



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

# Nutrition Monitoring Survey Series 2015

## Key Findings



## **The Nutrition Monitoring Survey Series 2015**

The 2015 Nutrition Monitoring Survey was funded by the Department of Health, Western Australia and conducted as part of the Nutrition Monitoring Survey Series, which commenced in 1995.

### **Acknowledgements**

The project was funded and managed by the Chronic Disease Prevention Directorate, Public Health, Department of Health, Western Australia. The Epidemiology Branch organised data collection and conducted the analysis of the survey information. The report was prepared by independent nutrition consultant Margaret Miller and marketing consultant Sarah Miller, with input from Kathy Ride, Policy Officer, Chronic Disease Prevention Directorate.

Special thanks are extended to all community participants in the 2015 Nutrition Monitoring Survey.

### **Suggested citation**

Miller, MR, and Miller, SA. (2017) Nutrition Monitoring Survey Series 2015 Key Findings, Department of Health, Western Australia.

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# Abbreviations

|       |  |
|-------|--|
| ABS   | Australian Bureau of Statistics              |
| BMI   | Body Mass Index                              |
| NHMRC | National Health and Medical Research Council |
| NMSS  | Nutrition Monitoring Survey Series           |
| WHO   | World Health Organization                    |



# Executive summary

The Western Australian Nutrition Monitoring Surveys Series (NMSS) has been conducted by the Department of Health, Western Australia (DoHWA) since 1995. The NMSS provides evidence to inform planning and initiatives to improve the health of all Western Australians, through better nutrition.

The aim of the NMSS is to investigate the nutrition knowledge, attitudes, beliefs and behaviours of Western Australian (WA) adults, as they relate to the *Australian Dietary Guidelines* (the Guidelines). The survey monitors attempts at dietary change consistent with the Guidelines, and investigates the barriers and promoters to making such changes. It also monitors attitudes towards government public health nutrition promotions.

The NMSS is conducted approximately every three years, with seven surveys having been conducted between 1995 and 2015 using similar methodology. In 2015 telephone interviews were completed from July to September with a stratified random sample of 1,207 adults aged 18 to 64 years drawn from the 2013 Electronic White Pages for Western Australia by area of residence.

This report presents the key nutrition findings for the WA adult population aged 18 to 64 years, and provides the health sector and general public with important information about food and nutrition behaviours, and barriers and enablers to healthy eating in Western Australia.

## Achieving and maintaining a healthy weight

- Less than one third of adults aged 18 to 64 years were classified as healthy weight (29.8%).
- The greatest proportion of adults (41.9%) was classified as overweight.
- About a quarter of adults were classified as obese (28.3%).
- Females were significantly more likely to be classified as healthy weight than males (37.4% compared with 23.1%).
- Half (51.3%) of those who were classified as overweight saw themselves as 'about the right weight'.
- About one third of adults (34.2%) were 'currently trying to lose weight', with those classified as obese more likely than others to be 'trying to lose weight' (57.2% compared with 38.8% of overweight and 9.5% healthy weight).
- Among those who were trying to lose weight, the most frequently stated reason (29.3%) was 'to improve health in general'.

## Eating a wide variety of nutritious foods

### Fruit

- Most WA adults (89.5%) were aware of the recommendation to eat either two (63.0%) or more than two (26.5%) serves of fruit each day for good health.
- Nearly two thirds (62.0%) reported consuming the recommended two or more serves of fruit on the day prior to the survey.
- Those aged 55 to 64 years were significantly more likely than those aged 18 to 34 years to have eaten more than two serves of fruit on the day prior to the survey (38.3% compared with 21.4%).
- Approximately half of WA adults (53.7%) claimed they already eat enough fruit, and of these most (81.4%) ate two or more serves on the day prior to the survey.
- Of those who said they were thinking about eating more fruit (17.9% of total), most (73.5%) ate less than the recommended serves on the day prior to the survey.

## Vegetables

- Just over half the population (57.4%) were aware of the recommendation to eat five or more serves of vegetables each day for good health.
- Only 12.2% of WA adults reported eating five or more serves of vegetables on the day prior to the survey.
- Four in ten (40.1%) reported eating at least five different types of vegetables on the day prior to the survey.
- Two thirds of WA adults (66.0%) thought that they already eat enough vegetables, however less than half (48.9%) reported eating one to two serves of vegetables on the day prior, with a third (34.9%) usually eating three to four serves a day. About a third (35.6%) said they had tried to increase their vegetable intake over the past 12 months (42.7% of females and 28.8% of males).

## Grains and cereal foods

- Two thirds of WA adults (64.6%) ate bread on the day prior to the survey. Of those who ate bread, 34.1% chose multigrain/wholegrain and 30.2% chose white varieties.
- A quarter of WA adults (25.7%) ate rice and 17.8% ate pasta or spaghetti on the day prior to the survey. Of those eating rice or pasta, 16.6% ate brown rice and 11.8% ate wholemeal pasta.
- Almost half of WA adults (43.6%) ate breakfast cereal on the day prior to the survey.
- The majority of adults (63.2%) said they already eat enough cereal foods and less than one in ten (7.2%) said they were trying to eat more.
- Almost one third (29.3%) said they ate less cereal foods now than 12 months ago (38.1% of females and 20.8% of males).

## Milk, yoghurt, cheese and alternatives

- Nearly all WA adults (97.3%) consumed some dairy foods or alternatives on the day prior to the survey, with the majority (87.5%) drinking milk.
- Of those who drank milk, 93.8% had cow's milk with the greatest proportion choosing to drink full-fat varieties (46.5%).
- Three in ten adults (29.4%) ate yoghurt on the day prior to the survey. Of those consuming yoghurt, most ate full fat types (56.8%).
- Over half of WA adults (52.8%) ate cheese on the day prior to the survey, with full fat cheese being their most common choice (44.8%).
- About half (51.4%) said they already eat enough calcium-rich foods, with females (10.6%) more likely to report trying to increase their intake than males (2.7%).

## Water

- Most WA adults (95.2%) reported drinking water on the day prior to the survey.
- WA adults in the Perth metropolitan area (94.3%) were significantly less likely to report water consumption on the previous day than those living elsewhere in WA (98.4%).
- Of those who drank water, about half (52.0%) drank water direct from the tap, and 33.9% consumed filtered tap water.

## Limiting intake of discretionary foods

### Sugar sweetened drinks and soft drinks

- Nearly one in five WA adults (18.8%) reported drinking sugar sweetened drinks on the day prior to survey, with a mean intake by consumers of 682mL (2.7 cups).
- Males were significantly more likely to have consumed sugar sweetened soft drinks (30.0%) than females (7.2%).
- Younger adults (18 to 34 years) were more likely to have consumed sugar sweetened drinks (29.0%) than those aged 45 to 54 years (10.1%) and those aged 55 to 64 years (8.6%).
- Less than 10% of WA adults (7.3%) reported drinking diet drinks on the day prior to the survey.
- A quarter of WA adults (24.1%) consumed soft drinks (sugar sweetened and/or diet drinks) on the day prior to the survey.
- Among those who consumed soft drinks, the mean intake was 661.7mL.

### Foods high in sugar or added sugar

- Half of WA adults (50.4%) claimed they already had a diet without a lot of high sugar foods.
- Almost three in ten WA adults (29.0%) said they always avoided foods high in sugar or added sugar.
- One fifth of WA adults (20.4%) said it was difficult to change the amount of sugary foods and drinks consumed because of a liking for the taste.

### Fat and fatty foods

- Around two out of five WA adults (43.7%) said they 'already eat a diet low in fat'.
- Just over a quarter of WA adults (26.0%) said they were 'trying to eat less fat and fatty foods'.
- Around half (46.0%) said they 'often' tried to avoid foods high in fat, while 23.7% 'sometimes' tried and 19.8% 'always' tried.
- Those classified as obese were significantly more likely than those classified as overweight or of a healthy weight to have tried to cut down on the amount of fat and fatty foods in the past 12 months (71.5% compared with 46.1% overweight and 40.3% healthy weight).
- Around one quarter of adults (27.2%) said that they did not understand the terms mono or polyunsaturated fat; another 4.5% could not remember what the terms meant.

### Salt and salty foods

- Half the population (54.1%) claimed they already had a diet low in salt.
- One in ten (10.7%) was currently trying to eat fewer foods high in salt or added salt.
- Males were significantly more likely than females to say they were not thinking about cutting down on the amount of salt and added salt foods in their diet (30.1% compared with 17.5%).
- The frequency of 'always' avoiding foods high in salt and added salt increased with age; those in the 55 to 64 year age group were significantly more likely than all the other age groups to always avoid foods high in salt and added salt (37.9% compared with 25.3% of 45 to 54 year olds, 20.2% of 35 to 44 year olds and 10.2% of 18 to 34 year olds).

## Breastfeeding

- The majority of WA adults (75.3%) said it was very important for mothers to breastfeed babies.
- One fifth (22.1%) said they did not know how long a mother should breastfeed; males (32.8%) and those aged 18 to 34 years (32.2%) were significantly more likely to say that they did not know how long mothers should breastfeed their babies.
- Of those specifying a length of time that mothers should breastfeed, almost half (43.8%) said 7 to 12 months and 30.8% said six months.
- A third of WA adults (36.4%) thought it was important for babies to be exclusively breastfed for 6 months.
- More than half of WA adults (53.3%) thought it was important for babies to be exclusively breastfed for less than 6 months.
- 'Immunity' (53.0%) and 'vitamins and minerals or nutrition' (52.8%) were the most frequently identified benefits of breastfeeding for the baby.
- The majority identified 'bonding/security/love/emotion' (70.9%) and 'weight loss/getting back to pre-pregnancy weight' (23.9%) as the benefits of breastfeeding for the mother.
- The main perceived difficulties preventing women from breastfeeding for at least six months were 'the need to return to work' (42.1%), 'poor breast milk supply' (30.1%), and 'problems with breast feeding' (28.1%).

## Food safety

- A majority of WA adults (63.2%) said they 'never' use an Esky to transport food.
- Around half of all adults (46.6%) said they had a thermometer in their main refrigerator and 52.7% correctly identified 5 ° Celsius as the maximum safe temperature for a refrigerator.
- One in ten WA adults (10.2%) had experienced vomiting or diarrhoea in the past six months that they suspected was due to food poisoning.
- Almost one quarter (22.8%) of those who suspected they had food poisoning had it confirmed by a nurse or doctor.

## Concerns related to food supply

### Food composition and portion size

- Most WA adults (87.5%) indicated they were 'quite concerned' or 'very concerned' about the amount of added sugar in food.
- Three quarters were also 'quite concerned' or 'very concerned' about the amount of salt (72.6%) and fat (72.8%) in food and increasing portion sizes (68.6%).
- Females were significantly more likely to be 'quite concerned' or 'very concerned' about all these issues than males.

### Food access and quality

- More than eight in ten WA adults were 'quite concerned' or 'very concerned' about the sale of high caffeine drinks to children up to 12 years old (84.7%).
- Around eight in ten were 'quite concerned' or 'very concerned' about the effect of the environment on the future of food (79.0%).
- More than two thirds of adults (68.6%) were 'quite concerned' or 'very concerned' about the location of fast food outlets near schools.
- Almost two thirds of the population (61.1%) were 'quite concerned' or 'very concerned' about the health effects of genetically modified foods.

## **Making healthy eating easier**

### **Perceived enablers of healthy eating**

- More than 80% of WA adults agreed that the following factors would make it easier for people and their families to eat a healthy diet:
  - detailed and easy to understand information on food labels (89.4%)
  - cheaper healthier foods (87.4%)
  - if all unhealthy foods had a coloured symbol on the label (84.6%)
  - knowing quicker ways of preparing healthier foods (82.1%)
  - if you could buy more healthy food snacks (80.9%)
  - if children were not exposed to advertising and promotion of unhealthy foods and drinks (80.8%).

### **Food affordability**

- One in fifteen WA adults (6.5%) reported that someone in their household had eaten less than they should because they couldn't afford enough food in the past 12 months.

### **Access to healthy foods**

- Most WA adults (86.2%) agreed that a large selection of fruits and vegetables was available in their neighbourhood.
- Adults living outside the Perth metropolitan area were significantly less likely than those living in the Perth metropolitan area to 'strongly agree' there is a large selection of fruits and vegetables available (42.2% compared with 56.4%).
- One third (34.1%) 'disagreed' and 15.9% 'strongly disagreed' that a large selection of healthy take-away foods was available in their neighbourhood.

### **Meals purchased away from home**

- The majority of WA adults (70.0%) did not purchase a meal from a food outlet on the day prior to the survey. However, 16.1% bought lunch, 9.0% bought dinner and 1.8% bought breakfast.

### **Availability of healthy choices when buying a meal**

- Two thirds of WA adults (65.8%) said there were enough healthy choices available the last time they bought a meal.
- Half of WA adults (55.1%) said it was 'very important' to have healthy choices available when buying a meal.
- The majority of WA adults (64.3%) 'always' (29.6%) or 'often' (34.7%) try to choose healthy foods when buying a meal.
- Females (33.7%) were significantly more likely than males (25.8%) to 'always' try to choose healthy foods when buying a meal.
- Those aged 55 to 64 years (39.3%) were significantly more likely to 'always' try to choose healthy foods when buying a meal than those aged 35 to 44 years (26.8%) and those aged 18 to 34 years (25.8%).

## Food preparation skills

- Most adults (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 (75.0%) and knowing more about cooking (61.2%) would help them and their families to eat a healthier diet.

## Sources of information about nutrition in past 12 months

- Over one third of WA adults (39.3%) nominated the Internet or websites as their main source of nutrition and diet information.
- About two in ten nominated TV programs (19.1%), family and friends (17.8%), magazine articles (17.7%) and television advertisements (16.8%) as their main source of nutrition information.

## Government food regulation or controls

- More than nine out of ten WA adults said that it was 'very' or 'quite' important for governments to control or regulate nutrition information (95.9%) and health rating on food labels (94.4%).
- Eight out of ten said it was 'quite' or 'very' important for governments to control or regulate food advertising (83.5%), environmentally friendly foods (82.5%) and genetically modified foods (79.2%).

## Government financial support of nutrition activities

### Support of activities to monitor food supply and consumption

- Around nine out of ten WA adults rated government financial support as 'very' or 'quite important' for:
  - monitoring the quality of the food supply (96.5%)
  - working with industry to increase availability of healthy foods (94.9%)
  - conducting research investigating what Western Australians are eating and how their diet is changing over time (90.7%).

### Support of activities to promote healthy eating

- Approximately nine out of ten WA adults rated government financial support as 'very' or 'quite important' for:
  - supporting schools to provide nutrition information and programs (97.3%)
  - providing nutrition publications for the general public (89.0%)
  - advertising campaigns to promote healthy eating (88.6%) and healthy weight (87.7%) to the public.

## Priority of potential government community education program topics

- The five highest ranked potential community education program topics were:
  - sugar (59.3%)
  - weight control (49.3%)
  - fat (41.9%)
  - fruit and vegetables (40.4%)
  - bread and cereals (9.0%).
- Some significant gender variations in priority topics were:
  - males (49.8%) gave higher priority to fat education than females (33.7%)
  - females (47.4%) gave higher priority to fruit and vegetable education than males (33.7%)

# 1.0 Introduction

Poor diet, overweight and obesity are key modifiable risk factors for most preventable chronic diseases. Understanding 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 behaviours and intentions related to dietary patterns 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 policy, planning and initiatives that promote the National Health and Medical Research Council's (NHMRC's) *Australian Dietary Guidelines*<sup>1</sup> (the Guidelines). The Guidelines provide advice about healthy food choices, based on the best available evidence. They 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 Guidelines. The survey 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 surveys were conducted in 1995, 1998, 2001, 2004, 2009, 2012 and 2015.

## 2.0 Methodology

### 2.1 Survey administration and sampling

The 2015 NMSS was conducted from July to September with a stratified random sample of adults aged 18 to 64 years drawn from the 2013 electronic White Pages for Western Australia by area of residence.

The survey was conducted using computer-assisted telephone interviews. The methodology was pilot tested with a small sample (n=38) not included in the final sample. 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 6505 was called up to 10 times to make 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 meeting the criteria for participation, the adult with the most recent birthday was selected for interview. No substitutes were permitted. After the initial contact, a further 10 call backs were made to conduct an interview. Response information is summarised in Table 1.

The survey questionnaire included 172 questions, with a mixture of set-option and open-ended questions. Food intake was assessed using brief questions about the food consumed on the day prior to the survey. Duration of the interview was 38 minutes on average. Interviews were conducted between 6pm and 9pm on Monday to Fridays and between 10am and 9pm on Saturdays and Sundays over an 11 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: **Survey response rates, WA NMSS 2015**

| <b>2015 Nutrition Monitoring Survey Response Rates</b>               | <b>n</b>    |
|--|-------------|
| <b>Original sample using electronic White Pages</b>                  | <b>6505</b> |
| Not connected  | 1819        |
| Business/fax/modem   | 186         |
| Out of scope (age or not owner of house)                             | 2056        |
| <b>Eligible sample</b>   | <b>2444</b> |
| No response after 10 recalls   | 965         |
| <b>Eligible households contacted</b>                                 | <b>1479</b> |
| Refusals, incapacitated or unable to respond                         | 193         |
| Non English speaking   | 34          |
| Respondent ill or unavailable  | 45          |
| Partial interview/termination  | 0           |
| <b>Completed interview</b>   | <b>1207</b> |
| Response Rate 1: Completed interview / Eligible sample               | 49.4%       |
| Response Rate 2: Completed interview / Eligible households contacted | 81.6%       |
| Response Rate 3: Completed / Completed + Refused                     | 86.2%       |

## 2.2 Weighting the data

The data were weighted for sample design and probability of selection in 2015. Post survey adjustments were made to compensate for under or over representation of gender, age groups or areas of residence using the 2014 Estimated Resident Population for WA aged 18 to 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 SAS Enterprise Guide version 5.1 (SAS Institute Inc., Cary, NC, 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 preferred methods as they collect all foods eaten and are less susceptible to systematic bias<sup>2</sup>. Brief screeners have been shown to be useful for monitoring and surveillance purposes and place a lower level of burden on the respondents. The method used in this survey was a brief screener relying on several questions, wherever possible using those questions administered in previous Nutrition Monitoring Surveys. The data is self-reported and therefore may be susceptible to social desirability bias (a person's tendency to 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. The survey was undertaken from July to September, therefore does not account for seasonal variation in 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, self-reports 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 some discretionary foods (for example, sugary soft drinks and diet soft drink) and water. The survey methodology (including specific questions and definition of serve 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 part of a surveillance system at the 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 and the following sub-groupings:

1. gender (male, female)
2. age (18 to 34 years, 35 to 44 years, 45 to 54 years, 55 to 64 years)
3. area of residence (metropolitan area, rest of WA).

Frequency distributions are also presented for the following groupings if statistically significant differences from the population distribution were found:

4. annual household income (up to \$60,000, >\$60,000)
5. household shopping responsibility (sole, shared).

Where relevant, and if significantly different from the population distribution, frequency distributions for BMI category (healthy weight, overweight, obese) are also presented.

Responses to each interview question are displayed as a percentage of the total number of individuals interviewed (n=1207). Unless listed as a separate response category, 'don't know' and 'refused' have been excluded from all analyses. The total number of respondents is noted in the top left hand cell of each table.

### 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 within which the true estimate would lie in 95 out of 100 events. 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.

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.

### 3.3 Using this report

This report has been generated to be used as a reference document and therefore contains little interpretative text. Statistically significant differences between population characteristics are noted in text, for example, age, gender, household income, area of residence, and responsibility for household shopping. The confidence intervals can be used to determine statistical significance if no text has been provided. Data are not reported for annual household income and responsibility for household shopping if these were not statistically significant.

# 4.0 Sample description

## 4.1 Demographics

The demographic profile of the sample who participated in the 2015 NMSS is shown in Tables 2 and 3. These tables provide the unweighted number and percentage in the base sample (N=1207) for selected demographic sub-groups.

Table 2: **Sample frequencies by gender, age, area of residence, country of birth and living arrangements, WA NMSS 2015**

| Sample description         | Unweighted N | %    |
|----------------------------|--------------|------|
| <b>Gender</b>              |              |      |
| Male                       | 404          | 33.5 |
| Female                     | 803          | 66.5 |
| <b>Total</b>               | <b>1207</b>  |      |
| <b>Age Group</b>           |              |      |
| 18 to 34 years             | 134          | 11.1 |
| 35 to 44 years             | 246          | 20.4 |
| 45 to 54 years             | 377          | 31.2 |
| 55 to 64 years             | 450          | 37.3 |
| <b>Total</b>               | <b>1207</b>  |      |
| <b>Area of residence</b>   |              |      |
| Perth Metro                | 540          | 44.7 |
| Rest of WA                 | 667          | 55.3 |
| <b>Total</b>               | <b>1207</b>  |      |
| <b>Country of birth</b>    |              |      |
| Born in Australia          | 855          | 70.8 |
| Born in UK/Ireland         | 153          | 12.7 |
| Born in other country      | 199          | 16.5 |
| <b>Total</b>               | <b>1207</b>  |      |
| <b>Living arrangements</b> |              |      |
| Adult(s) with children     | 610          | 50.8 |
| Adults but no children     | 458          | 38.1 |
| Adult living alone         | 133          | 11.1 |
| <b>Total</b>               | <b>1201*</b> |      |

\*Some didn't answer or said they didn't know. These non-respondents were not included.

Table 3: Sample frequencies by education, employment status, household income, social disadvantage (SEIFA) and saving ability, WA NMSS 2015

| Sample description                                 | Unweighted n | %    |
|--|--------------|------|
| <b>Education</b>                                   |              |      |
| Less than high school                              | 166          | 13.8 |
| High School Certificate                            | 132          | 11.0 |
| Trade/Certificate/Diploma                          | 497          | 41.4 |
| Tertiary   | 406          | 33.8 |
| <b>Total</b>                                       | <b>1201*</b> |      |
| <b>Employment status</b>                           |              |      |
| Employed   | 879          | 73.0 |
| Unemployed   | 41           | 3.4  |
| Home Duties  | 106          | 8.8  |
| Retired  | 122          | 10.1 |
| Other  | 56           | 4.7  |
| <b>Total</b>                                       | <b>1204*</b> |      |
| <b>Annual household income</b>                     |              |      |
| Up to \$60,000                                     | 255          | 21.1 |
| \$60,001–\$120,000                                 | 423          | 35.1 |
| Over \$120,000                                     | 383          | 31.7 |
| Don't know or refused                              | 146          | 12.1 |
| <b>Total</b>                                       | <b>1207</b>  | 5.0  |
| <b>SEIFA</b>                                       |              |      |
| SEIFA Quintile 1                                   | 60           | 5.0  |
| SEIFA Quintile 2                                   | 140          | 11.6 |
| SEIFA Quintile 3                                   | 166          | 13.8 |
| SEIFA Quintile 4                                   | 481          | 39.9 |
| SEIFA Quintile 5                                   | 360          | 29.8 |
| <b>Total</b>                                       | <b>1207</b>  |      |
| <b>Household money situation</b>                   |              |      |
| Not enough or just enough to get by until next pay | 181          | 15.6 |
| Have a bit of money left over to spend or save     | 316          | 27.2 |
| Have some money left each pay to save regularly    | 665          | 57.2 |
| <b>Total</b>                                       | <b>1162*</b> |      |

\*Some didn't answer or said they didn't know. These non-respondents were not included.

Note: Percentage values may not add to 100% due to rounding.

## 4.2 Household food responsibility

Respondents were asked if they took any responsibility for doing household food shopping or for choosing and preparing meals in their household (Tables 4 and 5).

- Females were significantly more likely than males to take sole responsibility for food shopping (59.7% compared with 23.1%).
- Respondents with an annual household income up to \$60,000 were significantly more likely than those on a higher income to have sole responsibility for food shopping (63.6% compared with 34.6%).

