1) | 5.1 | (3.4,7.7) |
| 55 to 64 yrs | 47.4 | (42.5,52.3) | 40.6 | (35.9,45.5) | 1.2 | (0.4,3.6) | 5.9 | (4.1,8.5) | 4.8 | (3.1,7.3) |
| Area of residence | | | | | | | | | | |
| Perth Metro | 37.8 | (33.8,41.9) | 51.8 | (47.6,56.0) | 2.3 | (1.2,4.4) | 5.3 | (3.9,7.2) | 2.9 | (1.9,4.3) |
| Rest of State | 30.6 | (25.7,35.9) | 42.8 | (36.7,49.0) | 1.9 | (1.0,3.7) | 14.7 | (10.6,19.9) | 10.1 | (7.0,14.4) |
| Total | | | | | | | | | | |
| Males | 33.8 | (28.8,39.1) | 52.3 | (46.9,57.7) | 2.3 | (1.1,4.4) | 7.7 | (5.6,10.5) | 3.9 | (2.5,6.2) |
| Females | 38.7 | (34.6,43.1) | 47.3 | (42.7,51.9) | 2.1 | (0.9,5.1) | 6.9 | (5.0,9.5) | 5.0 | (3.6,6.8) |
| Persons | 36.2 | (32.9,39.6) | 49.8 | (46.3,53.4) | 2.2 | (1.2,3.8) | 7.3 | (5.9,9.1) | 4.4 | (3.4,5.8) |

5.6.3 Selection of healthy take-away foods available

Respondents were asked if they agreed, disagreed or neither agreed nor disagreed with the statement 'that a large selection of healthy take-away foods was available' in their neighbourhood, shown in Table 57.

Half (50.4%) 'disagreed' or 'strongly disagreed' that a large selection of healthy take-away foods was available. Respondents living in the Perth metropolitan area were significantly less likely to 'strongly disagree' that a large selection of healthy take-away foods was available than those living in the rest of the state (19.8% compared with 9.8%). Females were significantly more likely to 'strongly disagree' than males (15.1% compared with 9.0%).

Table 57: Large selection of healthy take-away foods are available, 18 to 64 years, WA NMSS 2012

| n=1548 | Strongly agree | | Agree | | Neither agree nor disagree | | Disagree | | Strongly disagree | | Don't know | |
|--------------------------|----------------|-------------------|-------------|--------------------|----------------------------|-------------------|-------------|--------------------|-------------------|--------------------|------------|------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 8.0 | (4.8,13.2) | 32.5 | (26.0,39.8) | 8.6 | (5.3,13.8) | 40.7 | (33.8,48.0) | 10.1 | (6.5,15.5) | 0.0 | (0.0) |
| 35 to 44 yrs | 8.2 | (5.6,12.0) | 24.8 | (19.8,30.6) | 10.2 | (7.2,14.3) | 41.9 | (36.0,48.1) | 13.5 | (10.0,17.9) | 1.3 | (0.5,3.7) |
| 45 to 54 yrs | 8.8 | (6.2,12.3) | 31.4 | (26.6,36.6) | 8.7 | (6.3,11.9) | 37.5 | (32.6,42.7) | 13.1 | (10.2,16.6) | 0.5 | (0.2,1.6) |
| 55 to 64 yrs | 12.3 | (9.4,15.9) | 31.4 | (27.0,36.2) | 8.9 | (6.6,12.0) | 30.0 | (25.8,34.7) | 12.9 | (10.0,16.4) | 4.5 | (2.9,6.8) |
| Area of residence | | | | | | | | | | | | |
| Perth Metro | 9.5 | (7.4,12.0) | 33.5 | (29.7,37.5) | 8.4 | (6.5,10.9) | 37.5 | (33.6,41.6) | 9.8 | (7.7,12.6) | 1.2 | (0.8,1.9) |
| Rest of State | 7.2 | (4.7,11.0) | 18.9 | (14.6,24.3) | 11.3 | (7.7,16.3) | 41.7 | (36.8,46.8) | 19.8 | (15.9,24.4) | 1.0 | (0.5,2.2) |
| Total | | | | | | | | | | | | |
| Males | 10.3 | (7.4,14.0) | 32.6 | (27.8,37.7) | 7.8 | (5.4,11.1) | 39.3 | (34.3,44.5) | 9.0 | (6.6,12.1) | 1.0 | (0.5,2.1) |
| Females | 7.6 | (5.9,9.9) | 28.1 | (24.2,32.3) | 10.3 | (8.0,13.3) | 37.5 | (33.3,42.0) | 15.1 | (12.1,18.6) | 1.3 | (0.9,2.1) |
| Persons | 9.0 | (7.2,11.1) | 30.4 | (27.2,33.7) | 9.1 | (7.3,11.2) | 38.4 | (35.1,41.8) | 12.0 | (10.0,14.3) | 1.2 | (0.8,1.8) |