Table 4: **Responsibility for household food shopping, WA NMSS 2015**

| n=1205                                | No   |              | Sole responsibility |              | Shared responsibility |              |
|---------------------------------------|------|--------------|---------------------|--------------|-----------------------|--------------|
|                                       | %    | 95% CI       | %                   | 95% CI       | %                     | 95% CI       |
| <b>Persons</b>                        | 16.4 | (11.9, 21.0) | 41.0                | (36.1, 45.9) | 42.6                  | (37.5, 47.7) |
| Female                                | 7.9  | (2.9, 12.8)  | 59.7                | (53.5, 65.9) | 32.4                  | (26.8, 38.1) |
| Male                                  | 24.7 | (17.3, 32.0) | 23.1                | (16.5, 29.7) | 52.2                  | (44.1, 60.4) |
| <b>Age group</b>                      |      |              |                     |              |                       |              |
| 18 to 34 yrs                          | 24.5 | (14.5, 34.4) | 34.0                | (23.9, 44.1) | 41.6                  | (30.6, 52.5) |
| 35 to 44 yrs                          | 9.4  | (3.2, 15.6)  | 44.0                | (35.6, 52.4) | 46.6                  | (38.0, 55.3) |
| 45 to 55 yrs                          | 11.6 | (6.9, 16.4)  | 50.6                | (44.1, 57.2) | 37.7                  | (31.3, 44.1) |
| 55 to 64 yrs                          | 12.3 | (8.0, 16.6)  | 42.2                | (36.5, 47.9) | 45.6                  | (39.6, 51.5) |
| <b>Area of residence</b>              |      |              |                     |              |                       |              |
| Perth Metro                           | 18.1 | (12.5, 23.7) | 41.8                | (35.7, 47.8) | 40.1                  | (33.8, 46.4) |
| Rest of WA                            | 10.2 | (6.2, 14.3)  | 38.0                | (33.0, 43.1) | 51.7                  | (46.1, 57.3) |
| <b>Annual household income n=1061</b> |      |              |                     |              |                       |              |
| Up to \$60,000                        | 5.3  | (0.3, 10.3)  | 63.6                | (52.3, 74.8) | 31.1                  | (20.1, 42.1) |
| \$60,000 and over                     | 18.7 | (12.9, 24.6) | 34.6                | (29.0, 40.3) | 46.6                  | (40.3, 52.9) |

Choosing and preparing meals for the household was more likely to be a shared (51.5%) than a sole (39.1%) responsibility (Table 5).

- Females were significantly more likely than males to report having sole responsibility for choosing and preparing meals in the household (56.1% compared with 22.9%).
- Males were significantly more likely to report having no (14.2%) or shared (62.9%) responsibility for choosing and preparing meals than females (4.3% and 39.7% respectively).
- WA adults with an annual household income up to \$60,000 were significantly more likely than those on a higher income to have sole responsibility for choosing and preparing meals (53.0% compared with 34.5%).

Table 5: Responsibility for choosing and preparing household meals, WA NMSS 2015

| n=1205                                | No   |             | Sole responsibility |              | Shared responsibility |              |
|---------------------------------------|------|-------------|---------------------|--------------|-----------------------|--------------|
|                                       | %    | 95% CI      | %                   | 95% CI       | %                     | 95% CI       |
| <b>Persons</b>                        | 9.3  | (6.0, 12.6) | 39.1                | (34.3, 43.9) | 51.5                  | (46.4, 56.7) |
| Female                                | 4.3  | (0.6, 7.9)  | 56.1                | (49.8, 62.3) | 39.7                  | (33.5, 45.8) |
| Male                                  | 14.2 | (8.8, 19.6) | 22.9                | (16.3, 29.5) | 62.9                  | (55.2, 70.6) |
| <b>Age group</b>                      |      |             |                     |              |                       |              |
| 18 to 34 yrs                          | 11.8 | (4.6, 19.0) | 30.7                | (21.0, 40.5) | 57.5                  | (46.7, 68.2) |
| 35 to 44 yrs                          | 6.3  | (1.1, 11.6) | 43.2                | (34.7, 51.6) | 50.5                  | (41.9, 59.2) |
| 45 to 55 yrs                          | 6.0  | (2.4, 9.7)  | 48.0                | (41.5, 54.5) | 46.0                  | (39.4, 52.5) |
| 55- to 4 yrs                          | 11.4 | (7.2, 15.6) | 43.1                | (37.3, 48.8) | 45.5                  | (39.6, 51.5) |
| <b>Area of residence</b>              |      |             |                     |              |                       |              |
| Perth Metro                           | 10.0 | (5.9, 14.1) | 39.6                | (33.7, 45.5) | 50.5                  | (44.1, 56.8) |
| Rest of WA                            | 7.0  | (4.0, 10.0) | 37.4                | (32.3, 42.4) | 55.6                  | (50.1, 61.1) |
| <b>Annual household income n=1061</b> |      |             |                     |              |                       |              |
| Up to \$60,000                        | 4.9  | (0.1, 9.8)  | 53.0                | (41.5, 64.5) | 42.1                  | (30.4, 53.7) |
| \$60,000 and over                     | 9.4  | (5.5, 13.3) | 34.5                | (28.9, 40.2) | 56.1                  | (49.9, 62.2) |

# 5.0 Results

## 5.1 Attitudes and beliefs related to diet and health

Attitudes and beliefs are recognised precursors of dietary and other health behaviours; therefore they provide evidence to inform health promotion efforts. The NMSS includes questions that aim to assess population beliefs about the effects of diet on health, perceived problems with the average Australian diet and attitudes towards health aspects of food and eating a healthy diet.

### 5.1.1 Major problems with the average Australian diet

Respondents were asked what they think are the major problems with the average Australian diet. Up to five responses were allowed (Table 6). The four highest ranking concerns were:

- too much fast food/junk food (48.6%)
- too much sugar and sweet things (chocolates/confectionery/cakes/lollies) (34.3%)
- too much fat or wrong sorts of fat (saturated fats) (28.4%)
- too much processed food/additives (18.6%).

Table 6: **Perceived major problems with the Australian diet, WA NMSS 2015**

| n= 1207  | % 95% CI          |
|--|-------------------|
| Too much fast / junk food  | 48.6 (43.4, 53.7) |
| Too much sugar / sweet things / chocolates / confectionery / cakes / lollies | 34.3 (29.5, 39.1) |
| Too much fat / wrong sorts of fat / saturated fats                           | 28.4 (23.8, 33.0) |
| Too much processed food / additives  | 18.6 (14.8, 22.5) |
| Not eating a balanced diet / not eating wide enough variety of foods         | 14.4 (10.5, 18.2) |
| No time to eat/cook properly / too lazy to cook / rely on pre-prepared foods | 13.2 (9.8, 16.6)  |
| Not enough fruit / vegies / salads   | 12.0 (9.0, 14.9)  |
| Too much alcohol / beer  | 9.7 (6.3, 13.0)   |
| Too much salt  | 8.3 (5.8, 10.9)   |
| Buying healthy food is too expensive   | 6.0 (3.4, 8.7)    |
| Portions are too large   | 5.9 (3.9, 7.9)    |
| Nothing / none / no problems   | 3.2 (1.0, 5.5)    |
| Too many soft drinks / sugary drinks   | 3.0 (1.3, 4.7)    |
| Don't know / unsure  | 1.2 (0.3, 2.2)    |

Note: Respondents allowed up to five answers. Total will not equal 100%.

### 5.1.2 Health conditions associated with diet and overweight

Respondents were asked to name health conditions they thought were associated with specific dietary 'problems'. Multiple responses were allowed; the top five health conditions for each dietary problem are shown in Table 7.

Except for problems associated with 'eating a lot of foods and drinks high in sugar or added sugar', less than 50% of WA adults could name more than one health condition associated with each diet problem. A lack of knowledge was particularly evident for the health effects of 'eating a lot of foods high in salt or added salt', 'not eating enough fruit and vegetables' and 'not eating enough bread and cereals'.

Table 7: Health conditions perceived as being associated with diet ‘problems’, WA NMSS 2015

| Diet problem   | Health problem                                    | %    | 95% CI       |
|--|---|------|--------------|
| <b>Too much fat or fatty foods</b>                           | Heart disease / heart attack / heart problems     | 73.8 | (69.2, 78.4) |
|  | Diabetes / high blood sugar /sugar problems       | 45.9 | (40.8, 51.0) |
|  | Obesity / gaining weight / overweight             | 41.8 | (36.7, 46.9) |
|  | High cholesterol                                  | 22.1 | (18.1, 26.0) |
|  | High blood pressure / hypertension                | 21.6 | (17.2, 26.0) |
|  | Doesn't cause health problems                     | 2.0  | (1.0, 3.1)   |
|  | Don't know  | 1.6  | (0.3, 2.9)   |
| <b>A lot of food and drinks high in sugar or added sugar</b> | Diabetes / blood sugar problems                   | 71.7 | (67.0, 76.3) |
|  | Weight gain / overweight / obesity                | 58.8 | (53.8, 63.8) |
|  | Heart disease / heart problems                    | 33.8 | (29.0, 38.5) |
|  | Dental caries / tooth decay                       | 13.3 | (10.2, 16.5) |
|  | High blood pressure                               | 12.9 | (9.1, 16.8)  |
|  | Don't know  | 1.8  | (0.5, 3.2)   |
|  | Doesn't cause health problems                     | 0.4  | (0.0, 0.8)   |
| <b>Being overweight</b>                                      | Heart disease / heart attack / heart problems     | 67.8 | (62.6, 73.0) |
|  | Joint problems / knee problems                    | 33.8 | (28.7, 38.9) |
|  | Diabetes  | 30.3 | (25.7, 34.9) |
|  | High blood pressure / hypertension                | 26.1 | (21.7, 30.5) |
|  | Obesity   | 24.1 | (19.5, 28.6) |
|  | Don't know  | 1.6  | (0.3, 3.0)   |
|  | Doesn't cause health problems                     | 0.1  | (0.0, 0.3)   |
| <b>A lot of food high in salt or added salt</b>              | High blood pressure / hypertension                | 48.4 | (43.2, 53.5) |
|  | Heart disease / heart problems                    | 48.1 | (43.0, 53.2) |
|  | Don't know  | 13.5 | (9.6, 17.3)  |
|  | Kidney disease / problems                         | 10.1 | (7.2, 13.0)  |
|  | Other   | 7.3  | (4.1, 10.4)  |
|  | Stroke  | 6.8  | (4.6, 9.1)   |
|  | Doesn't cause health problems                     | 3.0  | (0.8, 5.1)   |
| <b>Not eating enough fruit and vegetables</b>                | Vitamin, mineral deficiencies / lack of nutrition | 36.0 | (31.0, 41.1) |
|  | Constipation / poor irregular bowel movement      | 17.1 | (13.2, 20.9) |
|  | Digestion problems / acid reflux                  | 16.2 | (11.9, 20.5) |
|  | Poor immunity / prone to colds/flu/ low nutrition | 15.7 | (12.2, 19.2) |
|  | Heart disease / heart attack / heart problems     | 14.9 | (11.7, 18.1) |
|  | Obesity/gaining weight/overweight                 | 14.9 | (11.0, 18.9) |
|  | Don't know  | 9.0  | (6.0, 12.0)  |
|  | Doesn't cause health problems                     | 2.0  | (1.0, 3.1)   |
| <b>Not eating enough bread and cereal foods</b>              | Lethargy / fatigue / low stamina / run down       | 21.3 | (16.6, 26.1) |
|  | Constipation / poor irregular bowel movements     | 20.3 | (16.0, 24.7) |
|  | Don't know  | 19.7 | (15.8, 23.6) |
|  | Not enough fibre / roughage                       | 18.6 | (14.2, 23.0) |
|  | Doesn't cause health problems                     | 17.1 | (13.6, 20.5) |

Respondents allowed up to five answers. Total will not equal 100%

### 5.1.3 Attitude to health aspects of food and diet

Respondents were asked to choose one of three statements which best described how they feel about the health aspects of food and their diet (Table 8).

Overall, responses were almost equally divided between those who claimed to ‘pay a lot of attention to the health aspects of their food to achieve as healthy a diet as possible’ (45.8%) and those who said they ‘took a bit of notice of their food to achieve a fairly good diet’ (46.3%).

- Females were significantly more likely than males to pay a lot of attention to the health aspects of the food they eat (55.9% compared with 36.1%).
- Those aged 55 to 64 years were significantly more likely to claim to pay a lot of attention to the health aspects of their food than those aged 18 to 34 years (56.7% compared with 38.9%).

Table 8: Feelings about health aspects of food and diet, WA NMSS 2015

| n=1206                   | I pay a lot of attention to the health aspect of the food I eat to make sure my diet is as healthy as possible |              | I take a bit of notice of the health aspect of the food I eat to make sure I have a fairly good diet |              | I don't really think much about the health aspect of the food I eat |             |
|--------------------------|--|--------------|--|--------------|---|-------------|
|                          | %  | 95% CI       | %  | 95% CI       | %   | 95% CI      |
| <b>Persons</b>           | 45.8   | (40.8, 50.9) | 46.3   | (41.1, 51.4) | 7.9   | (4.6, 11.2) |
| Female                   | 55.9   | (49.7, 62.1) | 41.0   | (34.8, 47.2) | 3.1   | (1.1, 5.1)  |
| Male                     | 36.1   | (28.5, 43.7) | 51.3   | (43.2, 59.5) | 12.6  | (6.6, 18.5) |
| <b>Age group</b>         |  |              |  |              |   |             |
| 18 to 34 yrs             | 38.9   | (28.3, 49.5) | 48.9   | (37.8, 60.0) | 12.2  | (4.8, 19.6) |
| 35 to 44 yrs             | 49.5   | (40.9, 58.1) | 44.8   | (36.2, 53.5) | 5.6   | (1.0, 10.3) |
| 45 to 55 yrs             | 46.4   | (39.9, 52.9) | 48.8   | (42.2, 55.4) | 4.8   | (1.6, 8.0)  |
| 55 to 64 yrs             | 56.7   | (50.8, 62.6) | 38.8   | (32.9, 44.6) | 4.5   | (2.3, 6.7)  |
| <b>Area of residence</b> |  |              |  |              |   |             |
| Perth Metro              | 45.7   | (39.4, 51.9) | 47.1   | (40.8, 53.5) | 7.2   | (3.2, 11.2) |
| Rest of WA               | 46.4   | (40.8, 51.9) | 43.0   | (37.4, 48.7) | 10.6  | (6.2, 15.0) |

## 5.2 Behaviours and attitudes related to the Australian Dietary Guidelines

The Guidelines, developed by the National Health and Medical Research Council, make recommendations about the types and amounts of foods, food groups and dietary patterns required to promote health and wellbeing and reduce the risk of diet-related disease (see Appendix 1). They 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 results in this section are presented in relation to each of the Guidelines.

### 5.2.1 Achieve and maintain a healthy weight

The first 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.’ The NMSS measures the weight status of the population based on Body Mass Index (BMI) calculated from self-reported height and weight measurements, as well as actions taken to change weight.



### 5.2.1.1 Body Mass Index

BMI, based on corrected estimates for overestimation of height and underestimation of weight<sup>3</sup>, was calculated and used to categorise body weight using the World Health Organization classification system<sup>4</sup>:

| Body weight category | BMI (kg/m <sup>2</sup> ) |
|----------------------|--------------------------|
| Underweight          | <18.5                    |
| Healthy weight       | 18.5 to 24.9             |
| Overweight           | 25.0 to 29.9             |
| Obese                | ≥30.0                    |
| Overweight and obese | ≥25.0.                   |

BMI data are presented for 94.6% of respondents. Exclusions were 11 pregnant women and 54 respondents who provided insufficient information to calculate BMI.

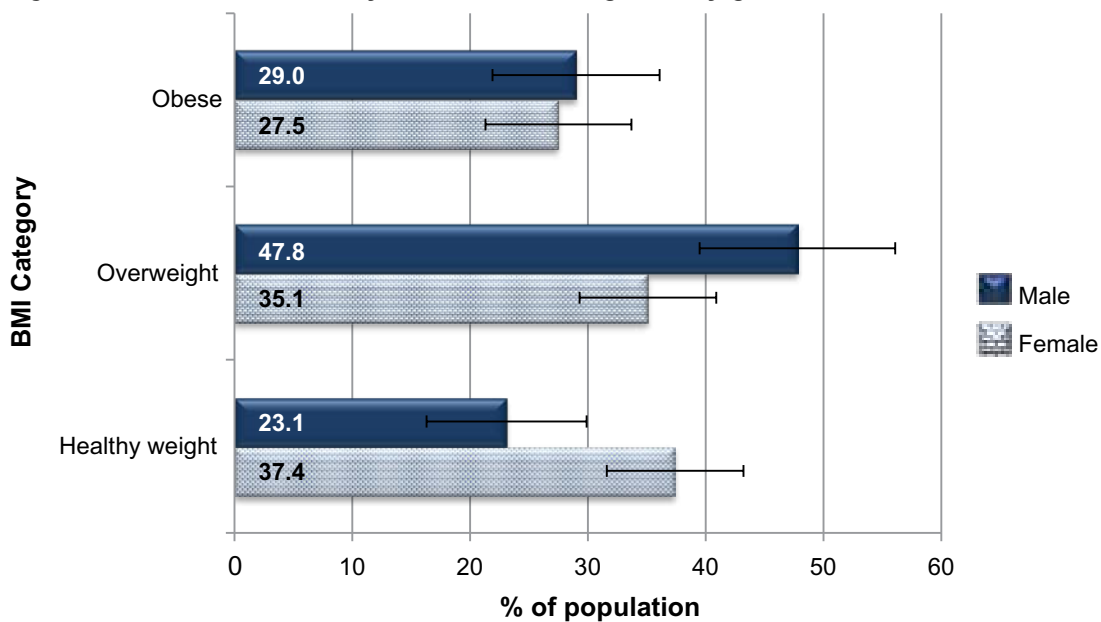
Only one respondent was classified as underweight, but as their BMI was just under healthy weight, they were placed within the 'healthy weight' group for further analysis. The distribution of BMI is shown in Table 9 and Figure 1.

- Three in ten WA adults (29.8%) were classified as healthy weight.
- Four in ten adults were classified as overweight (41.9%) and 28.3% as obese.
- Females were significantly more likely to be classified as healthy weight than males (37.4% compared with 23.1%).
- Respondents with an annual household income up to \$60,000 were significantly less likely to be overweight than those with a higher annual household income (20.5% compared with 47.6%).

Table 9: Distribution of Body Mass Index categories, WA NMSS 2015

| n=1142                                | Healthy weight |              | Overweight |              | Obese |              |
|---------------------------------------|----------------|--------------|------------|--------------|-------|--------------|
|                                       | %              | 95% CI       | %          | 95% CI       | %     | 95% CI       |
| <b>Persons</b>                        | 29.8           | (25.0, 34.6) | 41.9       | (36.5, 47.2) | 28.3  | (23.8, 32.9) |
| Female                                | 37.4           | (31.2, 43.6) | 35.1       | (29.2, 40.9) | 27.5  | (21.7, 33.4) |
| Male                                  | 23.1           | (16.0, 30.2) | 47.8       | (39.5, 56.2) | 29.0  | (22.2, 35.9) |
| <b>Age Group</b>                      |                |              |            |              |       |              |
| 18 to 34 yrs                          | 35.7           | (25.0, 46.5) | 42.6       | (30.9, 54.3) | 21.7  | (12.3, 31.1) |
| 35 to 44 yrs                          | 26.8           | (19.2, 34.4) | 43.5       | (34.4, 52.5) | 29.7  | (21.5, 38.0) |
| 45 to 54 yrs                          | 26.6           | (20.9, 32.3) | 36.6       | (30.3, 42.8) | 36.8  | (30.2, 43.5) |
| 55 to 64 yrs                          | 24.0           | (19.0, 29.0) | 44.6       | (38.6, 50.6) | 31.4  | (25.9, 37.0) |
| <b>Area of Residence</b>              |                |              |            |              |       |              |
| Perth Metro                           | 31.2           | (25.3, 37.1) | 42.1       | (35.6, 48.6) | 26.7  | (21.2, 32.3) |
| Rest of WA                            | 24.6           | (19.7, 29.5) | 40.9       | (35.0, 46.8) | 34.5  | (29.1, 39.9) |
| <b>Annual household income n=1009</b> |                |              |            |              |       |              |
| Up to \$60,000                        | 36.5           | (25.7, 47.2) | 20.5       | (13.4, 27.6) | 43.1  | (30.9, 55.2) |
| \$60,000 and over                     | 26.2           | (20.6, 31.9) | 47.6       | (41.1, 54.1) | 26.1  | (21.1, 31.1) |

Figure 1: Distribution of Body Mass Index categories by gender, WA NMSS 2015



### 5.2.1.2 Perception of current body weight

Respondents were given four options to describe their current body weight: 'underweight', 'about right', 'somewhat overweight' or 'very overweight' (Table 10).

- Just under half of WA adults (48.7%) said their current weight was 'about right', 39.7% said they were 'somewhat overweight' and only 7.3% said they were 'very overweight'.
- Females were significantly more likely to say they were 'very overweight' than males (10.8% compared with 4.1%).
- Adults aged 18 to 34 years were significantly more likely to say they were 'about right' than those aged 45 to 54 years or 55 to 64 years (58.3% compared with 39.4% and 40.3%).
- Adults in the 18 to 34 years age group (28.3%) were significantly less likely to say they were 'somewhat overweight' than those 45 to 54 years (49.9%) or 55 to 64 years (51.0%).

Table 10: Perception of current body weight, WA NMSS 2015

| n=1195                   | Underweight |             | About right |              | Somewhat overweight |              | Very Overweight |             |
|--------------------------|-------------|-------------|-------------|--------------|---------------------|--------------|-----------------|-------------|
|                          | %           | 95% CI      | %           | 95% CI       | %                   | 95% CI       | %               | 95% CI      |
| <b>Persons</b>           | 4.2         | (1.9, 6.5)  | 48.7        | (43.5, 53.9) | 39.7                | (34.9, 44.6) | 7.3             | (5.0, 9.6)  |
| Female                   | 3.6         | (0.6, 6.7)  | 44.0        | (37.9, 50.1) | 41.5                | (35.5, 47.6) | 10.8            | (6.8, 14.8) |
| Male                     | 4.7         | (1.4, 8.1)  | 53.1        | (45.1, 61.1) | 38.1                | (30.7, 45.5) | 4.1             | (1.9, 6.4)  |
| <b>Age Group</b>         |             |             |             |              |                     |              |                 |             |
| 18 to 34 yrs             | 7.5         | (2.1, 12.8) | 58.3        | (47.4, 69.3) | 28.3                | (18.3, 38.2) | 5.9             | (1.3, 10.6) |
| 35 to 44 yrs             | 2.9         | (0.0, 5.8)  | 47.0        | (38.3, 55.7) | 41.8                | (33.2, 50.4) | 8.5             | (3.8, 13.1) |
| 45 to 54 yrs             | 1.7         | (0.0, 3.4)  | 39.4        | (33.1, 45.7) | 49.9                | (43.4, 56.5) | 9.0             | (5.2, 12.8) |
| 55 to 64 yrs             | 1.6         | (0.2, 3.1)  | 40.3        | (34.5, 46.1) | 51.0                | (45.1, 56.9) | 7.0             | (4.5, 9.5)  |
| <b>Area of residence</b> |             |             |             |              |                     |              |                 |             |
| Perth Metro              | 4.6         | (1.8, 7.4)  | 49.0        | (42.6, 55.4) | 39.2                | (33.3, 45.2) | 7.1             | (4.3, 10.0) |
| Rest of WA               | 2.7         | (0.6, 4.7)  | 47.7        | (41.9, 53.5) | 41.5                | (36.1, 47.0) | 8.1             | (5.7, 10.5) |

### 5.2.1.3 Perception of current body 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 (Table 11).

Table 11: BMI category by perceived body weight, WA NMSS 2015

| n=1142              | Underweight     | About right       | Somewhat overweight | Very Overweight   |
|---------------------|-----------------|-------------------|---------------------|-------------------|
| <b>BMI Category</b> |                 |                   |                     |                   |
|                     | % 95% CI        | % 95% CI          | % 95% CI            | % 95% CI          |
| Healthy weight      | 9.9 (3.8, 15.9) | 83.5 (76.8, 90.2) | 6.6 (3.3, 9.9)      | 0.0               |
| Overweight          | 0.6 (0.0, 1.3)  | 51.3 (42.7, 60.0) | 47.3 (38.7, 55.9)   | 0.8 (0.1, 1.5)    |
| Obese               | 0.1 (0.0, 0.3)  | 9.8 (2.4, 17.2)   | 65.3 (56.3, 74.4)   | 24.8 (17.2, 32.3) |

- Most adults (83.5%) who were a healthy weight said their weight was 'about right'.
- Half (51.3%) of those who were classified as overweight saw themselves as 'about the right weight'.
- Two out of three (65.3%) respondents who were obese said they were 'somewhat overweight'.
- Only a quarter (24.8%) of respondents who were obese said they were 'very overweight'.

### 5.2.1.4 Intentions related to weight

Respondents were asked to choose which of five statements best described their current thinking and behaviour regarding their weight (Table 12).

- About half of WA adults (46.2%) were 'not thinking about changing their weight'.
- About one third (34.2%) were 'currently trying to lose weight'.
- Those classified as obese were significantly more likely than those of other BMI categories to be 'trying to lose weight' (57.2% compared with 38.8% of overweight and 9.5% healthy weight).
- Those who were classified as healthy weight were significantly more likely than those of other BMI categories to be 'not thinking about trying to lose/gain weight'.

Table 12: Intentions related to weight, WA adults, WA NMSS 2015

| n=1205                     | Trying to lose weight |              | Thinking about trying to lose weight |              | Not thinking about trying to lose/gain weight |              | Thinking about trying to gain Weight |              | Trying to gain weight |             |
|----------------------------|-----------------------|--------------|--------------------------------------|--------------|---|--------------|--------------------------------------|--------------|-----------------------|-------------|
|                            | %                     | 95% CI       | %                                    | 95% CI       | %   | 95% CI       | %                                    | 95% CI       | %                     | 95% CI      |
| <b>Persons</b>             | 34.2                  | (29.6, 38.9) | 13.4                                 | (10.3, 16.6) | 46.2  | (41.0, 51.4) | 46.2                                 | (41.0, 51.4) | 3.8                   | (1.8, 5.7)  |
| Female                     | 39.2                  | (33.3, 45.1) | 13.4                                 | (9.6, 17.1)  | 44.3  | (38.0, 50.5) | 0.8                                  | (0.0, 2.2)   | 2.4                   | (0.6, 4.1)  |
| Male                       | 29.5                  | (22.6, 36.5) | 13.5                                 | (8.6, 18.5)  | 48.0  | (39.8, 56.2) | 3.9                                  | (0.8, 7.1)   | 5.1                   | (1.6, 8.6)  |
| <b>Age Group</b>           |                       |              |                                      |              |   |              |                                      |              |                       |             |
| 18 to 34 yrs               | 24.9                  | (15.5, 34.2) | 8.7                                  | (2.7, 14.8)  | 53.8  | (42.9, 64.8) | 5.3                                  | (1.0, 9.6)   | 7.3                   | (2.5, 12.1) |
| 35 to 44 yrs               | 42.5                  | (34.0, 51.0) | 15.6                                 | (9.3, 22.0)  | 39.9  | (31.4, 48.4) | 0.2                                  | (0.0, 0.7)   | 1.7                   | (0.0, 3.5)  |
| 45 to 54 yrs               | 40.7                  | (34.2, 47.1) | 18.4                                 | (13.3, 23.4) | 39.6  | (33.2, 46.0) | 0.8                                  | (0.0, 2.3)   | 0.6                   | (0.0, 1.3)  |
| 55 to 64 yrs               | 37.8                  | (32.1, 43.5) | 15.8                                 | (11.4, 20.1) | 44.2  | (38.3, 50.1) | 0.4                                  | (0.0, 1.1)   | 1.8                   | (0.2, 3.4)  |
| <b>Area of Residence</b>   |                       |              |                                      |              |   |              |                                      |              |                       |             |
| Perth Metro                | 34.7                  | (29.0, 40.4) | 12.3                                 | (8.5, 16.1)  | 46.4  | (39.9, 52.8) | 2.8                                  | (0.6, 5.0)   | 3.8                   | (1.4, 6.3)  |
| Rest of WA                 | 32.4                  | (27.5, 37.3) | 17.5                                 | (13.6, 21.5) | 45.5  | (39.7, 51.2) | 1.1                                  | (0.0, 2.6)   | 3.5                   | (1.0, 6.0)  |
| <b>BMI category n=1141</b> |                       |              |                                      |              |   |              |                                      |              |                       |             |
| Healthy weight             | 9.5                   | (5.1, 13.8)  | 4.0                                  | (2.0, 5.9)   | 72.0  | (63.8, 80.3) | 7.8                                  | (1.8, 13.8)  | 6.7                   | (1.7, 11.8) |
| Overweight                 | 38.8                  | (30.5, 47.2) | 13.1                                 | (8.4, 17.9)  | 44.2  | (35.4, 53.0) | 0.1                                  | (0.0, 0.2)   | 3.8                   | (0.4, 7.1)  |
| Obese                      | 57.2                  | (47.8, 66.6) | 24.7                                 | (16.6, 32.9) | 16.4  | (7.7, 25.1)  | 0.8                                  | (0.0, 2.0)   | 0.9                   | (0.0, 1.9)  |

### 5.2.1.5 Attempts to change weight in the past 12 months

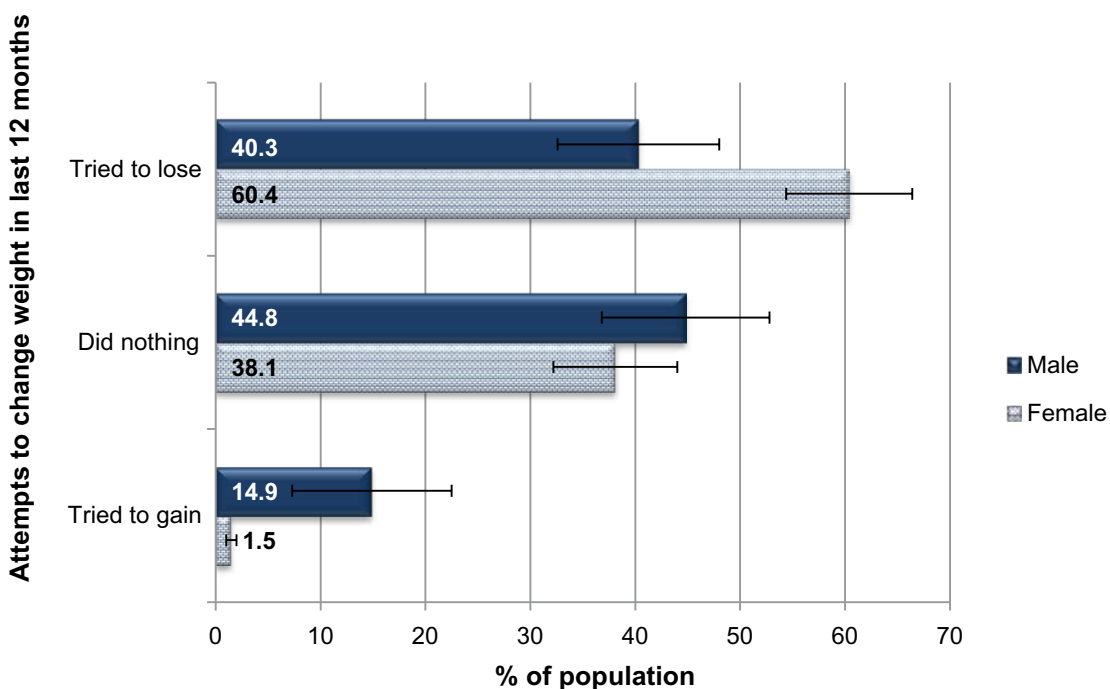
Respondents were asked if they had been trying to lose weight, gain weight or neither in the past 12 months (Table 13, Figure 2).

- Half of WA adults (49.9%) said that they had tried to lose weight in the past 12 months, with females significantly more likely to say that they had tried to lose weight than males (60.4% compared with 40.3%).
- Most of those obese (76.3%), half of those overweight (51.6%) and one quarter of those of healthy weight (25.1%) had tried to lose weight in the past 12 months.
- Few adults (8.5%) had tried to gain weight in the past 12 months; those who did were significantly more likely to be males (14.9% compared with 1.5% females) and aged 18 to 34 years (18.9% compared with 2% or less in other age groups).

Table 13: Attempts to change weight in the past 12 months, WA NMSS

| n=1196                     | Tried to gain |             | Did nothing |              | Tried to lose |              |
|----------------------------|---------------|-------------|-------------|--------------|---------------|--------------|
|                            | %             | 95% CI      | %           | 95% CI       | %             | 95% CI       |
| <b>Persons</b>             | 8.5           | (4.3, 12.6) | 41.6        | (36.6, 46.7) | 49.9          | (44.7, 55.1) |
| Female                     | 1.5           | (0.5, 2.5)  | 38.1        | (32.2, 44.1) | 60.4          | (54.4, 66.3) |
| Male                       | 14.9          | (7.3, 22.5) | 44.8        | (36.8, 52.8) | 40.3          | (32.6, 48.0) |
| <b>Age Group</b>           |               |             |             |              |               |              |
| 18 to 34 yrs               | 18.9          | (9.1, 28.8) | 39.0        | (28.1, 50.0) | 42.0          | (31.0, 53.1) |
| 35 to 44 yrs               | 1.5           | (0.0, 3.0)  | 41.3        | (32.7, 49.9) | 57.2          | (48.6, 65.8) |
| 45 to 54 yrs               | 2.0           | (0.2, 3.8)  | 44.2        | (37.7, 50.7) | 53.8          | (47.3, 60.3) |
| 55 to 64 yrs               | 1.3           | (0.0, 2.7)  | 44.8        | (38.9, 50.7) | 53.9          | (48.0, 59.8) |
| <b>Area of Residence</b>   |               |             |             |              |               |              |
| Perth Metro                | 9.9           | (4.7, 15.1) | 39.5        | (33.3, 45.7) | 50.6          | (44.2, 57.0) |
| Rest of WA                 | 3.1           | (1.0, 5.1)  | 49.5        | (43.8, 55.3) | 47.4          | (41.7, 53.1) |
| <b>BMI category n=1142</b> |               |             |             |              |               |              |
| Healthy weight             | 16.3          | (7.4, 25.2) | 58.5        | (48.9, 68.2) | 25.1          | (17.2, 33.1) |
| Overweight                 | 3.4           | (0.0, 13.1) | 42.0        | (33.4, 50.6) | 51.6          | (42.8, 60.3) |
| Obese                      | 3.4           | (0.0, 10.6) | 19.9        | (13.7, 26.1) | 76.3          | (68.1, 84.5) |

Figure 2: Attempts to change weight in the past 12 months by gender, WA NMSS 2015



### 5.2.1.6 Influences, steps taken and barriers to changing weight

Respondents attempting to change their weight were asked what influenced them to try to change and what steps they had taken. Up to five answers were allowed.

The top three reasons stated for those trying to change weight were to:

- improve health in general (29.3% (95% CI [24.8, 33.8]))
- improve fitness/short of breath/ tired/ sluggish (16.2% (95% CI [12.1, 20.3]))
- look better (11.6% (95% CI [7.8, 15.3])).

The top three steps taken by those trying to change weight were:

- more exercise/walking more/more activity (41.9% (95% CI [36.8, 47.0]))
- changed diet/eating habits/more activity (24.7% (95% CI [20.5, 29.0]))
- eat smaller portions/eat less food (12.1% (95% CI [9.2, 15.0])).

All respondents were asked what barriers made it difficult to control their weight. Up to five answers were allowed. The top three barriers for controlling weight for all adults were:

- no time to exercise (19.2% (95% CI [15.1, 23.3]))
- enjoyment of food/food helps me get through (12.6% (95% CI [9.1, 16.1]))
- shift work/long hours/work commitments (9.4% (95% CI [6.6, 12.1])).

About a quarter of WA adults (23.9% (95% CI [19.0, 28.4])) said nothing made it difficult for them to control their weight.

### 5.2.1.7 Perception of current weight compared with 12 months ago

Respondents were asked how their current weight compared with their weight 12 months ago (Table 14).

- One in three (34.1%) said they weighed less now than 12 months ago, while 20.9% said they now weighed more.
- Significantly more females (42.7%) than males (26.1%) said they currently weighed less than they did 12 months ago.
- Significantly more obese adults (48.0%) than healthy weight adults (27.4%) said they currently weighed less than they did 12 months ago.

Table 14: Perception of current weight compared with 12 months ago, WA NMSS 2015

| n=1193                     | Weigh more |              | Weigh about the same |              | Weigh less |              |
|----------------------------|------------|--------------|----------------------|--------------|------------|--------------|
|                            | %          | 95% CI       | %                    | 95% CI       | %          | 95% CI       |
| <b>Persons</b>             | 20.9       | (16.3, 25.4) | 45.1                 | (39.9, 50.2) | 34.1       | (29.3, 38.8) |
| Female                     | 17.4       | (13.0, 21.8) | 39.9                 | (34.2, 45.7) | 42.7       | (36.3, 49.0) |
| Male                       | 24.0       | (16.4, 31.7) | 49.8                 | (41.7, 58.0) | 26.1       | (19.8, 32.5) |
| <b>Age Group</b>           |            |              |                      |              |            |              |
| 18 to 34 yrs               | 26.7       | (16.4, 37.0) | 38.6                 | (27.4, 49.9) | 34.7       | (24.4, 45.0) |
| 35 to 44 yrs               | 17.0       | (10.8, 23.3) | 45.1                 | (36.4, 53.8) | 37.9       | (29.3, 46.4) |
| 45 to 54 yrs               | 15.9       | (11.3, 20.5) | 50.9                 | (44.3, 57.4) | 33.2       | (26.9, 39.5) |
| 55 to 64 yrs               | 18.5       | (13.9, 23.0) | 52.8                 | (46.9, 58.7) | 28.7       | (23.3, 34.1) |
| <b>Area of Residence</b>   |            |              |                      |              |            |              |
| Perth Metro                | 20.9       | (15.3, 26.5) | 44.3                 | (37.9, 50.6) | 34.8       | (28.9, 40.7) |
| Rest of WA                 | 20.7       | (15.9, 25.5) | 48.2                 | (42.4, 53.9) | 31.1       | (26.1, 36.2) |
| <b>BMI category n=1140</b> |            |              |                      |              |            |              |
| Healthy weight             | 19.6       | (10.9, 28.4) | 53.0                 | (43.3, 62.6) | 27.4       | (18.8, 36.1) |
| Overweight                 | 3.9        | (14.9, 30.4) | 45.8                 | (37.1, 54.5) | 31.5       | (23.8, 39.2) |
| Obese                      | 3.9        | (12.3, 27.4) | 32.1                 | (23.5, 40.7) | 48.0       | (38.9, 57.1) |

### 5.2.2 Eating a variety of nutritious foods

The second guideline advises people to ‘Enjoy a wide variety of nutritious foods from these five food groups every day’, namely:

- (i) fruit
- (ii) vegetables, legumes/beans
- (iii) grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties
- (iv) lean meats and poultry, fish, eggs, tofu, nuts, seeds, legumes/beans
- (v) milk, yoghurt, cheese and/or their alternatives, mostly reduced fat.

The second guideline also advises people to drink plenty of water.

*The Australian Guide to Healthy Eating* (Figure 3) is a pictorial representation of this guideline and demonstrates the proportion each food group should contribute to the diet.

Figure 3: Australian Guide to Healthy Eating



Source<sup>1</sup>: Australian Government. Eat for Health. Australian Dietary Guidelines, 2013, Page 10.

### 5.2.2.1 Fruit

The Guidelines recommend at least two serves of fruit per day for both males and females. This section provides 2015 survey results related to knowledge of the recommendations for fruit consumption, self-reported intake, intentions related to current intake and attempts to change intake.

#### Knowledge of daily recommended intake

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 a cup of cooked or canned fruit. Knowledge of the recommended number of serves of fruit per day is shown in Table 15 and Figure 4.

- Most WA adults (89.5%) identified two serves (63.0%) or more than two serves (26.5%) as the recommended amount of fruit per day.
- Females were significantly more likely than males to say two serves of fruit was the recommended daily amount (70.1% compared with 56.1%).
- The younger age groups were significantly more likely than the oldest age group to nominate two serves per day as the recommended amount (68.2% of those 18 to 34 years and 69.3% of those 35 to 44 years compared with 47.6% of those 55 to 64 years).



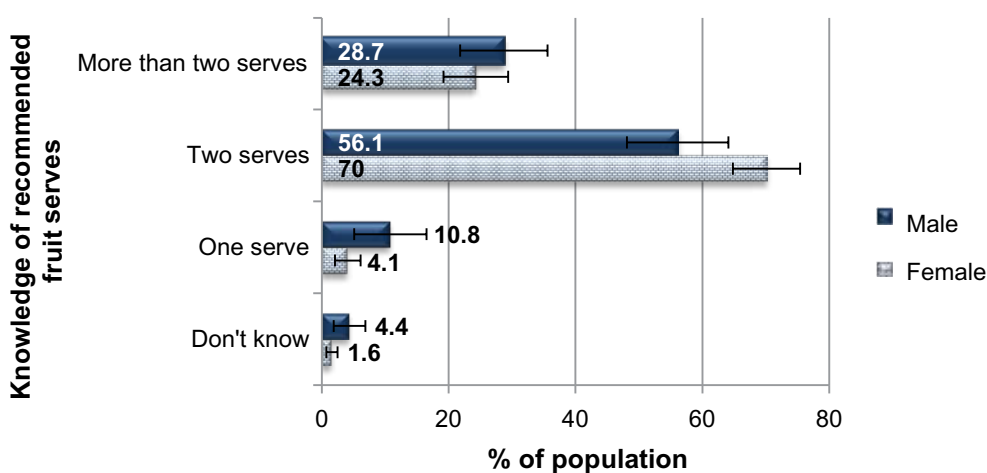
- Conversely, older adults were significantly more likely to nominate more than two serves per day as the recommended amount (38.3% of those 55 to 64 years compared with 21.0% of those less than 45 years).
- Those with the sole responsibility for shopping were significantly more likely than others to identify two serves per day as the recommended amount (69.7% compared with 52.1%).

Table 15: **Knowledge of recommended serves of fruit per day, WA NMSS 2015**

| n=1204                                    | Don't know |            | Up to one serve |             | Two serves |              | More than two serves |              |
|---|------------|------------|-----------------|-------------|------------|--------------|----------------------|--------------|
|   | %          | 95% CI     | %               | 95% CI      | %          | 95% CI       | %                    | 95% CI       |
| <b>Persons</b>                            | 3.0        | (1.7, 4.4) | 7.5             | (4.4, 10.6) | 63.0       | (58.1, 67.8) | 26.5                 | (22.2, 30.8) |
| Female                                    | 1.6        | (0.7, 2.5) | 4.1             | (2.1, 6.1)  | 70.1       | (64.8, 75.4) | 24.3                 | (19.2, 29.3) |
| Male                                      | 4.4        | (1.9, 6.9) | 10.8            | (5.1, 16.4) | 56.1       | (48.1, 64.1) | 28.7                 | (21.8, 35.6) |
| <b>Age Group</b>                          |            |            |                 |             |            |              |                      |              |
| 18 to 34 yrs                              | NA         |            | 9.1             | (2.1, 16.0) | 68.2       | (57.9, 78.5) | 21.1                 | (12.3, 29.9) |
| 35 to 44 yrs                              | NA         |            | 6.9             | (2.5, 11.4) | 69.3       | (61.0, 77.5) | 21.4                 | (14.0, 28.7) |
| 45 to 54 yrs                              | 3.4        | (0.6, 6.1) | 5.1             | (2.1, 8.0)  | 58.5       | (52.0, 65.1) | 33.1                 | (26.8, 39.3) |
| 55 to 64 yrs                              | 6.7        | (3.5, 9.9) | 7.4             | (4.3, 10.5) | 47.6       | (41.7, 53.5) | 38.3                 | (32.6, 44.0) |
| <b>Area of Residence</b>                  |            |            |                 |             |            |              |                      |              |
| Perth Metro                               | 3.0        | (1.4, 4.6) | 7.0             | (3.2, 10.7) | 64.7       | (58.8, 70.7) | 25.3                 | (20.1, 30.5) |
| Rest of WA                                | 3.1        | (1.4, 4.8) | 9.4             | (5.3, 13.6) | 56.3       | (50.6, 62.0) | 31.1                 | (26.0, 36.3) |
| <b>Responsibility for shopping n=1102</b> |            |            |                 |             |            |              |                      |              |
| Sole                                      | 2.2        | (0.8, 3.5) | 5.7             | (2.8, 8.6)  | 69.7       | (63.9, 75.6) | 22.4                 | (17.3, 27.5) |
| Shared                                    | 3.9        | (1.2, 6.6) | 9.3             | (3.0, 15.7) | 52.1       | (44.0, 60.2) | 34.7                 | (27.0, 42.3) |

NA means cell number too small for reliable estimate (relative standard error over 50%)

Figure 4: **Knowledge of recommended serves of fruit per day by gender, WA NMSS 2015**



## Knowledge of recommendations compared with serves eaten

Intake of fruit on the day prior to the survey compared with knowledge of the recommended number of serves of fruit is shown in Table 16.

Table 16: Knowledge of recommended serves of fruit by serves of fruit eaten on the day prior to survey, WA NMSS 2015

|                               | Don't know |            | Up to and including 1 serve |             | Two serves |              | More than two serves |              |
|-------------------------------|------------|------------|-----------------------------|-------------|------------|--------------|----------------------|--------------|
|                               | %          | 95% CI     | %                           | 95% CI      | %          | 95% CI       | %                    | 95% CI       |
| <b>Amount eaten yesterday</b> |            |            |                             |             |            |              |                      |              |
| Less than 1 serve             | 4.1        | (1.1, 7.0) | 15.3                        | (4.5, 26.0) | 57.6       | (44.7, 70.6) | 23.1                 | (11.7, 34.4) |
| 1 serve                       | NA         |            | 9.1                         | (3.2, 14.9) | 66.2       | (54.5, 77.9) | 22.6                 | (11.6, 33.6) |
| 2 serves                      | NA         |            | 6.6                         | (0.6, 12.6) | 73.6       | (65.8, 81.3) | 18.0                 | (12.4, 23.5) |
| 2 or more serves              | 4.3        | (1.6, 7.1) | 2.8                         | (0.4, 5.2)  | 52.3       | (44.0, 60.6) | 40.6                 | (32.6, 48.5) |

NA means cell number too small for reliable estimate (relative standard error over 50%)

- Most adults identified that two serves of fruit as the recommended daily amount regardless of how much fruit they ate on the day prior to the survey (57.6% of those who ate less than one serve, 66.2% of those who ate one serve, 73.6% of those who ate two serves and 52.3% of those who ate two or more serves).
- WA adults who ate two or more serves of fruit (52.3%) were significantly more likely to say that more than two serves were recommended than those who ate two serves (18.0%).
- Those who ate two serves of fruit (73.6%) were more likely to say two serves were recommended than those who ate more than two serves (52.3%)

### Amount of fruit eaten on day prior to survey

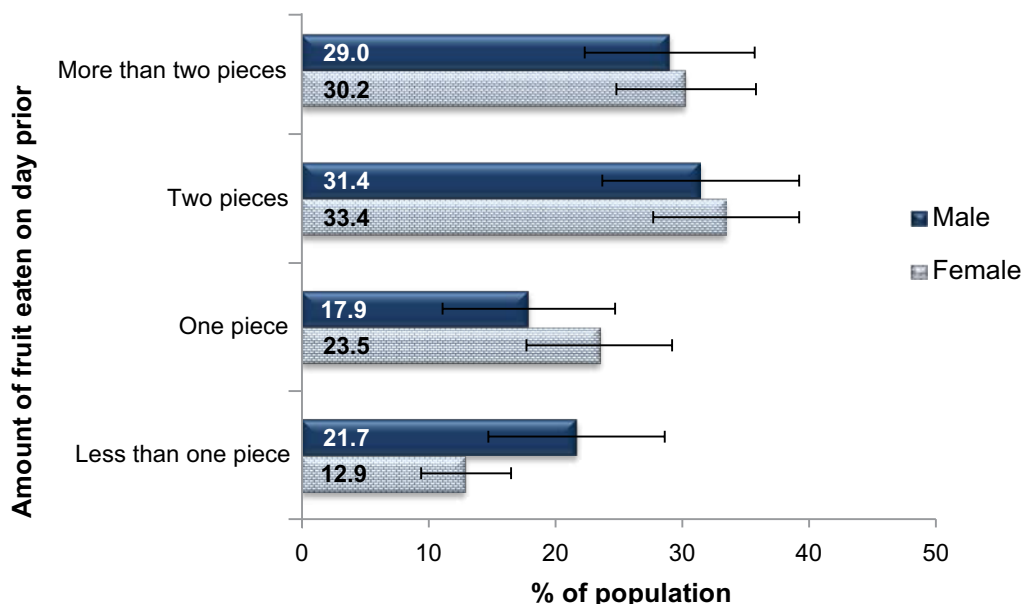
Respondents were asked how many pieces of fruit they ate on the day prior to the survey. They were told that a piece of fruit was equal to an apple, a small bunch of grapes, three prunes, and a quarter of a rock melon or half a cup of stewed, pureed or canned fruit. One piece of fruit defined in this way is also equivalent to one serve of fruit as defined in the *Australian Guide to Healthy Eating*. The amount of fruit eaten on the day prior to the survey is shown in Table 17 and Figure 5.