5.7 Could not afford enough food

Respondents were asked if anyone in their household had eaten less than they should because they couldn't afford enough food in the last 12 months, with 3.2% stating this was the case, shown in Table 58.

Table 58: Ate less than should as could not afford enough food, 18 to 64 years, WA NMSS 2012

| n = 908 | No | | Yes | |
|--------------------------------|-------------|--------------------|------------|------------------|
| | % | 95% CI | % | 95% CI |
| Age Group | | | | |
| 18 to 34 yrs | 96.7 | (90.4,98.9) | 3.3 | (1.1,9.6) |
| 35 to 44 yrs | 96.7 | (93.8,98.3) | 3.3 | (1.7,6.2) |
| 45 to 54 yrs | 97.1 | (93.5,98.7) | 2.9 | (1.3,6.5) |
| 55 to 64 yrs | 96.9 | (94.1,98.4) | 3.1 | (1.6,5.9) |
| Annual household income | | | | |
| Up to \$60,000 | 92.6 | (84.8,96.6) | 7.4 | (3.4,15.2) |
| Over \$60,000 | 97.9 | (95.8,98.9) | 2.1 | (1.1,4.2) |
| Total | | | | |
| Males | 97.6 | (93.2,99.2) | 2.4 | (0.8,6.8) |
| Females | 96.0 | (93.6,97.6) | 4.0 | (2.4,6.4) |
| Persons | 96.8 | (94.8,98.1) | 3.2 | (1.9,5.2) |

5.8 Making the healthy choice the easy choice

Respondents were asked a series of questions about what would make it easier for them and their family to eat a healthy diet. They were given a number of options relating to cooking, shopping and eating meals away from home, shown in Tables 59 to 65.

5.8.1 Food preparation skills

Respondents were asked to rate their cooking skills from 'can't cook' through to 'can cook almost anything', shown in Table 59. Most respondents (73.1%) said they 'can cook a wide variety of foods' or 'can cook almost anything'.

Females were significantly more likely than males to say they 'can cook a wide variety of meals' or 'cook almost anything' (51.4% compared with 36.9%, and 34.4% compared with 23.9% respectively). Respondents who said they had the sole responsibility for food shopping were significantly more likely to report that they could 'cook almost anything' than those who shared this responsibility (37.7% compared with 26.1%). Only 6.7% of respondents rated their cooking skills as 'limited'.

However, in separate questions, the majority of respondents reported that knowing more ways of preparing healthy foods (74.8%) and knowing more about cooking (59.9%) would help them and their families to eat a healthier diet (Table 60).