- Nearly two thirds of WA adults (62.0%) reported consuming two or more pieces of fruit on the day prior to the survey (63.6% of females and 60.4% of males).
- Less than one fifth (17.4%) of the population ate less than one piece of fruit on the day prior to the survey.
- Those classified as obese were significantly more likely than those classified as healthy weight to eat less than one piece of fruit on the day prior to the survey (28.2% compared with 11.8%).
- The population mean intake of fruit consumed on the day prior to the survey was 1.9 (95% CI [1.8, 2.0]) pieces (or serves).
- Among those who consumed fruit on the day prior to the survey, the mean intake was 2.3 (95% CI [2.2, 2.4]) pieces (or serves).
- Those aged 55 to 64 years were significantly more likely than those aged 18 to 34 years to have eaten more than two pieces of fruit on the day prior to the survey.

Table 17: Pieces of fruit eaten on the day prior to the survey, WA NMSS 2015

| n=1205                     | Less than one piece |              | One piece |              | Two pieces |              | More than two pieces |              |
|----------------------------|---------------------|--------------|-----------|--------------|------------|--------------|----------------------|--------------|
|                            | %                   | 95% CI       | %         | 95% CI       | %          | 95% CI       | %                    | 95% CI       |
| <b>Persons</b>             | 17.4                | (13.4, 21.4) | 20.6      | (16.2, 25.1) | 32.4       | (27.6, 37.3) | 29.6                 | (25.2, 34.0) |
| Females                    | 12.9                | (9.4, 16.5)  | 23.5      | (17.8, 29.2) | 33.4       | (27.7, 39.2) | 30.2                 | (24.6, 35.8) |
| Males                      | 21.7                | (14.7, 28.6) | 17.9      | (11.1, 24.6) | 31.4       | (23.7, 39.2) | 29.0                 | (22.3, 35.7) |
| <b>Age Group</b>           |                     |              |           |              |            |              |                      |              |
| 18 to 34 yrs               | 16.5                | (8.0, 25.1)  | 25.8      | (15.9, 35.6) | 34.5       | (23.9, 45.0) | 23.2                 | (14.4, 32.0) |
| 35 to 44 yrs               | 19.0                | (11.7, 26.3) | 17.8      | (11.4, 24.2) | 31.5       | (24.0, 39.0) | 31.7                 | (23.4, 40.0) |
| 45 to 54 yrs               | 18.4                | (13.2, 23.5) | 18.3      | (13.3, 23.2) | 31.3       | (25.1, 37.4) | 32.1                 | (26.0, 38.2) |
| 55 to 64 yrs               | 16.2                | (11.8, 20.6) | 14.8      | (10.6, 19.0) | 30.1       | (24.7, 35.4) | 38.9                 | (33.1, 44.7) |
| <b>Area of Residence</b>   |                     |              |           |              |            |              |                      |              |
| Perth Metro                | 17.3                | (12.4, 22.3) | 21.2      | (15.7, 26.6) | 32.0       | (26.0, 37.9) | 29.6                 | (24.2, 35.0) |
| Rest of WA                 | 17.7                | (13.2, 22.3) | 18.6      | (13.9, 23.3) | 34.1       | (28.7, 39.5) | 29.5                 | (24.7, 34.4) |
| <b>BMI category n=1140</b> |                     |              |           |              |            |              |                      |              |
| Healthy weight             | 11.8                | (6.6, 17.1)  | 22.9      | (13.7, 32.1) | 30.2       | (21.2, 39.3) | 35.1                 | (26.6, 43.6) |
| Overweight                 | 13.5                | (7.7, 19.3)  | 23.4      | (15.4, 31.4) | 33.5       | (25.1, 41.8) | 29.7                 | (22.3, 37.0) |
| Obese                      | 28.2                | (18.6, 37.7) | 15.3      | (10.2, 20.4) | 31.3       | (23.2, 39.4) | 25.2                 | (17.7, 32.7) |

Figure 5: Amount of fruit eaten on day prior by gender, WA NMSS 2015



## Intentions to eat more fruit

Respondents were asked which of four statements best described them in relation to their current fruit intake and whether they were thinking about or trying to eat more fruit (Table 18).

- Approximately half of WA adults (53.7%) thought that they already eat enough fruit.
- About one third were either thinking about (17.9%) or trying (17.4%) to eat more fruit.

## Intentions to eat more fruit compared with fruit serves eaten

Intention to eat more fruit compared with intake on the day prior to the survey is shown in Table 19.

- Of those who said they already eat enough fruit (57.3% of total), on the day prior to the survey most ate two (37.5% (95% CI [30.9, 44.1])) or more than two serves (43.9% (95% CI [37.2, 50.5])).
- Of those who said they were thinking about eating more fruit (17.9% of total), most (73.5%) ate less than the recommended serves on the day prior to the survey; 40.8% (95% CI [26.6, 55.1]) ate one serve and 32.7% (95% CI [19.9, 45.4]) ate less than one serve.
- Of those who said they were trying to eat more fruit (17.4% of total), two in five (42.7%) ate less than the recommended serves on the day prior to the survey; 27.2% (95% CI [17.0, 37.4]) ate one serve and 15.5% (95% CI [8.9, 22.1]) ate less than one serve.

Table 18: Intentions to eat more fruit, WA NMSS 2015

| n=1206                     |        | 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 | %                        | 95% CI |
| <b>Persons</b>             |        | 53.7 (48.6, 58.9)        |        | 11.0 (7.6, 14.3)                     |        | 17.9 (13.5, 22.3)                |        | 17.4 (13.8, 20.9)        |        |
| Females                    |        | 56.2 (50.0, 62.4)        |        | 7.4 (4.8, 10.0)                      |        | 15.2 (10.5, 19.9)                |        | 21.2 (15.9, 26.6)        |        |
| Males                      |        | 51.4 (43.3, 59.6)        |        | 14.4 (8.4, 20.4)                     |        | 20.5 (13.2, 27.8)                |        | 13.7 (9.2, 18.2)         |        |
| <b>Age Group</b>           |        |                          |        |                                      |        |                                  |        |                          |        |
| 18 to 34 yrs               |        | 50.9 (39.8, 62.0)        |        | 9.6 (2.6, 16.6)                      |        | 23.4 (13.6, 33.2)                |        | 16.1 (8.8, 23.4)         |        |
| 35 to 44 yrs               |        | 51.8 (43.2, 60.4)        |        | 14.8 (7.9, 21.6)                     |        | 15.8 (9.4, 22.2)                 |        | 17.6 (11.3, 24.0)        |        |
| 45 to 54 yrs               |        | 54.6 (48.0, 61.1)        |        | 9.2 (5.7, 12.7)                      |        | 14.6 (9.9, 19.3)                 |        | 21.6 (16.1, 27.1)        |        |
| 55 to 64 yrs               |        | 62.0 (56.2, 67.8)        |        | 11.5 (7.5, 15.4)                     |        | 11.5 (7.7, 15.3)                 |        | 15.0 (10.8, 19.3)        |        |
| <b>Area of Residence</b>   |        |                          |        |                                      |        |                                  |        |                          |        |
| Perth Metro                |        | 53.4 (47.1, 59.7)        |        | 11.1 (6.9, 15.2)                     |        | 18.2 (12.8, 23.7)                |        | 17.3 (13.0, 21.6)        |        |
| Rest of WA                 |        | 55.0 (49.4, 60.7)        |        | 10.7 (7.3, 14.0)                     |        | 16.6 (12.0, 21.2)                |        | 17.7 (13.4, 22.0)        |        |
| <b>BMI category n=1141</b> |        |                          |        |                                      |        |                                  |        |                          |        |
| Healthy weight             |        | 55.5 (45.7, 65.4)        |        | 7.4 (3.3, 11.6)                      |        | 20.3 (10.7, 29.9)                |        | 16.8 (9.0, 24.5)         |        |
| Overweight                 |        | 57.0 (48.4, 65.6)        |        | 13.4 (6.5, 20.3)                     |        | 13.9 (7.6, 20.1)                 |        | 15.7 (10.8, 20.7)        |        |
| Obese                      |        | 47.5 (38.3, 56.6)        |        | 11.5 (6.3, 16.7)                     |        | 22.0 (13.7, 30.3)                |        | 19.0 (13.2, 24.8)        |        |

Table 19: Intentions to eat more fruit by fruit intake on the day prior to survey, WA NMSS 2015

|                               | 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                   |                   |
| <b>Amount eaten yesterday</b> |                          |                   |                                      |                   |                                  |                   |                          |                   |
| Less than 1 serve             |                          | 5.8 (2.0, 9.7)    |                                      | 51.7 (35.4, 68.0) |                                  | 32.7 (19.9, 45.4) |                          | 15.5 (8.9, 22.1)  |
| 1 serve                       |                          | 12.8 (7.9, 17.8)  |                                      | 15.4 (7.2, 23.6)  |                                  | 40.8 (26.6, 55.1) |                          | 27.2 (17.0, 37.4) |
| 2 serves                      |                          | 37.5 (30.9, 44.1) |                                      | 22.2 (6.5, 37.9)  |                                  | 17.9 (7.1, 28.8)  |                          | 38.2 (27.4, 49.0) |
| 2 or more serves              |                          | 43.9 (37.2, 50.5) |                                      | 10.8 (1.2, 20.3)  |                                  | 8.5 (3.0, 14.1)   |                          | 19.1 (11.3, 26.9) |

### Attempts to change fruit intake in the past 12 months

Respondents were asked if they had tried to change the amount of fruit they ate in the past 12 months (Table 20).

- About half (53.5%) said they had not tried to change the amount of fruit they eat.
- About two in five (42.1%) had tried to increase the amount of fruit they ate.
- Those 18 to 34 years old (55.7%) were significantly more likely to say they attempted to increase their fruit intake in the past 12 months than those 45 to 54 years of age (35.1%) and those 55 to 64 years of age (23.9%).

Table 20: Attempts to change fruit intake in the past 12 months, WA NMSS 2015

| n=1206                   | No attempt to change |                   | Tried to increase |                   | Tried to decrease |                 |        |
|--------------------------|----------------------|-------------------|-------------------|-------------------|-------------------|-----------------|--------|
| %                        | 95% CI               | %                 | 95% CI            | %                 | 95% CI            | %               | 95% CI |
| <b>Persons</b>           |                      | 53.5 (48.3, 58.7) |                   | 42.1 (36.8, 47.4) |                   | 4.4 (2.6, 6.1)  |        |
| Females                  |                      | 52.0 (45.8, 58.2) |                   | 42.6 (36.2, 48.9) |                   | 5.5 (3.0, 7.9)  |        |
| Males                    |                      | 55.0 (46.7, 63.3) |                   | 41.7 (33.3, 50.0) |                   | 3.3 (0.9, 5.8)  |        |
| <b>Age Group</b>         |                      |                   |                   |                   |                   |                 |        |
| 18 to 34 yrs             |                      | 40.7 (30.0, 51.5) |                   | 55.7 (44.8, 66.6) |                   | 3.6 (0.4, 6.8)  |        |
| 35 to 44 yrs             |                      | 56.0 (47.4, 64.5) |                   | 37.7 (29.4, 46.1) |                   | 6.3 (2.0, 10.6) |        |
| 45 to 54 yrs             |                      | 60.3 (53.8, 66.7) |                   | 35.1 (28.8, 41.5) |                   | 4.6 (2.2, 7.0)  |        |
| 55 to 64 yrs             |                      | 72.7 (67.4, 77.9) |                   | 23.9 (18.9, 28.9) |                   | 3.5 (1.4, 5.6)  |        |
| <b>Area of Residence</b> |                      |                   |                   |                   |                   |                 |        |
| Perth Metro              |                      | 51.9 (45.5, 58.3) |                   | 43.8 (37.3, 50.3) |                   | 4.3 (2.2, 6.4)  |        |
| Rest of WA               |                      | 59.5 (53.8, 65.2) |                   | 35.9 (30.2, 41.6) |                   | 4.6 (2.6, 6.6)  |        |

## Comparison of current fruit intake with 12 months prior

Respondents were asked how their current fruit intake compared with their intake 12 months ago (Table 21).

- Approximately a third of WA adults (31.6%) said they eat more fruit now than 12 months ago while the majority (61.5%) said they eat the same amount.
- Those aged 18 to 34 years were significantly more likely than 55 to 64 year olds to say they eat more fruit now than 12 months ago (42.2% compared with 19.4%).

Table 21: Amount of fruit eaten now compared with 12 months ago, WA NMSS 2015

| n=1205                   | Eat less now    | Eat about the same | Eat more now      |
|--------------------------|-----------------|--------------------|-------------------|
| % 95% CI                 | % 95% CI        | % 95% CI           | % 95% CI          |
| <b>Persons</b>           | 7.0 (4.4, 9.6)  | 61.5 (56.3, 66.6)  | 31.6 (26.6, 36.6) |
| Females                  | 8.0 (4.7, 11.2) | 56.6 (50.2, 62.9)  | 35.4 (29.0, 41.9) |
| Males                    | 6.0 (1.9, 10.1) | 66.1 (58.3, 73.9)  | 27.9 (20.5, 35.3) |
| <b>Age Group</b>         |                 |                    |                   |
| 18 to 34 yrs             | 7.2 (1.4, 12.9) | 50.6 (39.6, 61.7)  | 42.2 (31.4, 53.1) |
| 35 to 44 yrs             | 6.8 (2.9, 10.6) | 67.6 (59.6, 75.6)  | 25.6 (18.0, 33.3) |
| 45 to 54 yrs             | 7.9 (4.5, 11.3) | 65.0 (58.7, 71.3)  | 27.1 (21.1, 33.0) |
| 55 to 64 yrs             | 5.6 (3.0, 8.2)  | 75.0 (69.9, 80.1)  | 19.4 (14.7, 24.0) |
| <b>Area of Residence</b> |                 |                    |                   |
| Perth Metro              | 6.3 (3.2, 9.5)  | 60.6 (54.3, 67.0)  | 33.0 (26.9, 39.2) |
| Rest of WA               | 9.3 (6.0, 12.7) | 64.5 (58.9, 70.1)  | 26.2 (20.9, 31.5) |

### 5.2.2.2 Vegetables

The Guidelines recommend a minimum of five serves of vegetables per day for women and between five and six for men (depending on age). Most public education campaigns promote five serves for all adults.

#### Knowledge of daily recommended intake

Respondents were asked the recommended number of serves of vegetables that people should eat each day (Table 22). 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.

- Just over half the population (57.4%) believed the recommendation was to eat five (54.7%) or more than five (2.7%) serves of vegetables every day.
- Females were significantly more likely than males to say five serves a day was the recommended vegetable intake (66.1% compared with 43.9%).

Table 22: Knowledge of recommended serves of vegetables per day, WA NMSS 2015

| n=1205                   | Don't know     | Up to two serves  | Three to four serves | Five serves       | Five or more serves |
|--------------------------|----------------|-------------------|----------------------|-------------------|---------------------|
| % 95% CI                 | % 95% CI       | % 95% CI          | % 95% CI             | % 95% CI          | % 95% CI            |
| <b>Persons</b>           | 3.2 (1.5, 5.0) | 10.8 (7.5, 14.1)  | 28.5 (23.8, 33.2)    | 54.7 (49.6, 59.9) | 2.7 (1.4, 4.1)      |
| Female                   | NA             | 5.0 (2.9, 7.1)    | 22.6 (17.9, 27.3)    | 66.1 (60.5, 71.7) | 3.8 (1.5, 6.1)      |
| Male                     | 4.0 (1.5, 6.4) | 16.3 (10.2, 22.4) | 34.1 (26.3, 41.9)    | 43.9 (35.8, 52.0) | 1.7 (0.2, 3.1)      |
| <b>Age Group</b>         |                |                   |                      |                   |                     |
| 18 to 34 yrs             | NA             | 8.7 (1.8, 15.6)   | 28.9 (18.9, 39.0)    | 56.5 (45.6, 67.5) | NA                  |
| 35 to 44 yrs             | NA             | 13.9 (7.3, 20.4)  | 24.4 (17.2, 31.7)    | 57.0 (48.4, 65.7) | NA                  |
| 45 to 54 yrs             | 4.1 (1.0, 7.1) | 10.3 (6.1, 14.5)  | 31.4 (25.2, 37.6)    | 51.3 (44.8, 57.9) | 2.8 (0.8, 4.8)      |
| 55 to 64 yrs             | 4.0 (1.6, 6.4) | 12.3 (8.2, 16.3)  | 29.2 (23.9, 34.6)    | 51.6 (45.7, 57.5) | 2.9 (0.9, 4.9)      |
| <b>Area of Residence</b> |                |                   |                      |                   |                     |
| Perth Metro              | 3.3 (1.2, 5.5) | 10.3 (6.2, 14.3)  | 28.1 (22.4, 33.8)    | 55.8 (49.5, 62.1) | 2.5 (0.9, 4.1)      |
| Rest of WA               | 3.0 (1.1, 4.8) | 12.8 (8.7, 16.9)  | 30.0 (24.9, 35.2)    | 50.7 (45.0, 56.4) | 3.5 (1.4, 5.6)      |

NA means cell number too small for reliable estimate (relative standard error over 50%)

### Knowledge of recommended serves of vegetables per day compared with serves eaten<sup>1</sup>

Knowledge of the recommended number of serves of vegetables compared with serves of vegetables eaten on the day prior to the survey is shown in Table 23.

- WA adults who ate five or more serves of vegetables were more likely to say five or more serves were recommended (81.3% than those who ate one to two serves (49.3%).
- Those who ate three to four serves were more likely to say three to four serves were recommended (29.3%) than those who ate five serves (13.1%).
- Those who ate one to two serves were more likely to say up to two serves were recommended (16.2%) than those who ate three to four serves (5.4%).

<sup>1</sup>Note: 'Usual serves of vegetables' was reported in previous NMSS. Both 'usual' and 'intake the day prior to survey' were asked in 2015 but only 'intake the day prior to survey' is presented. There were no significant differences between 'usual' and 'day prior' intakes.

**Table 23: Knowledge of recommended serves of vegetables by serves of vegetables eaten on the day prior to survey, WA NMSS 2015**

|                        | Knowledge of recommended serves of vegetables per day |                   |                      |                     |
|------------------------|---|-------------------|----------------------|---------------------|
|                        | Don't know  | Up to two serves  | Three to four serves | Five or more serves |
| Amount eaten yesterday | % 95% CI  | % 95% CI          | % 95% CI             | % 95% CI            |
| Less than one serve    | NA  | NA                | NA                   | 44.6 (6.5, 82.7)    |
| One to two serves      | 3.8 (0.9, 6.7)  | 16.2 (10.3, 22.1) | 30.7 (24.2, 37.3)    | 49.3 (42.1, 56.5)   |
| Three to four serves   | 1.1 (0.2, 2.0)  | 5.4 (1.9, 8.8)    | 29.3 (20.6, 37.9)    | 64.3 (55.5, 73.1)   |
| Five or more serves    | NA  | NA                | 13.1 (5.8, 20.4)     | 81.3 (72.4, 90.2)   |

Note: For knowledge of recommended daily serves of veg it was not possible to split response categories into 'less than 1 serve' and '1 to 2 serves' to match the categories provided for amount eaten yesterday due to very small numbers

NA means cell number too small for reliable estimate (relative standard error over 50%)

### Serves of vegetables eaten on the day prior to the survey

Respondents were asked how many serves of vegetables they ate yesterday. 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. Serves of vegetables eaten on the day prior to the survey (as self-reported data) are shown in Table 24.

- Most adults (96.7%) reported eating at least one serve of vegetables on the day prior to the survey, with the majority (53.5%) eating one to two serves.
- Only 12.2% of adults reported eating five or more serves of vegetables on the day prior to the survey.
- The mean intake of vegetables consumed on the day prior to the survey (by all respondents) was 2.7 serves (95% CI [2.5, 2.8]).
- Among those who consumed vegetables on the day prior to the survey, the mean intake was 2.6 serves (95% CI [2.5, 2.8]).



Table 24: Serves of vegetables eaten on the day prior to the survey, WA NMSS 2015

| n=1141                   | Less than 1 serve |            | One to two serves |              | Three to four serves |              | Five or more serves |              |
|--------------------------|-------------------|------------|-------------------|--------------|----------------------|--------------|---------------------|--------------|
|                          | %                 | 95% CI     | %                 | 95% CI       | %                    | 95% CI       | %                   | 95% CI       |
| <b>Persons</b>           | 3.3               | (0.8, 5.8) | 53.5              | (48.3, 58.8) | 31.0                 | (26.2, 35.7) | 12.2                | (8.6, 15.9)  |
| Female                   | NA                |            | 49.7              | (43.4, 56.1) | 35.3                 | (29.3, 41.2) | 12.8                | (8.6, 17.0)  |
| Male                     | NA                |            | 57.3              | (48.8, 65.7) | 26.7                 | (19.5, 34.0) | 11.7                | (5.7, 17.7)  |
| <b>Age Group</b>         |                   |            |                   |              |                      |              |                     |              |
| 18 to 34 yrs             | NA                |            | 51.6              | (40.0, 63.1) | 29.6                 | (19.4, 39.7) | 14.0                | (5.7, 22.3)  |
| 35 to 44 yrs             | NA                |            | 50.0              | (41.1, 58.9) | 36.8                 | (28.1, 45.4) | 11.3                | (6.0, 16.6)  |
| 45 to 54 yrs             | NA                |            | 61.5              | (55.1, 67.9) | 28.2                 | (22.4, 34.0) | 8.2                 | (4.5, 11.8)  |
| 55 to 64 yrs             | 2.5               | (0.7, 4.3) | 53.0              | (46.9, 59.0) | 30.2                 | (24.6, 35.8) | 14.4                | (10.1, 18.6) |
| <b>Area of Residence</b> |                   |            |                   |              |                      |              |                     |              |
| Perth Metro              | 3.5               | (0.4, 6.6) | 52.8              | (46.3, 59.3) | 31.2                 | (25.4, 37.1) | 12.5                | (7.9, 17.0)  |
| Rest of WA               | 2.4               | (0.4, 4.3) | 56.3              | (50.6, 61.9) | 29.9                 | (24.9, 35.0) | 11.4                | (7.8, 15.0)  |

NA means cell number too small for reliable estimate (relative standard error over 50%)

### Variety of vegetables eaten on the day prior to the survey

Respondents were asked how many different types of vegetables they ate on the day prior to the survey (Table 25).

- Two out of five WA adults (40.1%) consumed five or more types of vegetables.
- A further two in five (40.1%) ate three to four types of vegetables.
- About one-fifth (19.8%) of the population ate two or less types of vegetables on the day prior to the survey.

Table 25: **Number of different types of vegetables eaten on the day prior to the survey, WA NMSS 2015**

| n=1196                   | None               | Up to two            | Three to four        | Five                 | Six                  | Over six            |
|--------------------------|--------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
|                          | % 95% CI           | % 95% CI             | % 95% CI             | % 95% CI             | % 95% CI             | % 95% CI            |
| <b>Persons</b>           | 5.9<br>(3.4, 8.5)  | 13.9<br>(10.3, 17.6) | 40.1<br>(35.1, 45.2) | 17.7<br>(14.2, 21.2) | 11.2<br>(7.7, 14.6)  | 11.2<br>(7.7, 14.6) |
| Female                   | 4.7<br>(2.4, 7.1)  | 11.7<br>(8.2, 15.2)  | 37.1<br>(31.1, 43.1) | 22.0<br>(16.7, 27.2) | 10.8<br>(7.1, 14.4)  | 13.7<br>(9.5, 18.0) |
| Male                     | 7.0<br>(2.6, 11.5) | 16.1<br>(9.9, 22.2)  | 43.0<br>(34.9, 51.1) | 13.6<br>(9.2, 18.0)  | 11.5<br>(5.8, 17.3)  | 8.8<br>(3.4, 14.1)  |
| <b>Age Group</b>         |                    |                      |                      |                      |                      |                     |
| 18 to 34 yrs             | 7.1<br>(1.4, 12.8) | 11.6<br>(3.9, 19.3)  | 41.9<br>(30.9, 52.9) | 16.8<br>(9.4, 24.2)  | 10.3<br>(2.9, 17.6)  | 12.3<br>(4.5, 20.0) |
| 35 to 44 yrs             | 6.1<br>(1.9, 10.2) | 14.4<br>(8.3, 20.5)  | 38.0<br>(29.5, 46.4) | 13.1<br>(7.9, 18.2)  | 17.4<br>(10.3, 24.4) | 11.0<br>(6.0, 16.1) |
| 45 to 54 yrs             | 4.2<br>(1.6, 6.7)  | 16.7<br>(11.5, 21.9) | 41.9<br>(35.4, 48.4) | 21.5<br>(16.0, 27.0) | 6.9<br>(4.4, 9.5)    | 8.8<br>(5.5, 12.0)  |
| 55 to 64 yrs             | 5.0<br>(2.3, 7.6)  | 15.5<br>(11.2, 19.7) | 36.5<br>(30.7, 42.3) | 21.0<br>(16.1, 25.9) | 10.3<br>(6.8, 13.8)  | 11.7<br>(8.1, 15.4) |
| <b>Area of residence</b> |                    |                      |                      |                      |                      |                     |
| Perth Metro              | 5.5<br>(2.3, 8.6)  | 14.3<br>(9.9, 18.7)  | 40.4<br>(34.1, 46.6) | 17.6<br>(13.3, 22.0) | 10.9<br>(6.6, 15.2)  | 11.3<br>(7.0, 15.6) |
| Rest of WA               | 7.6<br>(4.3, 10.8) | 12.6<br>(8.5, 16.7)  | 39.2<br>(33.5, 44.9) | 17.7<br>(13.9, 21.6) | 12.1<br>(8.7, 15.6)  | 10.8<br>(7.8, 13.8) |

### Amount of vegetables eaten and number of varieties eaten

There was a consistent positive relationship between the mean number of serves of vegetables eaten and the mean number of varieties of vegetables eaten.

- Those adults who ate five varieties of vegetables on the day prior to the survey ate significantly more serves (3.2 serves (95% CI [3.0, 3.4])) than those who ate one variety (2.0 serves (95% CI [1.9, 2.1])), two varieties (2.4 serves (95% CI [2.3, 2.5])) or three varieties (2.6 serves (95% CI [2.5, 2.8])).

### Intention to eat more vegetables

Respondents were asked which of four statements best described them in relation to their current vegetable intake and whether they were thinking about or trying to eat more vegetables (Table 26).

- Two thirds (66.0%) of WA adults thought that they already eat enough vegetables.
- One in five (20.9%) were trying to eat more vegetables.

Table 26: **Intention to eat more vegetables, WA NMSS 2015**

| n=1207                     |        | 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 | %                             | 95% CI |
| Persons                    |        | 66.0 (61.2, 70.8)             |        | 4.0 (2.3, 5.7)                            |        | 9.0 (6.2, 11.9)                       |        | 20.9 (16.8, 25.1)             |        |
| Female                     |        | 66.6 (60.7, 72.4)             |        | 3.3 (1.5, 5.1)                            |        | 8.8 (5.3, 12.2)                       |        | 21.4 (16.2, 26.6)             |        |
| Male                       |        | 65.5 (57.9, 73.0)             |        | 4.7 (1.8, 7.6)                            |        | 9.3 (4.8, 13.8)                       |        | 20.5 (14.1, 26.9)             |        |
| <b>Age Group</b>           |        |                               |        |   |        |                                       |        |                               |        |
| 18 to 34 yrs               |        | 66.9 (56.8, 77.1)             |        | 2.2 (0.0, 4.8)                            |        | 10.4 (4.0, 16.7)                      |        | 20.5 (11.7, 29.3)             |        |
| 35 to 44 yrs               |        | 61.1 (52.6, 69.5)             |        | 7.4 (2.1, 12.8)                           |        | 6.4 (2.8, 10.0)                       |        | 25.1 (17.6, 32.5)             |        |
| 45 to 54 yrs               |        | 63.1 (56.6, 69.5)             |        | 4.2 (1.5, 6.8)                            |        | 11.5 (7.2, 15.7)                      |        | 21.3 (15.7, 26.8)             |        |
| 55 to 64 yrs               |        | 73.7 (68.4, 79.0)             |        | 3.7 (1.5, 5.8)                            |        | 6.4 (3.5, 9.3)                        |        | 16.2 (11.7, 20.7)             |        |
| <b>Area of Residence</b>   |        |                               |        |   |        |                                       |        |                               |        |
| Perth Metro                |        | 66.5 (60.6, 72.4)             |        | 4.2 (2.1, 6.4)                            |        | 8.0 (4.6, 11.5)                       |        | 21.3 (16.2, 26.4)             |        |
| Rest of WA                 |        | 64.1 (58.6, 69.7)             |        | 3.2 (1.7, 4.8)                            |        | 12.9 (8.7, 17.0)                      |        | 19.7 (15.1, 24.3)             |        |
| <b>BMI category n=1142</b> |        |                               |        |   |        |                                       |        |                               |        |
| Healthy weight             |        | 71.3 (63.0, 79.7)             |        | 4.3 (0.6, 8.1)                            |        | 8.4 (3.8, 13.0)                       |        | 15.9 (9.0, 22.8)              |        |
| Overweight                 |        | 67.2 (59.1, 75.3)             |        | 3.1 (0.8, 5.4)                            |        | 7.6 (3.7, 11.5)                       |        | 22.1 (14.6, 29.6)             |        |
| Obese                      |        | 61.1 (52.4, 69.9)             |        | 3.0 (1.0, 5.0)                            |        | 13.4 (6.0, 20.7)                      |        | 22.5 (16.0, 29.0)             |        |

**Intention to eat more vegetables compared with serves eaten**

A comparison between respondents' intention to eat more vegetables, compared with actual intake on the day prior to the survey is shown in Table 27.

- Of those who said they already eat enough vegetables (66.0% of total), only 16.3% (95% CI [11.0, 21.5]) ate five or more serves on the day prior to the survey compared with 48.0% who ate one to two serves and 34.9% who ate three to four serves.
- Of those respondents who said they were not thinking about eating more vegetables, 82.8% (95% CI [62.9, 100.0]) ate one to two serves on the day prior to the survey.
- Of those who said they were thinking about eating more vegetables (9.0% of total), 66.9% (95% CI [51.7, 82.0]) ate one to two serves on the day prior to the survey, 23.1% ate three to four serves and 2.7% ate 5 or more serves.
- Of those who said they were trying to eat more vegetables (20.9% of total), 61.6% (95% CI [50.5, 72.7]) ate one to two serves on the day prior to the survey and 25.3% ate three to four serves.

Table 27: Intention to eat more vegetables by vegetable intake on day prior to survey, WA NMSS 2015

| Amount eaten yesterday | 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       |
| Less than 1 serve      | 0.9                           | (0.2, 1.5)   | NA  |               | NA                                    |              | NA                            |              |
| 1 to 2 serves          | 48.0                          | (41.4, 54.6) | 82.8                                      | (62.9, 100.0) | 66.9                                  | (51.7, 82.0) | 61.6                          | (50.5, 72.7) |
| 3 to 4 serves          | 34.9                          | (28.7, 41.1) | NA  |               | 23.1                                  | (9.7, 36.4)  | 25.3                          | (16.6, 34.1) |
| 5 or more serves       | 16.3                          | (11.0, 21.5) | NA  |               | 2.7                                   | (0.5, 11.1)  | 3.6                           | (1.1, 6.1)   |

### Attempts to change vegetable intake in the past year

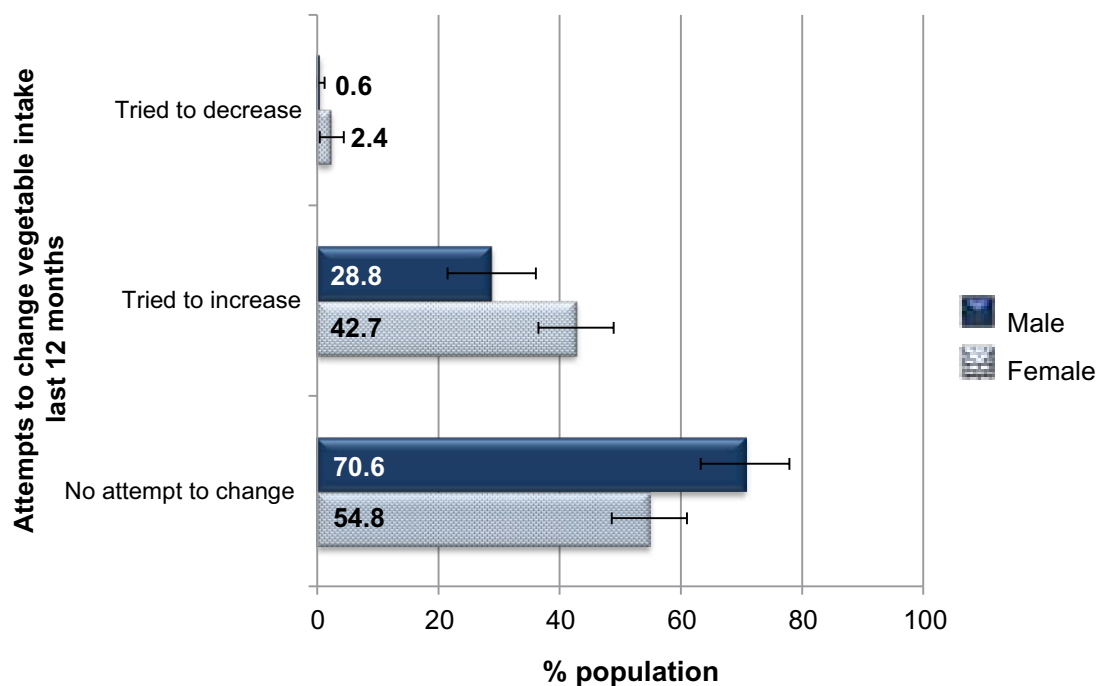
Respondents were asked if they had tried to change their vegetable intake in the past 12 months (Table 28 and Figure 6).

- About a third (35.6%) said they had tried to increase their vegetable intake over the past year.
- Females were significantly more likely than males to have said that they had tried to increase their vegetable intake (42.7% compared with 28.8%).

Table 28: Attempts to change vegetable intake past 12 months, WA NMSS 2015

| n=1207                   | No attempt to change |              | Tried to increase |              | Tried to decrease |            |
|--------------------------|----------------------|--------------|-------------------|--------------|-------------------|------------|
|                          | %                    | 95% CI       | %                 | 95% CI       | %                 | 95% CI     |
| <b>Persons</b>           | 62.9                 | (57.9, 67.8) | 35.6              | (30.7, 40.5) | 1.5               | (0.4, 2.6) |
| Female                   | 54.8                 | (48.6, 61.1) | 42.7              | (36.5, 48.9) | 2.4               | (0.4, 4.5) |
| Male                     | 70.6                 | (63.3, 77.9) | 28.8              | (21.5, 36.1) | 0.6               | (0.0, 1.2) |
| <b>Age Group</b>         |                      |              |                   |              |                   |            |
| 18 to 34 yrs             | 56.1                 | (45.3, 67.0) | 42.0              | (31.2, 52.7) | 1.9               | (0.0, 4.3) |
| 35 to 44 yrs             | 66.0                 | (58.2, 73.8) | 32.9              | (25.1, 40.6) | 1.1               | (0.0, 2.4) |
| 45 to 54 yrs             | 65.8                 | (59.6, 72.1) | 33.2              | (27.0, 39.5) | 0.9               | (0.0, 1.9) |
| 55 to 64 yrs             | 71.3                 | (66.0, 76.7) | 26.8              | (21.6, 32.1) | 1.8               | (0.2, 3.4) |
| <b>Area of Residence</b> |                      |              |                   |              |                   |            |
| Perth Metro              | 62.6                 | (56.5, 68.7) | 35.8              | (29.8, 41.9) | 1.5               | (0.2, 2.8) |
| Rest of WA               | 63.8                 | (58.2, 69.4) | 34.7              | (29.1, 40.3) | 1.5               | (0.4, 2.7) |

Figure 6: Attempts to change vegetable intake in the past 12 months by gender, WA NMSS 2015



### Comparison of current vegetable intake with 12 months ago

Respondents were asked how their current vegetable intake compared with their intake 12 months ago (Table 29).

- The majority of WA adults (65.8%) reported that they ate about the same amount of vegetables now as they did 12 months ago.
- One third (31.9%) reported eating more vegetables now than 12 months ago.
- Females were significantly more likely than males to say they were currently eating more vegetables than 12 months ago (41.1% compared with 23.2%).
- Adults aged 18 to 34 years were significantly more likely than those aged 55 to 64 years to report they eat more vegetables now than 12 months ago (41.9% compared with 20.0%).
- Adults aged 55 to 64 years (76.8%) were significantly more likely than those aged 18 to 34 years (56.3%) to report that they eat about the same amount of vegetables now as they did 12 months ago.

Table 29: Amount of vegetables eaten now compared with 12 months ago, WA NMSS 2015

| n=1204                   | Eat more now      | Eat about the same | Eat less now   |
|--------------------------|-------------------|--------------------|----------------|
|                          | % 95% CI          | % 95% CI           | % 95% CI       |
| <b>Persons</b>           | 31.9 (27.1, 36.8) | 65.8 (60.9, 70.7)  | 2.3 (1.2, 3.4) |
| Female                   | 41.1 (34.7, 47.5) | 56.9 (50.6, 63.3)  | 2.0 (1.0, 3.0) |
| Male                     | 23.2 (16.5, 29.9) | 74.2 (67.4, 81.1)  | 2.5 (0.6, 4.4) |
| <b>Age Group</b>         |                   |                    |                |
| 18 to 34 yrs             | 41.9 (31.2, 52.6) | 56.3 (45.5, 67.0)  | 1.9 (0.0, 4.1) |
| 35 to 44 yrs             | 27.4 (20.0, 34.8) | 70.8 (63.2, 78.3)  | 1.8 (0.2, 3.5) |
| 45 to 54 yrs             | 27.2 (21.3, 33.0) | 70.2 (64.2, 76.2)  | 2.7 (0.7, 4.6) |
| 55 to 64 yrs             | 20.0 (15.2, 24.7) | 76.8 (71.8, 81.8)  | 3.3 (1.1, 5.4) |
| <b>Area of Residence</b> |                   |                    |                |
| Perth Metro              | 33.1 (27.1, 39.1) | 65.1 (59.1, 71.1)  | 1.8 (0.6, 3.1) |
| Rest of WA               | 27.7 (22.5, 32.9) | 68.3 (63.0, 73.7)  | 4.0 (1.8, 6.1) |

### 5.2.2.3 Grains and cereal foods

The Guidelines recommend eating a wide variety of foods from the grain (cereal) foods group. Consumption of mostly wholegrain and/or high cereal fibre varieties is recommended, for example, bread, pasta, rice and noodles. Energy dense cereal foods such as muffins, pastries and sweetened biscuits, which are high in saturated fat, added sugar and/or added salt, are not included in this food group.

#### Bread

Respondents were asked how much and what main type of bread and bread substitutes they ate on the day prior to the survey (Table 30 and Figure 7).

- Two thirds of WA adults (64.6%) ate bread on the day prior to the survey
- Of those who ate bread on that day, 34.1% ate multigrain or wholegrain bread, 30.2% ate white bread, and one quarter (23.7%) ate brown or wholemeal bread.
- There were no significant differences in bread consumption by gender, age group or area of residence.

Table 30: Main type of bread eaten on the day prior to the survey, WA NMSS 2015

| n=780                    | 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      |
| <b>Persons</b>           | 23.7                     | (18.5, 28.8) | 34.1                           | (27.8, 40.4) | 5.9                          | (2.6, 9.3)  | 30.2        | (24.3, 36.2) | 6.1   | (2.9, 9.2)  |
| Female                   | 26.4                     | (19.4, 33.3) | 30.2                           | (22.4, 38.0) | 5.2                          | (2.9, 7.5)  | 30.1        | (23.3, 37.0) | 8.0   | (5.4, 10.7) |
| Male                     | 21.7                     | (14.4, 29.0) | 36.9                           | (27.6, 46.2) | 6.4                          | (0.9, 11.9) | 30.3        | (21.4, 39.3) | 4.6   | (0.0, 9.7)  |
| <b>Age Group</b>         |                          |              |                                |              |                              |             |             |              |       |             |
| 18 to 34 yrs             | 21.9                     | (10.8, 32.9) | 38.4                           | (24.5, 52.2) | 4.2                          | (0.0, 11.3) | 31.1        | (18.0, 44.3) | 4.4   | (0.0, 11.5) |
| 35 to 44 yrs             | 22.4                     | (13.7, 31.2) | 30.8                           | (19.9, 41.7) | 9.3                          | (2.0, 16.5) | 32.0        | (21.9, 42.1) | 5.5   | (0.6, 10.5) |
| 45 to 54 yrs             | 28.1                     | (20.4, 35.7) | 32.5                           | (25.0, 40.0) | 3.9                          | (0.8, 7.0)  | 26.6        | (19.6, 33.6) | 8.9   | (5.3, 12.6) |
| 55 to 64 yrs             | 23.8                     | (17.9, 29.8) | 30.7                           | (24.0, 37.4) | 8.1                          | (4.2, 12.1) | 30.5        | (23.8, 37.2) | 6.9   | (3.7, 10.1) |
| <b>Area of residence</b> |                          |              |                                |              |                              |             |             |              |       |             |
| Perth Metro              | 24.2                     | (17.8, 30.6) | 34.4                           | (26.5, 42.2) | 6.8                          | (2.6, 11.0) | 28.5        | (21.2, 35.9) | 6.1   | (2.1, 10.0) |
| Rest of WA               | 21.8                     | (15.7, 27.8) | 33.3                           | (26.5, 40.0) | 2.8                          | (0.5, 5.1)  | 36.3        | (29.1, 43.4) | 5.9   | (3.3, 8.5)  |

Base: those who ate bread on the day prior to the survey.

## Rice

Respondents were asked if they ate any rice on the day prior to the survey and if so whether it was white or brown rice (Figure 7).

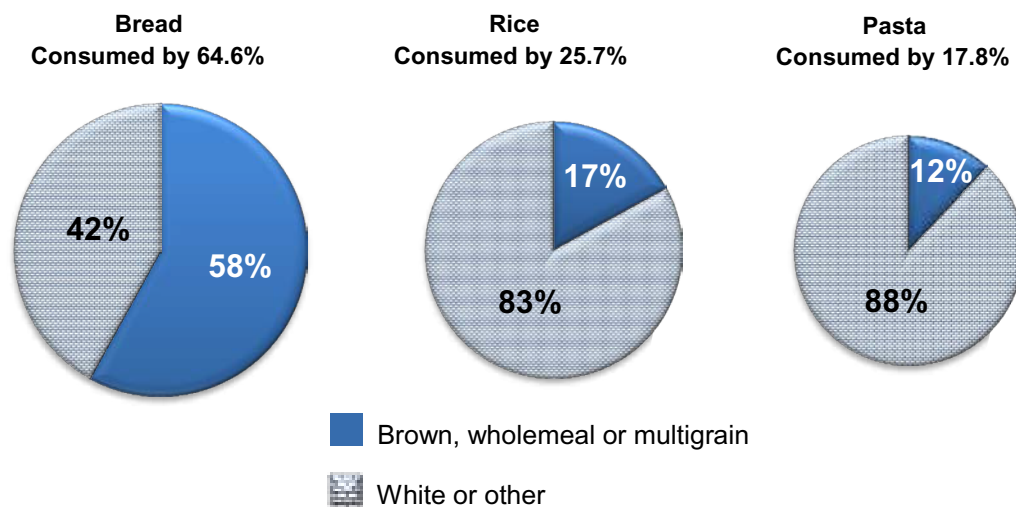
- One quarter (25.7%) of adults said that they ate rice on the day prior to the survey.
- Of those who ate rice, 83.4% ate white rice and 16.6% ate brown rice.
- There were no significant differences in rice consumption by gender, age group or area of residence.

## Pasta or spaghetti

Respondents were asked if they ate pasta or spaghetti on the day prior to the survey, and whether it was regular or wholemeal (Figure 7).

- Only 17.8% of adults said they ate pasta or spaghetti on the day prior to the survey.
- Of those who ate pasta or spaghetti, 88.2% ate regular types and 11.8% ate wholemeal varieties.
- There were no significant differences in pasta consumption by gender, age group or area of residence.

Figure 7: Types of bread, rice or pasta eaten on the day prior to the survey, of those who consumed the food, WA NMSS 2015



### Breakfast cereal

Respondents were asked whether they ate breakfast cereal on the day prior to the survey.

- Almost half the WA adults (43.6%) ate breakfast cereal on the day prior to the survey.
- There were no significant differences in breakfast cereal consumption by gender, age group or area of residence.

### Intentions to eat more cereal foods

Respondents were asked which of four statements best described them in relation their current intake of cereal foods and whether they were thinking about or trying to eat more cereal foods (Table 31).

- Almost two thirds of the population (63.2%) said that they already eat enough cereal foods and only 7.2% said they were trying to eat more.
- There were no significant differences in intentions to eat more cereal foods by gender, age group or area of residence.



Table 31: Intentions to eat more cereal foods, WA NMSS 2015

| n=1206                   | 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      |
| <b>Persons</b>           | 63.2                            | (58.4, 68.0) | 25.5  | (21.5, 29.5) | 4.1                                     | (1.8, 6.4)  | 7.2                             | (4.3, 10.1) |
| Female                   | 58.0                            | (51.7, 64.2) | 31.0  | (25.4, 36.7) | 3.6                                     | (1.4, 5.8)  | 7.4                             | (2.8, 12.1) |
| Male                     | 68.2                            | (61.3, 75.2) | 20.2  | (14.9, 25.6) | 4.6                                     | (0.7, 8.6)  | 6.9                             | (3.4, 10.5) |
| <b>Age Group</b>         |                                 |              |   |              |   |             |                                 |             |
| 18 to 34 yrs             | 61.6                            | (51.2, 71.9) | 20.9  | (13.0, 28.8) | 5.4                                     | (0.2, 10.5) | 12.2                            | (5.4, 19.0) |
| 35 to 44 yrs             | 67.6                            | (59.8, 75.5) | 27.9  | (20.3, 35.4) | 2.8                                     | (0.0, 5.7)  | 1.8                             | (0.3, 3.2)  |
| 45 to 54 yrs             | 60.6                            | (54.2, 67.0) | 28.9  | (23.1, 34.8) | 4.3                                     | (1.7, 6.9)  | 6.2                             | (2.5, 9.9)  |
| 55 to 64 yrs             | 64.5                            | (58.9, 70.1) | 29.2  | (24.0, 34.5) | 2.7                                     | (0.8, 4.7)  | 3.5                             | (1.3, 5.7)  |
| <b>Area of residence</b> |                                 |              |   |              |   |             |                                 |             |
| Perth Metro              | 63.7                            | (57.8, 69.6) | 24.6  | (19.7, 29.4) | 3.9                                     | (1.1, 6.7)  | 7.8                             | (4.2, 11.5) |
| Rest of WA               | 61.2                            | (55.7, 66.8) | 29.0  | (23.9, 34.1) | 5.0                                     | (2.6, 7.5)  | 4.8                             | (2.1, 7.4)  |

**Attempts to change cereal food intake in the past 12 months**

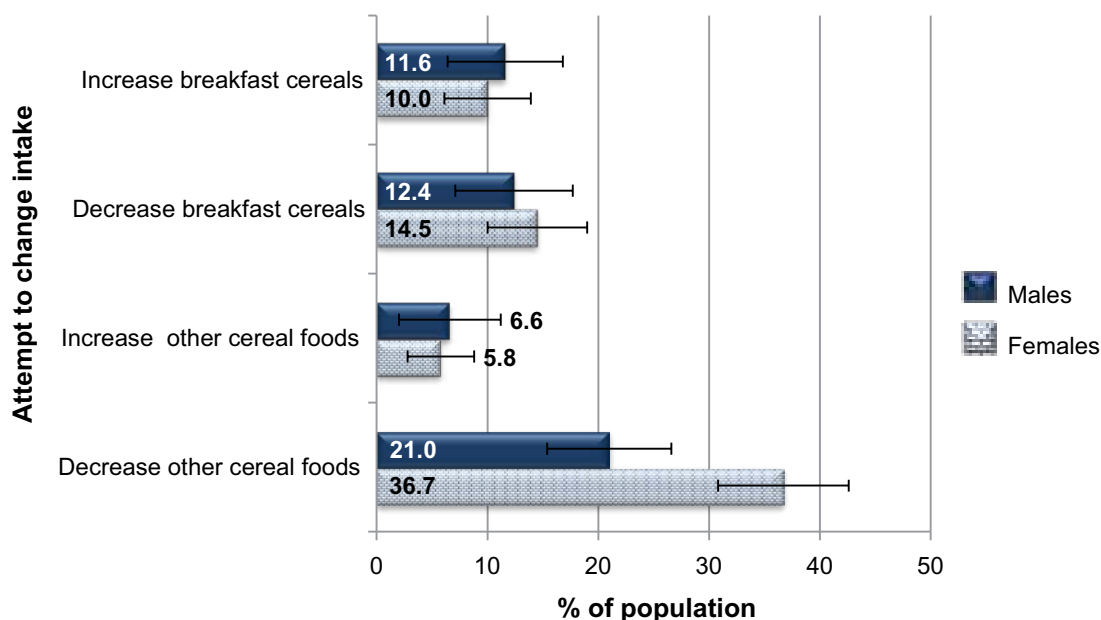
Respondents were asked if they had tried to change the amount of breakfast cereal or other cereal foods such as bread, rice or pasta they ate in the past 12 months (Table 32 and Figure 8).