Table 59: Self-assessment of cooking skills, 18 to 64 years, WA NMSS 2012

| n=1534 | Can't cook | | Can boil and egg, BBQ meat or heat frozen meals | | Can cook basic meal and 3 veg type meal | | Can cook a wide variety of meals | | Can cook almost anything | |
|---|------------|------------------|---|------------------|---|--------------------|----------------------------------|--------------------|--------------------------|--------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 1.5 | (0.5,4.7) | 7.7 | (4.4,12.9) | 22.9 | (17.2,29.8) | 45.0 | (37.6,52.5) | 22.9 | (17.3,29.7) |
| 35 to 44 yrs | 2.2 | (0.9,5.5) | 3.8 | (1.8,7.9) | 17.0 | (12.5,22.6) | 46.9 | (40.9,53.0) | 30.0 | (25.0,35.6) |
| 45 to 54 yrs | 0.8 | (0.3,2.6) | 3.2 | (1.7,5.8) | 17.6 | (13.9,22.1) | 44.0 | (38.8,49.2) | 34.4 | (29.6,39.6) |
| 55 to 64 yrs | 0.8 | (0.3,2.5) | 4.4 | (2.6,7.4) | 21.5 | (17.7,25.8) | 38.3 | (33.8,43.0) | 35.0 | (30.6,39.7) |
| Responsibility for food shopping | | | | | | | | | | |
| Sole responsibility | 0.5 | (0.1,2.6) | 2.1 | (1.0,4.3) | 10.9 | (8.2,14.4) | 48.8 | (43.9,53.8) | 37.7 | (33.1,42.4) |
| Shared responsibility | 0.7 | (0.3,1.9) | 2.3 | (1.2,4.5) | 26.7 | (21.7,32.4) | 44.2 | (38.4,50.1) | 26.1 | (21.2,31.7) |
| Total | | | | | | | | | | |
| Males | 2.1 | (1.0,4.1) | 7.0 | (4.6,10.5) | 30.1 | (25.3,35.4) | 36.9 | (31.8,42.4) | 23.9 | (19.8,28.6) |
| Females | 0.7 | (0.2,2.6) | 3.5 | (1.9,6.4) | 10.0 | (7.5,13.1) | 51.4 | (46.9,55.9) | 34.4 | (30.5,38.6) |
| Persons | 1.4 | (0.8,2.6) | 5.3 | (3.7,7.4) | 20.2 | (17.4,23.3) | 44.0 | (40.6,47.5) | 29.1 | (26.2,32.2) |

5.8.2 Enablers of healthy eating

Respondents were asked what would make it easier for them and their families to eat a healthy diet and given a list of eleven suggestions, shown in Table 60. There was majority support for all of the suggestions with the highest level of agreement for:

- Detailed and easy to understand information on food labels (88.9%).
- Cheaper healthier foods (88%).
- Knowing quicker ways of preparing healthier foods (84.3%).
- If you could buy more healthy food snacks (82.6%).
- If all unhealthy foods had a coloured symbol on the label (81.6%).
- More health food options in take-away/fast food outlets (78.5%).
- More information to help me decide which foods are healthy (74.7%).
- My family/partner enjoyed health foods (71.6%).
- Healthier foods were easier to find in supermarkets (69.3%).
- If I knew more about cooking (59.9%).

There were no significant differences by gender in these attitudes. Respondents aged 55 to 64 years were significantly less likely to agree with the statement 'if they could buy more healthy snack foods' compared with all other age groups (68.7% compared with 89.3% in 18 to 34 year olds).

Respondents aged 18 to 34 years were significantly more likely than those aged 35 to 44 or over 55 years to agree with the statement 'if I knew more about cooking' it would make it easier to eat a healthy diet (67.7% compared with 51.9% and 55.1% respectively), as were those with a household income up to \$60,000 compared with those over \$60,000 (73.6% compared with 53.3%).

Table 60: Options that would support eating a healthier diet, 18 to 64 years, WA NMSS 2012