Table 32: Intentions to change total amounts of breakfast cereal and other cereal foods such as bread, rice or pasta eaten in past 12 months, WA NMSS 2015

|                          | Tried to change amount of breakfast cereal n=1205 |                              | Tried to change amount of other cereal foods n=1206 |                              |      |             |      |              |
|--------------------------|---|------------------------------|---|------------------------------|------|-------------|------|--------------|
|                          | Yes tried to increase amount                      | Yes tried to decrease amount | Yes tried to increase amount                        | Yes tried to decrease amount |      |             |      |              |
|                          | %   | 95% CI                       | %   | 95% CI                       | %    | 95% CI      | %    | 95% CI       |
| <b>Persons</b>           | 10.8  | (7.5, 14.0)                  | 13.4  | (9.9, 16.9)                  | 6.2  | (3.4, 8.9)  | 28.7 | (24.4, 33.0) |
| Female                   | 10.0  | (6.1, 13.8)                  | 14.5  | (10.0, 19.0)                 | 5.8  | (2.8, 8.7)  | 36.7 | (30.8, 42.7) |
| Male                     | 11.6  | (6.4, 16.7)                  | 12.4  | (7.1, 17.7)                  | 6.6  | (2.0, 11.1) | 21.0 | (15.4, 26.6) |
| <b>Age Group</b>         |   |                              |   |                              |      |             |      |              |
| 18 to 34 yrs             | 12.2  | (5.2, 19.2)                  | 15.1  | (7.7, 22.6)                  | 10.2 | (3.7, 16.7) | 24.0 | (15.6, 32.4) |
| 35 to 44 yrs             | 10.4  | (4.8, 16.0)                  | 16.6  | (10.1, 23.0)                 | 0.9  | (0.0, 2.1)  | 42.0 | (33.5, 50.6) |
| 45 to 54 yrs             | 11.9  | (7.4, 16.4)                  | 10.6  | (6.5, 14.7)                  | 5.5  | (2.7, 8.4)  | 27.3 | (21.6, 33.0) |
| 55 to 64 yrs             | 6.4   | (3.7, 9.2)                   | 8.8   | (5.4, 12.1)                  | 4.1  | (1.7, 6.5)  | 24.4 | (19.4, 29.3) |
| <b>Area of residence</b> |   |                              |   |                              |      |             |      |              |
| Perth Metro              | 11.2  | (7.1, 15.2)                  | 13.4  | (9.2, 17.6)                  | 6.6  | (3.2, 10.0) | 28.2 | (23.0, 33.4) |
| Rest of WA               | 9.3   | (6.4, 12.2)                  | 13.6  | (8.9, 18.2)                  | 4.7  | (2.1, 7.3)  | 30.6 | (25.2, 36.1) |

- Similar proportions of WA adults had tried to either increase their breakfast cereal intake (10.8%), or decrease their breakfast cereal intake (13.4%) in the past 12 months.
- A significantly greater proportion of WA adults had tried to decrease their 'other' cereal food intake (28.7%) than increase their 'other' cereal food intake (6.2%) in the past 12 months.
- Females (36.7%) were significantly more likely than males (21.0%) to have tried to decrease their 'other' cereal food intake in the past 12 months.
- Those aged 35 to 44 years (42.0%) were significantly more likely to have tried to decrease their 'other' cereal food intake in the past 12 months than all other age groups (24.0% of those aged 35 to 44 years, 27.3% of those aged 45 to 54 years, and 24.4% of those aged 55 to 64 years).
- Those aged 35 to 44 years (0.9%) were also significantly less likely to have tried to increase their 'other' cereal food intake in the past 12 months than those aged 18 to 34 years (10.2%), and those aged 45 to 54 years (5.5%).

Figure 8: **Attempts to change breakfast cereal and other cereal food intake in the past 12 months, by gender, WA NMSS 2015**



### Comparison of current cereal food intake with 12 months ago

Respondents were asked how their current intake of all types of cereals compared with their intake 12 months ago (Table 33).

- The majority of WA adults (63.1%) said they eat about the same amount of cereal foods now as they did 12 months ago.
- Three in ten (29.3%) said they ate less cereal foods now than 12 months ago.
- Females were significantly more likely than males to say they eat less cereal foods now than 12 months ago (38.1% compared with 20.8%).
- Adults in the 35 to 44 years age group were significantly more likely (38.8%) than adults in the 55 to 64 years age group (23.5%) to say they eat less cereal foods now than 12 months ago.

Table 33: Amount of cereal foods eaten now compared with 12 months ago, WA NMSS 2015

| n=1204                   | Eat less now |              | Eat about the same |              | Eat more now |             |
|--------------------------|--------------|--------------|--------------------|--------------|--------------|-------------|
|                          | %            | 95% CI       | %                  | 95% CI       | %            | 95% CI      |
| <b>Persons</b>           | 29.3         | (24.9, 33.6) | 63.1               | (58.3, 68.0) | 7.6          | (4.4, 10.8) |
| Female                   | 38.1         | (32.1, 44.2) | 56.2               | (50.1, 62.4) | 5.6          | (3.2, 8.1)  |
| Male                     | 20.8         | (15.1, 26.4) | 69.7               | (62.5, 77.0) | 9.5          | (3.8, 15.2) |
| <b>Age Group</b>         |              |              |                    |              |              |             |
| 18 to 34 yrs             | 26.9         | (18.0, 35.8) | 62.9               | (52.6, 73.2) | 10.2         | (3.1, 17.4) |
| 35 to 44 yrs             | 38.8         | (30.4, 47.3) | 55.7               | (47.1, 64.3) | 5.5          | (1.3, 9.6)  |
| 45 to 54 yrs             | 28.4         | (22.7, 34.1) | 64.5               | (58.3, 70.7) | 7.1          | (3.6, 10.6) |
| 55 to 64 yrs             | 23.5         | (18.5, 28.5) | 71.8               | (66.5, 77.1) | 4.7          | (2.4, 7.0)  |
| <b>Area of residence</b> |              |              |                    |              |              |             |
| Perth Metro              | 29.8         | (24.4, 35.1) | 62.3               | (56.3, 68.3) | 7.9          | (4.0, 11.8) |
| Rest of WA               | 27.4         | (22.5, 32.3) | 66.1               | (60.8, 71.4) | 6.5          | (3.5, 9.5)  |

#### 5.2.2.4 Milk, yoghurt, cheese and their alternatives

The 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 and their alternatives on the day prior to the survey (Table 34).

- Most respondents (97.3%) consumed some dairy foods or alternatives on the day prior to the survey.

Table 34: Consumption of dairy\* foods on the day prior to the survey, WA NMSS 2015

| n=1207                   | Milk |              | Yoghurt |              | Cheese |              | No dairy |            |
|--------------------------|------|--------------|---------|--------------|--------|--------------|----------|------------|
|                          | %    | 95% CI       | %       | 95% CI       | %      | 95% CI       | %        | 95% CI     |
| <b>Persons</b>           | 87.5 | (84.0, 91.0) | 29.4    | (24.9, 33.9) | 52.8   | (47.7, 57.9) | 2.7      | (1.7, 3.7) |
| Female                   | 82.4 | (77.2, 87.6) | 37.1    | (30.9, 43.2) | 45.9   | (39.9, 52.0) | 4.1      | (2.6, 5.5) |
| Male                     | 92.3 | (87.9, 96.8) | 22.1    | (16.0, 28.1) | 59.3   | (51.5, 67.1) | 1.3      | (0.0, 2.7) |
| <b>Age Group</b>         |      |              |         |              |        |              |          |            |
| 18 to 34 yrs             | 85.0 | (77.2, 92.8) | 26.4    | (17.0, 35.7) | 55.8   | (44.8, 66.8) | 0.2      | (0.0, 0.6) |
| 35 to 44 yrs             | 90.8 | (86.2, 95.5) | 33.6    | (25.4, 41.8) | 49.9   | (41.3, 58.6) | 4.5      | (1.1, 7.9) |
| 45 to 54 yrs             | 90.0 | (86.3, 93.6) | 30.3    | (24.4, 36.3) | 50.4   | (43.8, 56.9) | 4.1      | (1.7, 6.4) |
| 55 to 64 yrs             | 86.1 | (82.2, 89.9) | 30.1    | (24.8, 35.3) | 52.3   | (46.4, 58.3) | 4.5      | (2.3, 6.8) |
| <b>Area of Residence</b> |      |              |         |              |        |              |          |            |
| Perth Metro              | 87.1 | (82.8, 91.4) | 30.1    | (24.5, 35.7) | 51.0   | (44.7, 57.4) | 2.7      | (1.5, 3.9) |
| Rest of WA               | 88.9 | (85.6, 92.2) | 26.7    | (22.3, 31.2) | 59.6   | (54.2, 65.0) | 2.5      | (1.4, 3.7) |

Note: "Dairy" includes soy and other alternative dairy products

## Milk

Respondents were asked how much milk they consumed on the day prior to the survey - including milk used in cereal, tea, coffee, and other drinks, or milk used in cooking (including soy, almond, powdered milk and any other types of milk). They were also asked the main type of milk consumed and the fat content (Table 35) and whether flavoured or plain (data not shown).

- The majority of adults (87.5%) reported drinking milk on the day prior to the survey.
- Males were significantly more likely than females to drink milk (92.3% compared with 82.4%).
- Among those who consumed milk, 93.8% chose cow's milk, with the greatest proportion choosing to drink full-fat varieties (46.5%).
- Among those who consumed milk, consumers were significantly less likely to drink skim varieties of flavoured milk (3.9% (95% CI [0.0, 8.1])) compared with reduced fat (53.6% (95% CI [28.0, 79.3])) or full fat varieties (42.4% (95% CI [17.7, 67.2])).
- They were also significantly less likely to drink skim varieties of plain milk (14.9% (95% CI [11.0, 18.9])) or reduced fat milk (35.5% (95% CI [30.3, 40.8])) compared with full fat varieties (49.5% (95% CI [43.9, 55.2])).

Table 35: **Type of milk consumed on day prior to the survey, WA NMSS 2015**

| n=1044                   | Whole cow's milk |              | Low fat cow's milk |              | Skim cow's milk |              | Whole soy milk |            | Low fat/skim other |            | Other |             |
|--------------------------|------------------|--------------|--------------------|--------------|-----------------|--------------|----------------|------------|--------------------|------------|-------|-------------|
|                          | %                | 95% CI       | %                  | 95% CI       | %               | 95% CI       | %              | 95% CI     | %                  | 95% CI     | %     | 95% CI      |
| <b>Persons</b>           | 46.5             | (40.9, 52.0) | 34.6               | (29.4, 39.8) | 12.7            | (9.1, 16.3)  | 1.4            | (0.5, 2.3) | 0.4                | (0.1, 0.7) | 4.5   | (2.5, 6.6)  |
| Female                   | 40.9             | (34.4, 47.4) | 36.0               | (29.7, 42.3) | 14.5            | (9.7, 19.2)  | 1.4            | (0.4, 2.3) | 0.5                | (0.0, 1.1) | 6.7   | (3.1, 10.3) |
| Male                     | 51.2             | (42.7, 59.7) | 33.4               | (25.5, 41.3) | 11.1            | (5.8, 16.5)  | 1.4            | (0.0, 2.8) | 0.2                | (0.0, 0.5) | 2.7   | (0.5, 4.8)  |
| <b>Age Group</b>         |                  |              |                    |              |                 |              |                |            |                    |            |       |             |
| 18 to 34 yrs             | 50.7             | (38.6, 62.9) | 28.9               | (17.7, 40.0) | 14.5            | (6.3, 22.8)  | 0.2            | (0.0, 0.7) | 0.4                | (0.0, 1.0) | 5.2   | (0.8, 9.6)  |
| 35 to 44 yrs             | 49.1             | (40.0, 58.3) | 36.3               | (27.4, 45.3) | 6.8             | (2.8, 10.9)  | 2.3            | (0.0, 5.5) | -                  |            | 5.4   | (1.5, 9.2)  |
| 45 to 54 yrs             | 38.3             | (31.5, 45.1) | 42.2               | (35.4, 49.1) | 15.1            | (10.0, 20.3) | 0.9            | (0.0, 1.9) | 0.4                | (0.0, 1.1) | 3.0   | (0.5, 5.6)  |
| 55 to 64 yrs             | 43.2             | (36.8, 49.6) | 35.9               | (29.7, 42.1) | 13.1            | (8.8, 17.4)  | 3.4            | (0.8, 6.0) | 0.6                | (0.0, 1.4) | 3.8   | (1.4, 6.2)  |
| <b>Area of residence</b> |                  |              |                    |              |                 |              |                |            |                    |            |       |             |
| Perth Metro              | 44.5             | (37.6, 51.3) | 36.3               | (29.9, 42.7) | 13.0            | (8.5, 17.5)  | 1.4            | (0.3, 2.6) | 0.2                | (0.0, 0.4) | 4.5   | (2.1, 7.0)  |
| Rest of WA               | 53.7             | (47.7, 59.7) | 28.3               | (23.4, 33.3) | 11.3            | (7.9, 14.8)  | 1.1            | (0.1, 2.1) | 1.0                | (0.0, 2.1) | 4.5   | (1.2, 7.9)  |

Base: those who consumed milk on the day prior to the survey.

## Yoghurt

Respondents were asked how much yoghurt they ate on the day prior to the survey, the main type of yoghurt and the fat content of the yoghurt they consumed.

- Almost one third of adults (29.4%) consumed yoghurt on the day prior to the survey (Table 32).
- Females were significantly more likely than males to eat yoghurt on the day prior to the survey (37.1% compared with 22.1%).
- Of those who ate yoghurt, most ate full fat types (56.8%) (Table 36).

Table 36: Types of yoghurt consumed on the day prior to the survey, WA NMSS 2015

| n=389                    | Whole cow's milk yoghurt |              | Low fat cow's milk yoghurt |              | Skim cow's milk yoghurt |             | Whole other milk yoghurt |             | Low fat other milk yoghurt |            | Skim other milk yoghurt |            |
|--------------------------|--------------------------|--------------|----------------------------|--------------|-------------------------|-------------|--------------------------|-------------|----------------------------|------------|-------------------------|------------|
|                          | %                        | 95% CI       | %                          | 95% CI       | %                       | 95% CI      | %                        | 95% CI      | %                          | 95% CI     | %                       | 95% CI     |
| <b>Persons</b>           | 53.5                     | (44.7, 62.4) | 31.9                       | (23.5, 40.2) | 9.3                     | (4.5, 14.2) | 3.3                      | (0.5, 6.2)  | 0.4                        | (0.0, 1.1) | 1.5                     | (0.0, 0.4) |
| Female                   | 53.3                     | (42.2, 64.4) | 30.3                       | (19.7, 40.9) | 10.1                    | (3.1, 17.0) | 4.4                      | (0.1, 8.6)  | NA                         |            | 1.9                     | (0.0, 5.7) |
| Male                     | 53.9                     | (39.4, 68.5) | 34.3                       | (20.7, 47.9) | 8.1                     | (2.3, 14.0) | 1.7                      | (0.0, 4.5)  | 1.1                        | (0.0, 2.8) | 0.9                     | (0.0, 2.6) |
| <b>Age Group</b>         |                          |              |                            |              |                         |             |                          |             |                            |            |                         |            |
| 18 to 34 yrs             | 56.1                     | (35.9, 76.2) | 30.9                       | (12.4, 49.5) | 6.4                     | (0.0, 17.4) | 3.3                      | (0.0, 9.7)  | NA                         |            | 3.3                     | (0.0, 9.7) |
| 35 to 44 yrs             | 57.1                     | (41.9, 72.3) | 33.8                       | (18.7, 49.0) | 5.7                     | (0.9, 10.5) | 3.4                      | (0.0, 7.6)  | NA                         |            | NA                      |            |
| 45 to 54 yrs             | 43.8                     | (32.3, 55.3) | 35.0                       | (23.5, 46.5) | 15.3                    | (6.1, 24.5) | 5.9                      | (0.2, 11.6) | NA                         |            | NA                      |            |
| 55 to 64 yrs             | 55.1                     | (44.8, 65.5) | 27.1                       | (17.9, 36.2) | 13.2                    | (5.7, 20.8) | 0.2                      | (0.0, 0.7)  | 2.4                        | (0.0, 6.3) | 2.0                     | (0.0, 5.8) |
| <b>Area of residence</b> |                          |              |                            |              |                         |             |                          |             |                            |            |                         |            |
| Perth Metro              | 51.2                     | (40.4, 62.0) | 33.1                       | (23.0, 43.2) | 9.8                     | (3.9, 15.7) | 3.6                      | (0.1, 7.1)  | 0.4                        | (0.0, 1.2) | 1.9                     | (0.0, 4.9) |
| Rest of WA               | 63.4                     | (55.0, 71.9) | 26.7                       | (18.8, 34.5) | 7.4                     | (3.1, 11.6) | 2.1                      | (0.3, 4.0)  | 0.4                        | (0.0, 1.2) | NA                      |            |

Base: those who ate yoghurt on the day prior to the survey.

## Cheese

Respondents were asked if they ate cheese on the day prior to the survey and if so, how much of different types of cheeses they ate (Table 34 and Table 37).

- Over half of WA adults (52.8%) ate cheese of some type on the day prior to the survey (Table 34).
- Including people who didn't eat any cheese, the mean amount of cheese consumed on the day prior to the survey was 1.0 (95% CI [0.8 - 1.1]) serve.
- The mean amount of cheese consumed by only those who did consume cheese on the day prior to the survey was 1.9 (95% CI [1.6 - 2.1]) serves.
- Around four in ten adults ate full fat cheeses (44.8%), with only 7.9% eating reduced fat cheese and 4.4% eating ricotta/cottage style cheeses.
- Males were significantly more likely than females to eat full fat cheeses (51.7% compared with 37.5%).

Table 37: Types of cheese consumed on the day prior to the survey, WA NMSS 2015

| n=1207                   | Ricotta or cottage cheese | Reduced fat cheese | Full fat cheese   |
|--------------------------|---------------------------|--------------------|-------------------|
|                          | % 95% CI                  | % 95% CI           | % 95% CI          |
| <b>Persons</b>           | 4.4 (2.5, 6.4)            | 7.9 (5.0, 10.9)    | 44.8 (39.6, 49.9) |
| Female                   | 5.9 (2.7, 9.1)            | 7.0 (3.7, 10.3)    | 37.5 (31.9, 43.1) |
| Male                     | 3.0 (0.8, 5.3)            | 8.8 (4.1, 13.6)    | 51.7 (43.6, 59.8) |
| <b>Age Group</b>         |                           |                    |                   |
| 18 to 34 yrs             | 5.7 (1.5, 9.8)            | 8.2 (1.9, 14.5)    | 47.4 (36.3, 58.4) |
| 35 to 44 yrs             | 5.5 (1.3, 9.7)            | 6.9 (2.1, 11.7)    | 42.9 (34.4, 51.4) |
| 45 to 54 yrs             | 2.0 (0.1, 3.8)            | 9.0 (5.0, 13.0)    | 42.6 (36.2, 49.0) |
| 55 to 64 yrs             | 3.1 (1.0, 5.1)            | 7.3 (4.3, 10.4)    | 43.7 (37.9, 49.5) |
| <b>Area of Residence</b> |                           |                    |                   |
| Perth Metro              | 4.5 (2.2, 6.9)            | 8.7 (5.1, 12.4)    | 42.1 (35.8, 48.5) |
| Rest of WA               | 4.0 (0.7, 7.3)            | 4.9 (2.9, 6.9)     | 54.7 (49.1, 60.3) |

Note: Reduced fat and full fat cheeses include all hard and soft types excluding ricotta or cottage cheese.

In previous NMSS, 'types of cheese' was only reported for a base sample of those eating cheese.

### Intention related to the intake of calcium-rich foods

Respondents were asked which of four statements best described their intake of calcium rich foods and whether they were thinking about or trying to eat more (Table 38).

- Half (51.4%) said they already eat enough calcium-rich foods.
- Females were significantly more likely than males to say they were both thinking about eating more calcium rich foods (12.7% compared with 10.6%) and trying to eat more calcium rich foods (10.6% compared with 2.7%).

Table 38: Intention toward eating more calcium-rich food, WA NMSS 2015

| n=1205                   | Already eat enough calcium rich food | Not thinking about eating more calcium rich food | Thinking about eating more calcium rich food | Trying to eat more calcium rich foods |
|--------------------------|--------------------------------------|--|--|---------------------------------------|
|                          | % 95% CI                             | % 95% CI   | % 95% CI                                     | % 95% CI                              |
| <b>Persons</b>           | 51.4 (46.2, 56.5)                    | 30.5 (25.8, 35.2)                                | 11.6 (7.9, 15.3)                             | 6.5 (4.6, 8.5)                        |
| Female                   | 46.9 (40.8, 53.0)                    | 29.8 (23.9, 35.7)                                | 12.7 (8.1, 17.3)                             | 10.6 (7.2, 13.9)                      |
| Male                     | 55.6 (47.5, 63.7)                    | 31.1 (23.8, 38.5)                                | 10.6 (4.7, 16.4)                             | 2.7 (0.7, 4.7)                        |
| <b>Age Group</b>         |                                      |  |  |                                       |
| 18 to 34 yrs             | 46.8 (35.8, 57.9)                    | 30.3 (20.2, 40.5)                                | 17.0 (8.4, 25.5)                             | 5.8 (1.8, 9.9)                        |
| 35 to 44 yrs             | 57.5 (49.1, 65.9)                    | 30.6 (22.6, 38.5)                                | 6.9 (3.0, 10.7)                              | 5.1 (2.2, 8.0)                        |
| 45 to 54 yrs             | 50.1 (43.6, 56.7)                    | 31.5 (25.4, 37.6)                                | 8.8 (5.2, 12.5)                              | 9.5 (5.9, 13.2)                       |
| 55 to 64 yrs             | 55.7 (49.8, 61.6)                    | 29.6 (24.0, 35.1)                                | 8.3 (5.2, 11.4)                              | 6.4 (3.9, 9.0)                        |
| <b>Area of residence</b> |                                      |  |  |                                       |
| Perth Metro              | 51.2 (44.8, 57.5)                    | 30.1 (24.3, 35.9)                                | 12.2 (7.6, 16.8)                             | 6.5 (4.1, 8.9)                        |
| Rest of WA               | 52.0 (46.3, 57.7)                    | 32.0 (26.5, 37.5)                                | 9.5 (5.8, 13.1)                              | 6.6 (3.9, 9.2)                        |

### 5.2.2.5 Water

In addition to eating a wide variety of nutritious foods the Guidelines recommend drinking ‘plenty of water’.

#### Amount of drinking water consumed

Respondents were asked how many cups, glasses, millilitres (mL) or litres (L) of plain water they drank on the day prior to the survey (Table 39).

- Most adults (95.2%) consumed water on the day prior to the survey.
- WA adults in the Perth metro area (94.3%) were significantly less likely to report water consumption on the previous day than those living elsewhere in WA (98.4%).
- The mean water consumption of all adults in WA was 1384 mL (95% CI [1293.9, 1474.9]).
- Among only those who said they drank water on the day prior to survey (n=1158), the mean consumption was 1454 mL (95% CI [1368.0, 1540.2]).

Table 39: **Water consumption on the day prior to the survey, WA NMSS 2015**

| n=1203                   | Consumed water     |
|--------------------------|--------------------|
|                          | % 95% CI           |
| <b>Persons</b>           | 95.2 (92.8, 97.6)  |
| Female                   | 98.1 (96.5, 99.7)  |
| Male                     | 92.4 (88.0, 96.8)  |
| <b>Age Group</b>         |                    |
| 18 to 34 yrs             | 96.7 (91.8, 100.0) |
| 35 to 44 yrs             | 94.9 (90.3, 99.5)  |
| 45 to 54 yrs             | 95.8 (92.7, 98.9)  |
| 55 to 64 yrs             | 91.4 (87.5, 95.2)  |
| <b>Area of Residence</b> |                    |
| Perth Metro              | 94.3 (91.3, 97.4)  |
| Rest of WA               | 98.4 (97.6, 99.3)  |

### Sources of plain drinking water

Respondents were asked whether the water they consumed was mostly from a tap, filtered from a tap or bottled (Table 40).

- Among those who drank water on the day prior to the survey, the majority drank tap water (52.0%). Filtered tap water was consumed by 33.9% of adults.
- There were no significant differences in sources of plain drinking water by gender, age group or area of residence.

Table 40: **Main type of water consumed on day prior to the survey, WA NMSS 2015**

| n=1158                   | Tap water         | Filtered water    | Bottled water     |
|--------------------------|-------------------|-------------------|-------------------|
|                          | % 95% CI          | % 95% CI          | % 95% CI          |
| <b>Persons</b>           | 52.0 (46.8, 57.2) | 33.9 (29.0, 38.8) | 14.2 (10.6, 17.7) |
| Female                   | 53.5 (47.3, 59.7) | 32.8 (27.1, 38.5) | 13.7 (9.2, 18.2)  |
| Male                     | 50.4 (42.0, 58.8) | 35.0 (26.9, 43.0) | 14.6 (9.0, 20.2)  |
| <b>Age Group</b>         |                   |                   |                   |
| 18 to 34 yrs             | 54.7 (43.6, 65.8) | 30.6 (20.2, 40.9) | 14.8 (7.2, 22.4)  |
| 35 to 44 yrs             | 42.9 (34.3, 51.4) | 41.4 (32.7, 50.2) | 15.7 (9.4, 22.0)  |
| 45 to 54 yrs             | 53.6 (46.9, 60.2) | 32.8 (26.5, 39.1) | 13.6 (9.0, 18.3)  |
| 55 to 64 yrs             | 55.5 (49.5, 61.6) | 33.2 (27.5, 38.9) | 11.3 (7.6, 15.0)  |
| <b>Area of residence</b> |                   |                   |                   |
| Perth Metro              | 51.6 (45.1, 58.1) | 35.4 (29.3, 41.5) | 13.0 (8.6, 17.4)  |
| Rest of WA               | 53.2 (47.5, 58.9) | 28.4 (23.0, 33.9) | 18.3 (13.9, 22.8) |

Base: those who drank water on the day prior to the survey.

Note: Rain water was coded as bottled water



## 5.2.3 Discretionary foods

The third dietary guideline recommends ‘Limit intake of foods containing saturated fat, added salt, added sugars and alcohol’. These foods are commonly called discretionary foods (they should be consumed occasionally), because they are high in energy (kilojoules) and low in nutrients.

### 5.2.3.1 Soft drinks

Respondents were asked to estimate the amount of sugar sweetened drinks they consumed on the day prior to the survey; carbonated drinks, energy drinks, sports drinks, flavoured mineral water and vitamin water. Respondents were also asked separately about diet (low calorie, artificially sweetened) drinks. Collectively, the sugar sweetened and diet drinks are referred to as soft drinks.

To estimate amounts of soft drinks consumed, respondents were asked how many cans, bottles, glasses or cups of the listed sugar sweetened or diet drinks they drank on the day prior to the survey, along with the size of the container. For example a respondent might report consuming two 355 mL cans of RedBull® or a 1.25 litre bottle of Coke®.

The types of soft drinks consumed are shown in Table 41 and Figure 9. Amounts and frequencies of consumption are discussed below in separate sections for total, sugar sweetened and diet drinks.

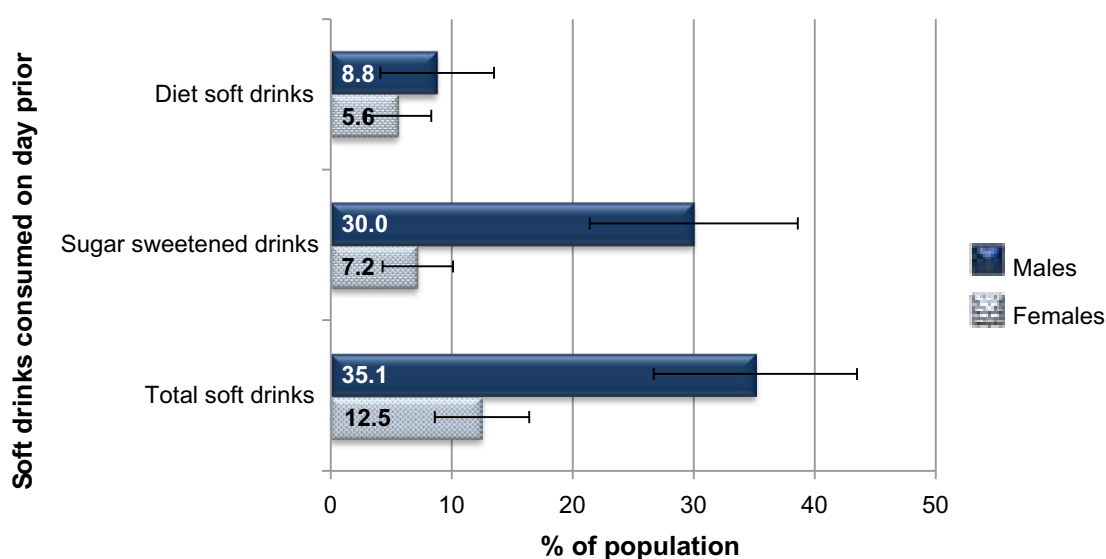
Table 41: **Sugar sweetened\*, diet and total soft drinks consumed on day prior to the survey, WA NMSS 2015**

| n=1205                     | Sugar sweetened drinks* |              | Diet drinks |             | Total soft drinks** |              |
|----------------------------|-------------------------|--------------|-------------|-------------|---------------------|--------------|
|                            | %                       | 95% CI       | %           | 95% CI      | %                   | 95% CI       |
| <b>Persons</b>             | 18.8                    | (13.8, 23.9) | 7.3         | (4.5, 10.0) | 24.1                | (19.0, 29.2) |
| Female                     | 7.2                     | (4.3, 10.1)  | 5.6         | (2.9, 8.4)  | 12.5                | (8.6, 16.4)  |
| Male                       | 30.0                    | (21.4, 38.6) | 8.8         | (4.1, 13.5) | 35.1                | (26.7, 43.6) |
| <b>Age Group</b>           |                         |              |             |             |                     |              |
| 18 to 34 yrs               | 29.0                    | (18.1, 40.0) | 5.4         | (0.0, 11.0) | 31.9                | (20.8, 43.0) |
| 35 to 44 yrs               | 16.1                    | (9.2, 23.0)  | 10.2        | (4.6, 15.8) | 22.0                | (14.6, 29.4) |
| 45 to 54 yrs               | 10.1                    | (6.2, 14.1)  | 8.4         | (4.7, 12.2) | 18.6                | (13.4, 23.7) |
| 55 to 64 yrs               | 8.6                     | (5.2, 12.0)  | 6.6         | (3.7, 9.5)  | 14.8                | (10.5, 19.0) |
| <b>Area of Residence</b>   |                         |              |             |             |                     |              |
| Perth Metro                | 19.0                    | (12.8, 25.3) | 7.4         | (3.9, 10.8) | 24.0                | (17.7, 30.3) |
| Rest of WA                 | 18.1                    | (13.1, 23.0) | 6.9         | (4.6, 9.1)  | 24.2                | (19.1, 29.3) |
| <b>BMI category n=1140</b> |                         |              |             |             |                     |              |
| Healthy weight             | 20.6                    | (10.7, 30.4) | 3.5         | (0.4, 6.6)  | 23.6                | (13.7, 33.6) |
| Overweight                 | 17.6                    | (8.8, 26.3)  | 6.8         | (2.8, 10.8) | 23.6                | (14.6, 32.5) |
| Obese                      | 21.3                    | (12.7, 29.9) | 13.0        | (5.5, 20.4) | 28.3                | (19.6, 37.0) |

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

\*\* some respondents may have consumed both SSB and diet drinks so totals may not add up

Figure 9: **Sugar sweetened, diet and total soft drinks consumed on day prior to the survey, WA NMSS 2015**



### Sugar sweetened drinks

- Overall, 18.8% of the population consumed sugar sweetened drinks on the day prior to the survey.
- Males were significantly more likely to have consumed sugar sweetened drinks than females (30.0% compared with 7.2%).
- Younger adults 18 to 34 years (29.0%) were significantly more likely to have consumed sugar sweetened drinks than those aged over 45 to 54 years (10.1%) and 55 to 64 years (8.6%).
- The population mean amount of sugar sweetened drinks consumed on the day prior to the survey was 125mL (95% CI [78, 171]).
- Among those who drank sugar sweetened drinks, the mean intake was 662mL (95% CI [484, 839]).

### Diet drinks

- Around one in thirteen adults (7.3%) reported drinking diet drinks on the day prior to the survey.
- The population mean amount of diet soft drinks consumed on the day prior to the survey was 40mL (95% CI [22,58]).
- Among those who drank diet soft drinks, the mean intake was 544mL (95% CI [352, 737]).

### Total soft drinks

- A quarter of WA adults (24.1%) consumed soft drinks on the day prior to the survey.
- Males were significantly more likely to have consumed soft drinks than females (35.1% compared with 12.5%).
- Adults aged 18 to 34 years (31.9%) were significantly more likely to have consumed soft drinks than those aged 55 to 64 years (14.8%)
- The population mean intake of soft drinks consumed on the day prior to the survey was 164mL (95% CI [114, 214]).
- Among those who consumed soft drinks, the mean intake was 682mL (95% CI [533, 832]).

## Intentions to reduce sugary drinks

- Respondents were asked which of four statements best described them in relation to their sugary drink consumption, and whether they were thinking about or trying to reduce their intake (Table 42).
- Three quarters of WA adults (73.6%) thought they already had a diet low in sugary drinks.
- Only 12.7% of adults were trying to drink fewer sugary drinks and 6.4% were thinking about cutting down the amount consumed.
- Females were more likely than males to state that they already have a diet low in sugary drinks (81.5% compared with 65.9%).
- Those aged 18 to 34 years (63.3%) were significantly less likely than those aged 55 to 64 years (83.2%) to already have a diet low in sugary drinks.
- Those aged 18 to 34 years were significantly more likely than those aged 45 to 54 years to not be thinking about cutting down on sugary drinks (13.7% compared with 1.5%).

Table 42: Intentions toward reducing sugary drink intake, WA NMSS 2015

| n=1207                   | Already have a diet low in sugary drinks |              | Currently trying to drink fewer sugary drinks |              | Thinking about cutting down sugary drinks |             | Not thinking about cutting down sugary drinks |             |
|--------------------------|--|--------------|---|--------------|---|-------------|---|-------------|
|                          | %  | 95% CI       | %   | 95% CI       | %   | 95% CI      | %   | 95% CI      |
| <b>Persons</b>           | 73.6                                     | (68.5, 78.6) | 12.7  | (9.2, 16.3)  | 6.4                                       | (3.5, 9.2)  | 7.4   | (3.7, 11.1) |
| Female                   | 81.5                                     | (76.2, 86.8) | 9.8   | (6.0, 13.6)  | 5.1                                       | (1.7, 8.6)  | 3.5   | (0.9, 6.2)  |
| Male                     | 65.9                                     | (57.7, 74.2) | 15.5  | (9.6, 21.5)  | 7.5                                       | (3.0, 12.1) | 11.0  | (4.4, 17.6) |
| <b>Age Group</b>         |  |              |   |              |   |             |   |             |
| 18 to 34 yrs             | 63.3                                     | (52.3, 74.3) | 13.7  | (5.9, 21.4)  | 9.3                                       | (2.8, 15.9) | 13.7  | (5.1, 22.3) |
| 35 to 44 yrs             | 79.4                                     | (72.4, 86.3) | 12.4  | (6.6, 18.2)  | 3.9                                       | (0.6, 7.1)  | 4.4   | (1.0, 7.7)  |
| 45 to 54 yrs             | 79.5                                     | (74.0, 85.1) | 14.3  | (9.3, 19.2)  | 4.7                                       | (1.9, 7.5)  | 1.5   | (0.2, 2.8)  |
| 55 to 64 yrs             | 83.2                                     | (78.8, 87.7) | 9.1   | (5.8, 12.4)  | 4.5                                       | (1.7, 7.2)  | 3.2   | (1.1, 5.3)  |
| <b>Area of Residence</b> |  |              |   |              |   |             |   |             |
| Perth Metro              | 73.4                                     | (67.1, 79.6) | 11.8  | (7.5, 16.2)  | 6.6                                       | (3.1, 10.2) | 8.2   | (3.6, 12.8) |
| Rest of WA               | 74.3                                     | (69.1, 79.5) | 16.1  | (11.6, 20.7) | 5.4                                       | (2.9, 7.8)  | 4.2   | (1.7, 6.7)  |

When asked how often they tried to avoid sugary drinks, around half (52.1%) the respondents claimed to 'always' avoid sugary drinks (Table 43).

- Females were significantly more likely than males to say they always avoid sugary drinks (60.1% compared with 44.4%).
- Adults aged 55 to 64 years (68.2%) were significantly more likely than adults 18 to 34 years (40.8%) and adults 35 to 44 years (53.4%) to say they always avoid sugary drinks.
- Adults aged 18 to 34 years (24.3%) were significantly more likely than all other age groups to say they sometimes try to avoid sugary drinks (7.3% of 35 to 44 year old adults, 8.6% of 45 to 54 year old adults and 8.5% of 55 to 64 year old adults).

Table 43: Frequency of trying to avoid sugary drinks, WA NMSS 2015

| n=1200                     | Always |              | Often |              | Sometimes |              | Rarely/never |             |
|----------------------------|--------|--------------|-------|--------------|-----------|--------------|--------------|-------------|
|                            | %      | 95% CI       | %     | 95% CI       | %         | 95% CI       | %            | 95% CI      |
| <b>Persons</b>             | 52.1   | (46.9, 57.3) | 26.2  | (21.8, 30.6) | 14.6      | (9.9, 19.3)  | 7.1          | (4.0, 10.2) |
| Female                     | 60.1   | (53.9, 66.3) | 24.3  | (19.0, 29.6) | 11.1      | (6.2, 16.0)  | 4.5          | (2.3, 6.7)  |
| Male                       | 44.4   | (36.4, 52.3) | 28.0  | (21.0, 35.1) | 18.0      | (10.3, 25.8) | 9.6          | (3.9, 15.2) |
| <b>Age Group</b>           |        |              |       |              |           |              |              |             |
| 18 to 34 yrs               | 40.8   | (30.2, 51.5) | 24.8  | (15.5, 34.1) | 24.3      | (13.8, 34.7) | 10.2         | (3.0, 17.3) |
| 35 to 44 yrs               | 53.4   | (44.8, 62.1) | 32.8  | (24.5, 41.1) | 7.3       | (2.9, 11.7)  | 6.5          | (2.2, 10.8) |
| 45 to 54 yrs               | 59.4   | (53.0, 65.9) | 28.4  | (22.4, 34.4) | 8.6       | (4.6, 12.5)  | 3.6          | (1.8, 5.5)  |
| 55 to 64 yrs               | 68.2   | (62.5, 73.8) | 18.4  | (13.7, 23.1) | 8.5       | (5.0, 12.0)  | 4.9          | (2.4, 7.4)  |
| <b>Area of Residence</b>   |        |              |       |              |           |              |              |             |
| Perth Metro                | 51.9   | (45.5, 58.3) | 26.0  | (20.5, 31.4) | 15.8      | (10.0, 21.6) | 6.3          | (2.5, 10.1) |
| Rest of WA                 | 52.7   | (47.0, 58.5) | 27.1  | (22.0, 32.3) | 10.0      | (6.5, 13.5)  | 10.1         | (6.1, 14.1) |
| <b>BMI category n=1135</b> |        |              |       |              |           |              |              |             |
| Healthy weight             | 55.0   | (45.2, 64.9) | 23.1  | (15.3, 30.9) | 10.3      | (2.6, 18.1)  | 11.5         | (3.6, 19.4) |
| Overweight                 | 48.4   | (39.8, 57.1) | 31.2  | (22.9, 39.5) | 15.4      | (7.1, 23.6)  | 5.0          | (0.2, 9.8)  |
| Obese                      | 55.1   | (46.0, 64.2) | 23.5  | (16.9, 30.1) | 15.6      | (7.2, 24.0)  | 5.8          | (2.3, 9.3)  |

### 5.2.3.2 Foods high in sugar or added sugar

Respondents were asked which of four statements best described them in relation to their intake of foods high in sugar or added sugar (Table 44).

- Half of WA adults (50.4%) claimed they already had a diet without a lot of high sugar foods.
- One in five (21.9%) was currently trying to eat fewer foods high in sugar or added sugar.
- Adults aged 55 to 64 years (63.5%) were significantly more likely than those aged 18 to 34 years (46.2%) and those aged 35 to 44 years (46.5%) to claim they already eat a diet low in sugar and added sugar foods.
- Adults aged 18 to 34 years (23.0%) were significantly more likely to be thinking about cutting down on foods high in sugar or added sugar than those aged 55 to 64 years (8.9%).

Table 44: Intentions to eat less food high in sugar or added sugar, WA NMSS 2015

| n=1207                   | Already eat a diet without a lot of high sugar foods |              | Trying to eat fewer foods high in sugar or added sugar |              | Thinking about cutting down foods high in sugar or added sugar |              | Not thinking about cutting down foods high in sugar or added sugar |             |
|--------------------------|--|--------------|--|--------------|--|--------------|--|-------------|
|                          | %  | 95% CI       | %  | 95% CI       | %  | 95% CI       | %  | 95% CI      |
| <b>Persons</b>           | 50.4   | (45.3, 55.6) | 21.9   | (18.0, 25.8) | 17.2   | (12.7, 21.7) | 10.5   | (6.8, 14.1) |
| Female                   | 52.3   | (46.1, 58.5) | 24.6   | (19.4, 29.8) | 15.5   | (10.4, 20.6) | 7.6  | (3.9, 11.4) |
| Male                     | 48.6   | (40.5, 56.7) | 19.3   | (13.6, 25.0) | 18.9   | (11.5, 26.2) | 13.2   | (7.0, 19.3) |
| <b>Age Group</b>         |  |              |  |              |  |              |  |             |
| 18 to 34 yrs             | 46.2   | (35.2, 57.2) | 17.4   | (9.7, 25.2)  | 23.0   | (13.0, 33.0) | 13.4   | (5.3, 21.5) |
| 35 to 44 yrs             | 46.5   | (38.0, 55.1) | 25.5   | (18.0, 33.0) | 17.6   | (10.8, 24.3) | 10.4   | (4.8, 16.1) |
| 45 to 54 yrs             | 52.1   | (45.6, 58.7) | 28.4   | (22.4, 34.5) | 12.3   | (7.9, 16.6)  | 7.1  | (3.9, 10.4) |
| 55 to 64 yrs             | 63.5   | (57.8, 69.2) | 20.0   | (15.3, 24.7) | 8.9  | (5.6, 12.3)  | 7.6  | (4.3, 10.9) |
| <b>Area of Residence</b> |  |              |  |              |  |              |  |             |
| Perth Metro              | 49.5   | (43.1, 55.8) | 21.3   | (16.6, 26.1) | 18.1   | (12.5, 23.7) | 11.2   | (6.6, 15.7) |
| Rest of WA               | 54.1   | (48.4, 59.7) | 24.1   | (19.2, 29.0) | 14.0   | (10.3, 17.7) | 7.8  | (4.4, 11.2) |

### Frequency of trying to avoid foods high in sugar or added sugar

Respondents were asked how often they tried to avoid foods high in sugar or added sugar.

- Three in ten WA adults (29.0%) said they always avoided foods high in sugar or added sugar, whereas one in ten (10.8%) rarely or never did (Table 45).
- Adults aged 55 to 64 years (47.4%) were significantly more likely than all other age groups to say they always avoid foods high in sugar or added sugar (22.2% of 18 to 34 year olds, 24.1% of 35 to 44 year olds and 32.4% of 45 to 54 year olds).
- Adults aged 55 to 64 years (31.8%) were significantly less likely to say they often avoid foods high in sugar or added sugar than those aged 35 to 44 years (49.4%) or those aged 45 to 54 years (45.3%).
- Adults aged 18 to 34 years of age were significantly more likely than those aged 55 to 64 years to say they rarely or never avoid foods high in sugar or added sugar (17.1% compared with 4.3%).
- Those with a household income above \$60,000 were significantly more likely than those on a lower income to rarely or never avoid foods high in sugar or added sugar (12.1% compared with 3.9%).

Table 45: Frequency of trying to avoid foods high in sugar or added sugar, WA NMSS 2015

| n=1201                                | Always |              | Often |              | Sometimes |              | Rarely/never |              |
|---------------------------------------|--------|--------------|-------|--------------|-----------|--------------|--------------|--------------|
|                                       | %      | 95% CI       | %     | 95% CI       | %         | 95% CI       | %            | 95% CI       |
| <b>Persons</b>                        | 29.0   | (24.6, 33.4) | 38.9  | (34.0, 43.8) | 21.3      | (16.8, 25.9) | 10.8         | (6.9, 14.7)  |
| Female                                | 31.3   | (25.8, 36.9) | 41.5  | (35.5, 47.5) | 21.1      | (15.3, 26.9) | 6.1          | (3.3, 8.9)   |
| Male                                  | 26.8   | (20.1, 33.5) | 36.3  | (28.6, 44.0) | 21.6      | (14.5, 28.6) | 15.3         | (8.4, 22.3)  |
| <b>Age Group</b>                      |        |              |       |              |           |              |              |              |
| 18 to 34 yrs                          | 22.2   | (13.2, 31.3) | 32.9  | (22.7, 43.0) | 27.8      | (17.7, 37.9) | 17.1         | ( 8.3, 25.9) |
| 35 to 44 yrs                          | 24.1   | (17.1, 31.2) | 49.4  | (40.8, 58.0) | 18.2      | (11.6, 24.7) | 8.3          | ( 3.3, 13.3) |
| 45 to 54 yrs                          | 32.4   | (26.1, 38.6) | 45.3  | (38.7, 51.8) | 16.0      | (11.2, 20.8) | 6.4          | (3.0, 9.8)   |
| 55 to 64 yrs                          | 47.4   | (41.5, 53.3) | 31.8  | (26.3, 37.2) | 16.5      | (12.0, 21.1) | 4.3          | ( 2.2, 6.4)  |
| <b>Area of Residence</b>              |        |              |       |              |           |              |              |              |
| Perth Metro                           | 28.7   | (23.3, 34.1) | 38.5  | (32.5, 44.6) | 21.5      | (15.9, 27.2) | 11.2         | (6.4, 16.0)  |
| Rest of WA                            | 30.2   | (25.1, 35.2) | 40.0  | (34.6, 45.5) | 20.7      | (15.6, 25.7) | 9.2          | (5.6, 12.7)  |
| <b>Annual household income n=1061</b> |        |              |       |              |           |              |              |              |
| Up to \$60,000                        | 35.0   | (24.9, 45.2) | 37.8  | (26.2, 49.4) | 23.3      | (13.1, 33.5) | 3.9          | (1.2, 6.6)   |
| \$60,000 and over                     | 27.1   | (21.8, 32.4) | 40.4  | (34.4, 46.4) | 20.3      | (14.9, 25.8) | 12.1         | (7.0, 17.3)  |
| <b>BMI category n=1136</b>            |        |              |       |              |           |              |              |              |
| Healthy weight                        | 29.7   | (22.2, 37.3) | 38.9  | (29.8, 48.0) | 18.4      | (9.6, 27.3)  | 13.0         | (4.8, 21.1)  |
| Overweight                            | 27.1   | (20.2, 34.1) | 40.9  | (32.5, 49.3) | 20.6      | (12.6, 28.5) | 11.4         | (4.4, 18.5)  |
| Obese                                 | 28.8   | (20.3, 37.4) | 39.3  | (30.4, 48.3) | 25.8      | (17.8, 33.8) | 6.0          | (2.6, 9.5)   |

### Influences and difficulties to change intake of sugary food and drinks

Respondents attempting to change their intake of foods and/or drinks high in sugar or added sugar were asked what influenced their decision. All respondents were also asked what made it or would make it difficult to change their intake of foods and/or drinks high in sugar or added sugar. Up to five answers were allowed to each question (Figure 10).