| n=1544 | Persons | Males | Females | 18–34 yrs | 35–44 yrs | 45–54 yrs | 55–64 yrs |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| What would make it easier for you or your family to eat a healthy diet? | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI | % 95% CI |
| Detailed and easy to understand information on food labels | 88.9 (86.5,91.0) | 86.8 (82.5,90.2) | 91.1 (88.4,93.2) | 86.5 (80.6,90.8) | 92.0 (88.0,94.8) | 89.9 (86.6,92.5) | 89.2 (85.8,91.8) |
| Cheaper healthy foods | 88.0 (85.8,89.9) | 87.8 (84.3,90.6) | 88.3 (85.4,90.7) | 90.6 (85.7,93.9) | 87.0 (82.4,90.6) | 89.5 (86.0,92.2) | 81.9 (77.7,85.5) |
| Knowing quicker ways of preparing healthy foods | 84.3 (81.7,86.7) | 82.5 (77.8,86.4) | 86.2 (83.5,88.6) | 84.5 (78.4,89.1) | 83.5 (78.3,87.6) | 86.0 (82.3,89.0) | 83.2 (79.2,86.6) |
| Could buy more healthy food snacks | 82.6 (80.1,84.9) | 82.3 (78.2,85.8) | 82.9 (79.9,85.6) | 89.3 (83.6,93.2) | 82.8 (77.9,86.8) | 81.6 (77.5,85.1) | 68.7 (64.0,73.1) |
| All unhealthy foods had a coloured symbol on the label | 81.6 (78.7,84.1) | 79.2 (74.4,83.4) | 84.0 (80.8,86.7) | 79.8 (73.4,85.1) | 80.3 (75.1,84.7) | 83.9 (80.0,87.2) | 84.1 (80.4,87.3) |
| More healthy food options in take-away/fast food outlets | 78.5 (75.4,81.3) | 76.1 (71.1,80.5) | 81.0 (77.3,84.3) | 76.2 (69.2,82.1) | 80.4 (75.2,84.7) | 83.2 (79.2,86.7) | 75.5 (70.9,79.6) |
| Knowing more ways of preparing healthy foods | 74.8 (71.4,77.8) | 72.6 (67.2,77.3) | 77.0 (72.9,80.7) | 73.0 (65.5,79.4) | 71.5 (65.7,76.8) | 78.8 (74.2,82.9) | 77.8 (73.5,81.6) |
| More information to help me decide which foods are healthy | 74.7 (71.6,77.5) | 72.8 (67.6,77.5) | 76.5 (73.2,79.6) | 77.0 (70.1,82.7) | 70.0 (64.1,75.3) | 76.6 (72.2,80.5) | 73.0 (68.4,77.1) |
| My family/partner enjoyed healthy foods | 71.6 (68.4,74.5) | 71.4 (66.5,75.8) | 71.8 (67.8,75.5) | 75.2 (68.4,81.0) | 70.5 (64.7,75.8) | 71.8 (66.9,76.2) | 63.6 (58.7,68.2) |
| Healthier food were easier to find in supermarkets | 69.3 (65.9,72.5) | 65.9 (60.5,70.9) | 72.8 (68.7,76.6) | 65.8 (58.3,72.6) | 71.4 (65.5,76.5) | 74.0 (69.2,78.3) | 69.9 (65.2,74.2) |
| I knew more about cooking | 59.9 (56.5,63.1) | 62.2 (57.0,67.2) | 57.4 (53.2,61.5) | 67.7 (60.5,74.2) | 51.9 (45.8,58.0) | 57.9 (52.8,62.8) | 55.1 (50.1,59.9) |

5.8.3 Frequency of choosing healthy foods when buying a meal

Respondents were asked how often they try to choose healthy foods when buying a meal, shown in Table 61. The majority (61.5%) said they 'always' or 'often' try to choose healthy foods. Females were significantly more likely to 'always' try to choose healthy foods when buying a meal than males (35% compared with 23.9%). Respondents aged 55 to 64 years were significantly more likely to say they 'always' try to choose healthy foods than younger age groups.

Table 61: Try to choose healthy foods when buying a meal, 18 to 64 years, WA NMSS 2012

| n=1544 Age Group | Always | | Often | | Sometimes | | Rarely | | Never | | I don't buy meals | |
|---------------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|------------|------------------|------------|------------------|-------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 25.4 | (19.4,32.5) | 30.8 | (24.2,38.4) | 30.6 | (24.4,37.6) | 6.7 | (3.9,11.2) | 6.1 | (3.3,11.0) | 0.4 | (0.1,1.1) |
| 35 to 44 yrs | 26.2 | (21.5,31.6) | 34.7 | (29.2,40.6) | 23.3 | (18.4,29.1) | 7.3 | (4.3,12.1) | 5.7 | (3.5,9.1) | 2.8 | (1.3,5.8) |
| 45 to 54 yrs | 29.1 | (24.8,33.7) | 35.8 | (30.8,41.1) | 19.9 | (15.9,24.6) | 7.8 | (5.4,11.0) | 4.3 | (2.6,7.0) | 3.2 | (1.7,5.9) |
| 55 to 64 yrs | 42.5 | (37.7,47.4) | 27.6 | (23.4,32.2) | 15.8 | (12.5,19.7) | 5.9 | (4.2,8.4) | 5.4 | (3.3,8.5) | 2.9 | (1.7,4.7) |
| Total | | | | | | | | | | | | |
| Males | 23.9 | (19.8,28.6) | 31.0 | (26.2,36.2) | 27.7 | (23.2,32.5) | 8.3 | (5.9,11.6) | 7.1 | (4.8,10.5) | 2.1 | (1.2,3.5) |
| Females | 35.0 | (30.8,39.3) | 33.4 | (29.3,37.9) | 20.4 | (16.8,24.6) | 5.5 | (3.7,8.0) | 3.8 | (2.4,6.0) | 1.8 | (1.2,2.8) |
| Persons | 29.3 | (26.4,32.5) | 32.2 | (28.9,35.6) | 24.1 | (21.2,27.3) | 6.9 | (5.4,8.9) | 5.5 | (4.0,7.4) | 2.0 | (1.4,2.8) |

5.8.4 Importance of having healthy choices available when buying a meal

Respondents rated the importance of having healthy choices available when buying a meal, shown in Table 62. Half (49.5%) of respondents said it was 'very important' to have healthy choices available when buying a meal and only 6.2% of said it was 'not at all important'. Females were significantly more likely to rate the availability of healthy choices as 'very important' than males (57.6% compared with 41.7%). Respondents aged 55 to 64 years were significantly more likely to rate the availability of healthy choices as 'very important' than those aged 18 to 44 years.

Table 62. Importance of having healthy choices available when buying a meal, 18 to 64 years, WA NMSS 2012

| n=1544 | Very important | | Quite important | | Neither important nor unimportant | | Quite unimportant | | Not at all important | |
|------------------|----------------|--------------------|-----------------|--------------------|-----------------------------------|-------------------|-------------------|------------------|----------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 42.4 | (35.5,49.6) | 31.8 | (25.2,39.2) | 10.7 | (6.6,16.9) | 8.0 | (4.6,13.5) | 7.1 | (4.1,12.1) |
| 35 to 44 yrs | 48.5 | (42.6,54.5) | 32.5 | (27.0,38.6) | 8.7 | (5.6,13.1) | 5.8 | (3.4,9.8) | 4.5 | (2.6,7.8) |
| 45 to 54 yrs | 52.9 | (47.6,58.1) | 31.7 | (27.0,36.9) | 5.0 | (3.3,7.5) | 4.7 | (2.9,7.5) | 5.7 | (3.6,8.9) |
| 55 to 64 yrs | 62.5 | (57.6,67.1) | 23.2 | (19.3,27.5) | 3.3 | (2.0,5.4) | 4.1 | (2.4,6.9) | 7.0 | (4.7,10.4) |
| Total | | | | | | | | | | |
| Males | 41.7 | (36.7,46.8) | 31.9 | (27.1,37.2) | 9.2 | (6.1,13.5) | 8.7 | (5.9,12.6) | 8.6 | (6.0,12.1) |
| Females | 57.6 | (53.1,62.0) | 28.9 | (24.9,33.2) | 6.3 | (4.2,9.2) | 3.5 | (2.0,5.8) | 3.8 | (2.4,6.0) |
| Persons | 49.5 | (46.1,52.9) | 30.4 | (27.2,33.8) | 7.7 | (5.8,10.2) | 6.1 | (4.5,8.3) | 6.2 | (4.7,8.2) |

5.8.5 Availability of healthy choices when buying a meal

Respondents were asked whether there were enough healthy choices available the last time they bought a meal from a restaurant, take-away, lunch bar or canteen, shown in Table 63. They were also given the options 'yes but I did not want any of them', 'I don't know what a healthy choice is' and 'I am uninterested in healthy choices'.

Two thirds of respondents (66.7%) said there were enough healthy choices while a quarter (26%) said there were not enough. Less than 1% of respondents reported 'not knowing what a healthy choice is' (0.6%) or being 'uninterested in healthy choices' (0.4%).

Table 63: Availability of healthy choices at last purchase from a restaurant, take-away outlet, lunch bar or canteen, 18 to 64 years, WA NMSS 2012

| n=1534 | No, not enough | | Yes, enough | | Yes but didn't want any of them | | I don't know what a healthy choice is | | I'm uninterested in healthy choices | |
|----------------|----------------|--------------------|-------------|--------------------|---------------------------------|------------------|---------------------------------------|------------------|-------------------------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | | | |
| 18 to 34 yrs | 29.3 | (22.8,36.8) | 65.1 | (57.4,72.0) | 5.2 | (2.8,9.5) | 0.0 | | 0.5 | (0.1,3.3) |
| 35 to 44 yrs | 29.8 | (24.4,35.8) | 61.1 | (54.9,67.0) | 8.3 | (5.4,12.6) | 0.6 | (0.1,4.1) | 0.2 | (0.0,1.6) |
| 45 to 54 yrs | 21.4 | (17.3,26.3) | 69.8 | (64.6,74.5) | 7.3 | (4.9,10.7) | 1.2 | (0.5,2.9) | 0.3 | (0.0,2.2) |
| 55 to 64 yrs | 19.6 | (15.9,23.8) | 73.6 | (69.0,77.8) | 5.0 | (3.2,7.7) | 1.2 | (0.5,2.8) | 0.6 | (0.2,2.1) |
| Total | | | | | | | | | | |
| Males | 27.1 | (22.4,32.4) | 63.9 | (58.5,69.0) | 8.2 | (5.7,11.5) | 0.5 | (0.1,1.7) | 0.3 | (0.1,1.0) |
| Females | 24.9 | (21.1,29.3) | 69.5 | (65.1,73.6) | 4.4 | (3.1,6.2) | 0.7 | (0.3,1.4) | 0.5 | (0.1,2.3) |
| Persons | 26.0 | (22.9,29.4) | 66.7 | (63.2,70.0) | 6.3 | (4.8,8.2) | 0.6 | (0.3,1.1) | 0.4 | (0.1,1.1) |

5.8.6 Meals purchased away from home

Respondents were asked if they had purchased a meal from a restaurant, take-away, lunch bar, canteen or other prepared food outlet on the day prior to the survey, shown in Table 64. The majority (69.8%) of respondents did not purchase a meal out on the day prior to the survey.

Eighteen per cent of respondents had purchased lunch, 10.4% had purchased dinner and only 1.5% had purchased breakfast. Respondents aged 35 to 44 years were significantly more likely to have bought breakfast on the day prior than those aged 18 to 34 years (3.3% compared with 0.3%). Respondents living in metropolitan Perth were significantly more likely to have purchased dinner on the day prior than those living in the rest of the state (11.9% compared with 4.9%).

Table 64: Meals purchased from a restaurant, take-away outlet, lunch bar, canteen or other food outlet on day prior, 18 to 64 years, WA NMSS 2012

| n=1544 | Breakfast | | Lunch | | Dinner | | Two meals | | Didn't buy a meal | |
|--------------------------|------------------|------------------|--------------|--------------------|---------------|-------------------|------------------|------------------|--------------------------|--------------------|
| Age Group | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| 18 to 34 yrs | 0.3 | (0.1,1.2) | 22.3 | (16.6,29.3) | 9.8 | (6.0,15.5) | 0.0 | | 67.7 | (60.2,74.3) |
| 35 to 44 yrs | 3.3 | (1.9,5.8) | 14.0 | (10.4,18.7) | 14.4 | (10.4,19.5) | 1.1 | (0.4,3.5) | 67.2 | (61.3,72.6) |
| 45 to 54 yrs | 2.4 | (1.2,4.9) | 15.8 | (12.3,20.1) | 9.3 | (6.8,12.6) | 0.5 | (0.1,1.7) | 72.0 | (67.0,76.4) |
| 55 to 64 yrs | 1.0 | (0.4,2.4) | 14.2 | (11.0,18.2) | 7.9 | (5.7,10.9) | 1.6 | (0.7,3.4) | 75.3 | (70.7,79.3) |
| Area of residence | | | | | | | | | | |
| Perth Metro | 1.3 | (0.8,2.2) | 18.5 | (15.4,22.2) | 11.9 | (9.4,14.9) | 0.7 | (0.3,1.4) | 67.6 | (63.5,71.4) |
| Rest of State | 2.4 | (1.4,4.0) | 14.4 | (10.5,19.4) | 4.9 | (3.2,7.4) | 0.5 | (0.2,1.2) | 77.8 | (72.5,82.3) |
| Total | | | | | | | | | | |
| Males | 1.4 | (0.7,2.7) | 19.4 | (15.3,24.3) | 10.0 | (7.2,13.7) | 0.5 | (0.2,1.6) | 68.7 | (63.4,73.6) |
| Females | 1.7 | (1.1,2.7) | 15.9 | (12.8,19.6) | 10.8 | (8.1,14.1) | 0.8 | (0.4,1.4) | 70.9 | (66.7,74.8) |
| Persons | 1.5 | (1.0,2.3) | 17.7 | (15.0,20.7) | 10.4 | (8.4,12.8) | 0.6 | (0.3,1.2) | 69.8 | (66.4,73.0) |

5.8.7 Type of meal last purchased away from home

Respondents were asked to think back to the last time they purchased a meal from a restaurant, take-away, lunch bar, canteen or other prepared food outlet, shown in Table 65. Half of respondents said that the last meal they purchased out was dinner, 42.5% bought lunch and 5.7% breakfast. Adults aged 35 to 44 years were significantly more likely to have bought breakfast last time they purchased a meal than adults aged 18 to 34 years (11.9% compared with 2.6%). Adults aged 55 to 64 years were significantly more likely to not buy meals out than those aged 18 to 34 years (2.0% compared with 0.1%).

Table 65: Last meal purchased from restaurant, take-away, lunch bar, canteen or other food outlet, 18 to 64 years, WA NMSS 2012

| n=1541 | Breakfast | | Lunch | | Evening meal | | Don't buy meals out | |
|------------------|------------|------------------|-------------|--------------------|--------------|--------------------|---------------------|------------------|
| | % | 95% CI | % | 95% CI | % | 95% CI | % | 95% CI |
| Age Group | | | | | | | | |
| 18 to 34 yrs | 2.6 | (1.1,5.9) | 50.7 | (43.0,58.3) | 46.6 | (39.0,54.3) | 0.1 | (0.0,0.9) |
| 35 to 44 yrs | 11.9 | (8.2,16.8) | 35.6 | (30.1,41.6) | 51.7 | (45.6,57.8) | 0.8 | (0.2,3.5) |
| 45 to 54 yrs | 6.0 | (3.8,9.2) | 36.4 | (31.5,41.7) | 56.1 | (50.8,61.3) | 1.5 | (0.6,3.6) |
| 55 to 64 yrs | 4.5 | (2.9,7.0) | 40.7 | (36.0,45.6) | 52.7 | (47.8,57.6) | 2.0 | (1.1,3.7) |
| Total | | | | | | | | |
| Males | 5.8 | (4.0,8.4) | 43.7 | (38.4,49.2) | 49.5 | (44.1,55.0) | 0.9 | (0.4,2.1) |
| Females | 5.7 | (4.1,7.8) | 41.3 | (36.8,45.9) | 52.2 | (47.6,56.7) | 0.9 | (0.5,1.5) |
| Persons | 5.7 | (4.5,7.4) | 42.5 | (39.0,46.1) | 50.8 | (47.2,54.4) | 0.9 | (0.5,1.5) |

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