The top three reasons to try to change sugary food and drink intake, for those trying to change, were to:

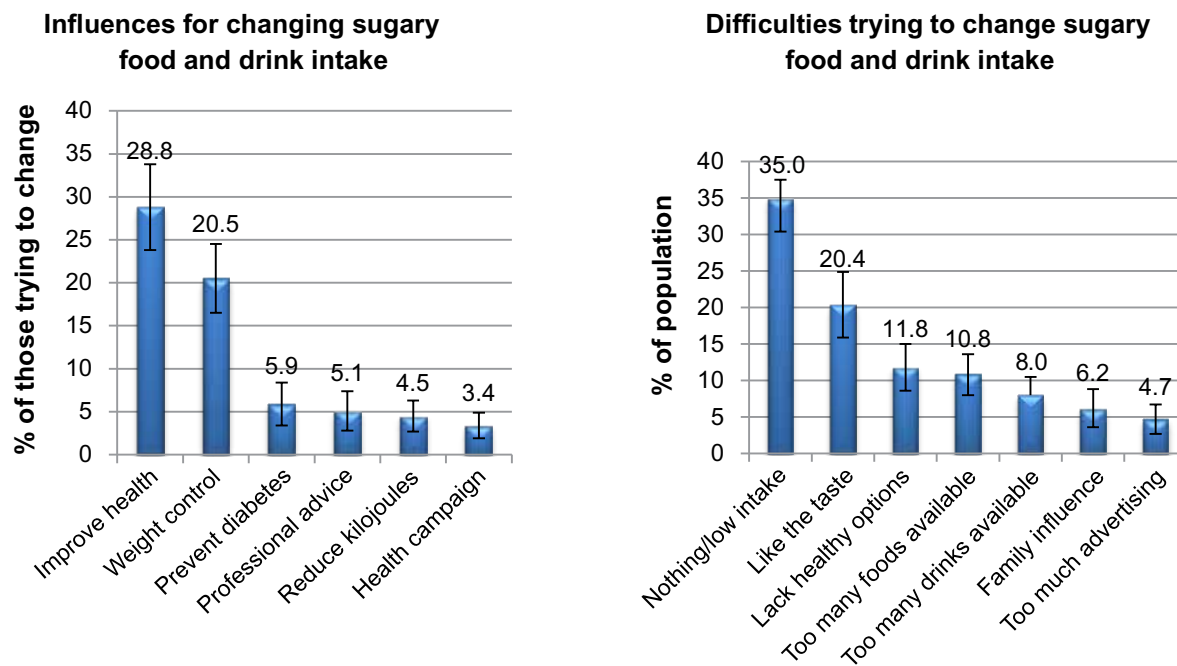
- improve health in general/ health reasons (28.8% (95% CI [23.8, 33.8]))
- control weight/ prevent weight gain (20.5% (95% CI [16.5, 24.6]))
- prevent diabetes (5.9% (95% CI [3.4, 8.5])).

The top three difficulties associated with trying to change the amount of sugary food and drinks consumed, for all respondents were:

- a liking for the taste (20.4% (95% CI [15.9, 25.0]))
- lack of healthy options available (11.8% (95% CI [8.6, 15.0]))
- too many high sugar foods (10.8% (95% CI [7.9, 13.8])) and high sugar drinks (8.0% (95% CI [5.4, 10.5])) available.

Overall, a third of the population (35.0% (95% CI [30.4, 39.6])) said they don't eat foods or drinks with added sugar, or nothing made it difficult for them to change the amount of these items they consume.

Figure 10: Influences and difficulties to change intake of sugary food and drinks, WA NMSS 2015



### 5.2.3.3 Fat and fatty foods

Respondents were asked a series of questions about their intake of fat and fatty foods, including: current intake; attempts to avoid or cut down fats; attempts to cut down in the past year; differences in intake between years; and the types of added fat used when preparing food (Tables 46 to 53).

#### Intentions to reduce fat and fatty food intake

Respondents were asked which of four statements best described them in relation to their current intake of fat and fatty foods, and whether they were thinking about or trying to eat less (Table 46).

- Around two out of five WA adults (43.7%) said they ‘already eat a diet low in fat’ and 26.0% said they were ‘trying to eat less fat and fatty foods’.
- WA adults aged 55 to 64 years were significantly more likely than those aged 35 to 44 years to say they already eat a diet low in fat (53.9% compared with 38.4%).
- Those adults classified as obese were significantly less likely than others to say they already eat a low fat diet (27.8% compared with 50.3% overweight and 53.2% healthy weight).
- Those classified as obese were significantly more likely to be trying to eat less fat and fatty foods than those of a healthy weight (36.5% compared with 14.1%).

Table 46: Intentions toward eating less fat and fatty foods, WA NMSS 2015

| n=1207                     | Already eat a low fat diet |              | Trying to eat less fat and fatty foods |              | Thinking about cutting down fat and fatty foods |              | Not thinking about cutting down fat |              |
|----------------------------|----------------------------|--------------|--|--------------|---|--------------|-------------------------------------|--------------|
|                            | %                          | 95% CI       | %                                      | 95% CI       | %   | 95% CI       | %                                   | 95% CI       |
| <b>Persons</b>             | 43.7                       | (38.7, 48.8) | 26.0                                   | (21.7, 30.2) | 18.0  | (13.5, 22.5) | 12.3                                | (9.1, 15.5)  |
| Female                     | 45.6                       | (39.5, 51.6) | 31.3                                   | (25.2, 37.4) | 12.6  | (8.1, 17.1)  | 10.5                                | (7.1, 13.9)  |
| Male                       | 42.0                       | (33.9, 50.1) | 20.8                                   | (15.1, 26.5) | 23.1  | (15.6, 30.7) | 14.0                                | (8.7, 19.3)  |
| <b>Age Group</b>           |                            |              |  |              |   |              |                                     |              |
| 18 to 34 yrs               | 42.5                       | (31.6, 53.4) | 22.6                                   | (13.7, 31.5) | 22.8  | (12.9, 32.7) | 12.1                                | (5.4, 18.8)  |
| 35 to 44 yrs               | 38.4                       | (30.0, 46.8) | 27.5                                   | (20.0, 34.9) | 20.1  | (12.7, 27.4) | 14.1                                | (8.1, 20.0)  |
| 45 to 54 yrs               | 43.6                       | (37.1, 50.0) | 31.4                                   | (25.1, 37.7) | 12.7  | (8.4, 16.9)  | 12.4                                | (8.2, 16.5)  |
| 55 to 64 yrs               | 53.9                       | (48.0, 59.8) | 25.4                                   | (20.2, 30.6) | 10.1  | (6.3, 13.9)  | 10.5                                | (7.0, 14.1)  |
| <b>Area of Residence</b>   |                            |              |  |              |   |              |                                     |              |
| Perth Metro                | 44.3                       | (38.0, 50.6) | 26.5                                   | (21.2, 31.8) | 18.4  | (12.8, 24.0) | 10.8                                | (7.0, 14.7)  |
| Rest of WA                 | 41.7                       | (36.0, 47.4) | 24.0                                   | (19.4, 28.7) | 16.4  | (12.4, 20.4) | 17.8                                | (13.4, 22.3) |
| <b>BMI category n=1142</b> |                            |              |  |              |   |              |                                     |              |
| Healthy weight             | 53.2                       | (43.5, 63.0) | 14.1                                   | (7.4, 20.7)  | 17.9  | (9.1, 26.8)  | 14.8                                | (6.9, 22.6)  |
| Overweight                 | 50.3                       | (41.6, 59.0) | 25.1                                   | (18.3, 32.0) | 13.9  | (6.6, 21.1)  | 10.7                                | (6.3, 15.1)  |
| Obese                      | 27.8                       | (19.2, 36.3) | 36.5                                   | (28.0, 45.0) | 25.0  | (16.5, 33.5) | 10.7                                | (6.1, 15.3)  |

### Frequency of trying to avoid foods high in fat

Respondents were asked how often they try to avoid eating foods high in fat (Table 47 and Figure 11).

- Around half (46.0%) said they ‘often’ tried to avoid foods high in fat, while 23.7% ‘sometimes’ tried and 19.8% ‘always’ tried.
- Those aged 55 to 64 years were significantly more likely than younger age groups to report ‘always’ trying to avoid food high in fat (36.6% compared with 16.2% of 18 to 34 year olds, 15.0% of 35 to 44 year olds and to 18% of 45 to 54 year olds).
- Those classified as obese were significantly more likely than those classified as overweight to ‘sometimes’ try to avoid food high in fat (35.9% compared with 18.5%). Conversely those classified as overweight were significantly more likely than those classified as obese to never try to avoid food high in fat (8.5% compared with 1.3%).
- Those classified as a healthy weight were significantly more likely than those classified as overweight to say they ‘rarely’ tried to avoid foods high in fat (11.1% compared with 1.4%).



Figure 11: Frequency of trying to avoid foods high in fat by BMI category, WA NMSS 2015

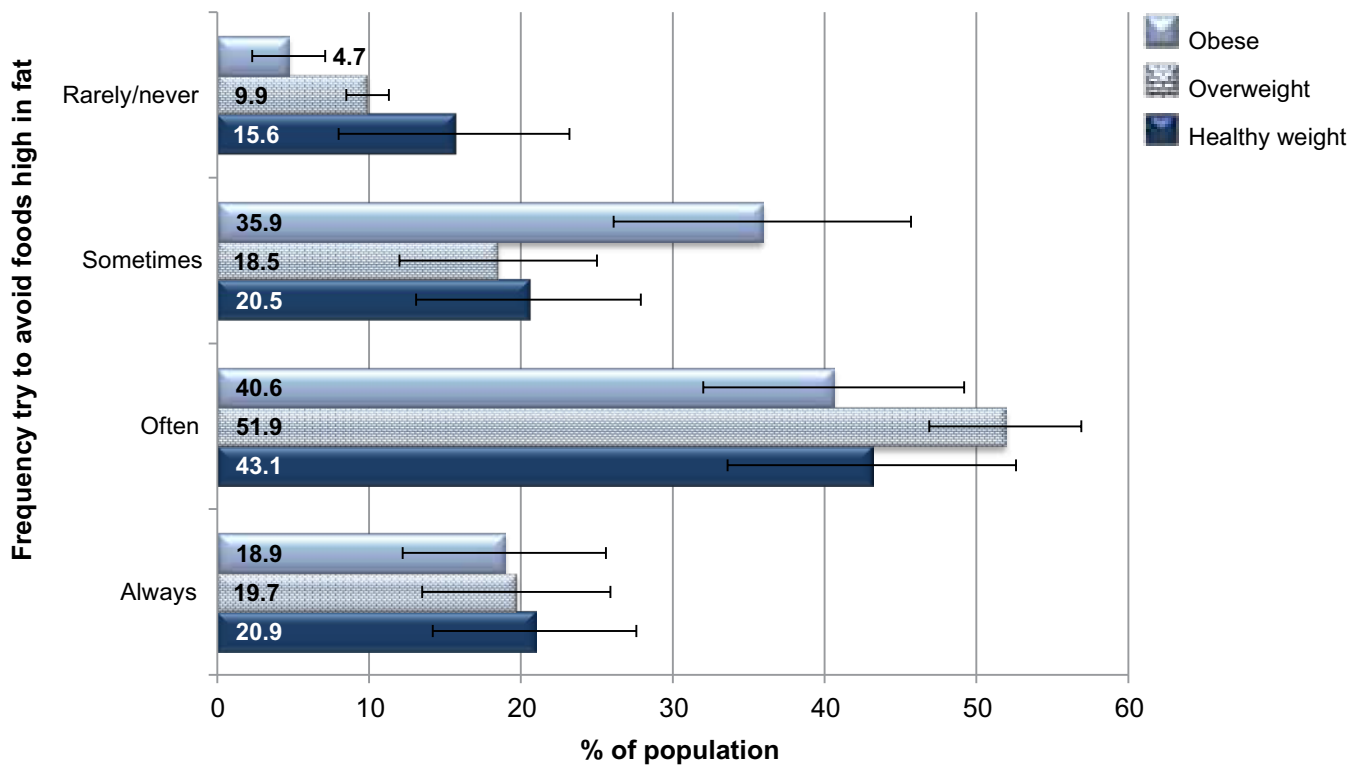


Table 47: Frequency of trying to avoid foods high in fat, WA NMSS 2015

| n=1199                     | Always |              | Often |              | Sometimes |              | Rarely |             | Never |             |
|----------------------------|--------|--------------|-------|--------------|-----------|--------------|--------|-------------|-------|-------------|
|                            | %      | 95% CI       | %     | 95% CI       | %         | 95% CI       | %      | 95% CI      | %     | 95% CI      |
| <b>Persons</b>             | 19.8   | (16.0, 23.5) | 46.0  | (40.9, 51.2) | 23.7      | (19.2, 28.2) | 4.7    | (2.3, 7.1)  | 5.8   | (3.4, 8.2)  |
| Female                     | 23.9   | (18.7, 29.1) | 48.7  | (42.5, 54.9) | 20.6      | (15.2, 26.0) | 2.6    | (1.3, 3.9)  | 4.3   | (2.6, 5.9)  |
| Male                       | 15.8   | (10.6, 21.1) | 43.5  | (35.3, 51.7) | 26.8      | (19.6, 33.9) | 6.7    | (2.2, 11.3) | 7.2   | (2.8, 11.6) |
| <b>Age group</b>           |        |              |       |              |           |              |        |             |       |             |
| 18 to 34 yrs               | 16.2   | (8.5, 24.0)  | 48.6  | (37.5, 59.6) | 24.2      | (14.6, 33.8) | 5.3    | (0.0, 10.6) | 5.6   | (0.5, 10.8) |
| 35 to 44 yrs               | 15.0   | (8.9, 21.1)  | 49.5  | (40.9, 58.1) | 24.2      | (16.7, 31.8) | 4.1    | (0.7, 7.4)  | 7.2   | (2.8, 11.7) |
| 45 to 54 yrs               | 18.0   | (13.3, 22.7) | 45.7  | (39.2, 52.3) | 26.4      | (20.3, 32.5) | 5.3    | (1.8, 8.8)  | 4.6   | (2.0, 7.2)  |
| 55 to 64 yrs               | 36.6   | (30.8, 42.3) | 35.6  | (30.0, 41.2) | 18.8      | (14.0, 23.7) | 3.3    | (1.3, 5.4)  | 5.6   | (3.0, 8.2)  |
| <b>Area of Residence</b>   |        |              |       |              |           |              |        |             |       |             |
| Perth Metro                | 19.1   | (14.6, 23.7) | 47.9  | (41.5, 54.2) | 23.2      | (17.7, 28.8) | 4.9    | (1.9, 7.9)  | 4.9   | (2.0, 7.8)  |
| Rest of WA                 | 22.1   | (17.2, 26.9) | 39.2  | (33.8, 44.5) | 25.6      | (20.4, 30.8) | 4.1    | (1.8, 6.3)  | 9.1   | (5.7, 12.5) |
| <b>BMI category n=1134</b> |        |              |       |              |           |              |        |             |       |             |
| Healthy weight             | 20.9   | (14.2, 27.5) | 43.1  | (33.4, 52.7) | 20.5      | (13.1, 27.8) | 11.1   | (3.5, 18.7) | 4.5   | (1.3, 7.8)  |
| Overweight                 | 19.7   | (13.5, 26.0) | 51.9  | (43.2, 60.5) | 18.5      | (12.0, 25.1) | 1.4    | (0.0, 3.0)  | 8.5   | (3.3, 13.6) |
| Obese                      | 18.9   | (12.2, 25.5) | 40.6  | (32.0, 49.1) | 35.9      | (26.1, 45.7) | 3.4    | (1.0, 5.7)  | 1.3   | (0.1, 2.4)  |

## Attempts to cut down fat and fatty food in the past 12 months

Respondents were asked if they had tried to cut down on the amount of fat and fatty food in their diet in the past 12 months (Table 48).

- About half of WA adults (52.1%) said they had tried to cut down on fat and fatty foods in the past 12 months.
- Those classified as obese were significantly more likely than those classified as overweight or of a healthy weight to have tried to cut down on the amount of fat and fatty foods in the past 12 months (71.5% compared with 46.1% overweight and 40.3% healthy weight).

Table 48: **WA adults who tried to cut down on fat and fatty foods in past 12 months, WA NMSS 2015**

| n=1205                     | No   |              | Yes  |              |
|----------------------------|------|--------------|------|--------------|
|                            | %    | 95% CI       | %    | 95% CI       |
| <b>Persons</b>             | 47.9 | (42.8, 53.1) | 52.1 | (46.9, 57.2) |
| Female                     | 45.9 | (39.8, 51.9) | 54.1 | (48.1, 60.2) |
| Male                       | 49.9 | (41.8, 58.1) | 50.1 | (41.9, 58.2) |
| <b>Age Group</b>           |      |              |      |              |
| 18 to 34 yrs               | 45.1 | (34.1, 56.2) | 54.9 | (43.8, 65.9) |
| 35 to 44 yrs               | 47.6 | (39.0, 56.2) | 52.4 | (43.8, 61.0) |
| 45 to 54 yrs               | 47.8 | (41.3, 54.3) | 52.2 | (45.7, 58.7) |
| 55 to 64 yrs               | 55.3 | (49.4, 61.2) | 44.7 | (38.8, 50.6) |
| <b>Area of Residence</b>   |      |              |      |              |
| Perth Metro                | 47.2 | (40.9, 53.6) | 52.8 | (46.4, 59.1) |
| Rest of Perth              | 50.7 | (45.0, 56.3) | 49.3 | (43.7, 55.0) |
| <b>BMI category n=1140</b> |      |              |      |              |
| Healthy weight             | 59.7 | (50.3, 69.0) | 40.3 | (31.0, 49.7) |
| Overweight                 | 53.9 | (45.2, 62.5) | 46.1 | (37.5, 54.8) |
| Obese                      | 28.5 | (20.4, 36.7) | 71.5 | (63.3, 79.6) |

## Fat and fatty food intake now compared with 12 months ago

Respondents were asked if they currently eat more, less or about the same amount of fat and fatty foods now than they did 12 months ago (Table 49).

- Most WA adults said either they 'eat about the same amount' (51.4%) or 'eat less' (45.5%) fat and fatty foods now than 12 months ago.
- Those aged 55 to 64 years were significantly more likely to say they 'eat about the same amount' than those in all the younger age groups (66.3% compared with 44.5% of 18 to 34 year olds, 51.9% of 35 to 44 year olds and 52.3% of 45 to 54 year olds).
- Adults aged 55 to 64 years were significantly less likely to say they 'eat less' fat and fatty foods now than 12 months ago compared with 18 to 34 year old respondents (33.4% compared with 52.5%).

Table 49: Amount of fat and fatty foods eaten compared with 12 months ago, WA NMSS 2015

| n=1205                   | Eat less now |              | Eat about the same now |              | Eat more now |            |
|--------------------------|--------------|--------------|------------------------|--------------|--------------|------------|
|                          | %            | 95% CI       | %                      | 95% CI       | %            | 95% CI     |
| <b>Persons</b>           | 45.5         | (40.4, 50.7) | 51.4                   | (46.3, 56.6) | 3.0          | (1.6, 4.5) |
| Female                   | 48.1         | (41.9, 54.3) | 48.8                   | (42.7, 54.9) | 3.1          | (1.2, 5.0) |
| Male                     | 43.1         | (35.0, 51.1) | 54.0                   | (45.8, 62.1) | 3.0          | (0.7, 5.2) |
| <b>Age Group</b>         |              |              |                        |              |              |            |
| 18 to 34 yrs             | 52.5         | (41.4, 63.5) | 44.5                   | (33.4, 55.6) | 3.0          | (0.2, 5.8) |
| 35 to 44 yrs             | 42.5         | (33.9, 51.1) | 51.9                   | (43.3, 60.6) | 5.6          | (1.9, 9.3) |
| 45 to 54 yrs             | 45.1         | (38.5, 51.6) | 52.3                   | (45.7, 58.8) | 2.7          | (0.4, 5.0) |
| 55 to 64 yrs             | 33.4         | (27.8, 39.0) | 66.3                   | (60.7, 71.9) | 0.3          | (0.0, 0.6) |
| <b>Area of Residence</b> |              |              |                        |              |              |            |
| Perth Metro              | 46.5         | (40.2, 52.9) | 50.7                   | (44.4, 57.1) | 2.7          | (1.0, 4.5) |
| Rest of WA               | 41.7         | (36.1, 47.4) | 54.1                   | (48.4, 59.8) | 4.2          | (1.9, 6.5) |

- When interviewed, those who reported eating less fat and fatty foods compared with 12 months ago were more likely to report having tried to cut down (90.0% compared with 10.0% who had not tried) (Table 50).
- Conversely, those who reported eating about the same amount of fat and fatty foods compared with 12 months ago, were less likely to report having tried to cut down than to not have tried (19.0% compared with 81.0%).

Table 50: Fat and fatty foods consumption now compared with 12 months ago by tried to cut down in the past 12 months, WA NMSS 2015

| n= 1203                            | Consumption compared to 12 months ago |              |                    |              |              |              |
|------------------------------------|---------------------------------------|--------------|--------------------|--------------|--------------|--------------|
|                                    | Eat less now                          |              | Eat about same now |              | Eat more now |              |
| Tried to cut fat in past 12 months | %                                     | 95% CI       | %                  | 95% CI       | %            | 95% CI       |
| Yes                                | 90.0                                  | (84.9, 95.2) | 19.0               | (13.6, 24.4) | 39.8         | (16.1, 63.5) |
| No                                 | 10.0                                  | (4.8, 15.1)  | 81.0               | (75.6, 86.4) | 60.2         | (36.5, 83.9) |

- WA adults who reported their intention to try to eat less fat and fatty foods were more likely to report trying to cut down the amount they consumed in the past 12 months than not trying (74.1% compared with 25.9%) (Table 51).
- WA adults who reported not thinking about cutting down fat and fatty foods were less likely to report trying to cut down the amount they consumed in the past 12 months than not trying (25.7% compared with 74.3%).

Table 51: Tried to cut down on the amount of fat and fatty foods in the past 12 months by intentions related to intake, WA NMSS 2015

| n= 1203   | Tried to cut fat in past 12 months |              |      |              |
|---|------------------------------------|--------------|------|--------------|
|   | Yes                                |              | No   |              |
| Intention related to intake of fat and fatty foods  | %                                  | 95% CI       | %    | 95% CI       |
| Already eat a low fat diet                          | 43.5                               | (35.8, 51.3) | 56.5 | (48.7, 64.2) |
| Not thinking about cutting down fat and fatty foods | 25.7                               | (14.9, 36.4) | 74.3 | (63.6, 85.1) |
| Thinking about cutting down fat and fatty foods     | 59.1                               | (44.3, 73.9) | 40.9 | (26.1, 55.7) |
| Trying to eat less fat and fatty foods              | 74.1                               | (65.6, 82.6) | 25.9 | (17.4, 34.4) |

### Attempts to change the type of fat eaten

Respondents were asked if they had tried to change the type of fat included in their diet in the past 12 months (Table 52).

- One third of WA adults (34.9%) had tried to change the type of fat included in their diet in the past 12 months.

Table 52: Tried to change the type of fat included in diet in the past 12 months, WA NMSS 2015

| n=1206                   | Tried to change type of fat in past 12 months |              |      |              |
|--------------------------|---|--------------|------|--------------|
|                          | No  |              | Yes  |              |
|                          | %   | 95% CI       | %    | 95% CI       |
| <b>Persons</b>           | 65.1  | (60.2, 70.0) | 34.9 | (30.0, 39.8) |
| Female                   | 59.4  | (53.2, 65.7) | 40.6 | (34.3, 46.8) |
| Male                     | 70.5  | (63.1, 77.9) | 29.5 | (22.1, 36.9) |
| <b>Age Group</b>         |   |              |      |              |
| 18 to 34 yrs             | 60.8  | (50.1, 71.5) | 39.2 | (28.5, 49.9) |
| 35 to 44 yrs             | 62.6  | (54.4, 70.7) | 37.4 | (29.3, 45.6) |
| 45 to 54 yrs             | 67.8  | (61.6, 73.9) | 32.2 | (26.1, 38.4) |
| 55 to 64 yrs             | 75.5  | (70.5, 80.5) | 24.5 | (19.5, 29.5) |
| <b>Area of Residence</b> |   |              |      |              |
| Perth Metro              | 64.7  | (58.6, 70.8) | 35.3 | (29.2, 41.4) |
| Rest of Perth            | 66.7  | (61.1, 72.2) | 33.3 | (27.8, 38.9) |

## Use of mono or polyunsaturated fat when preparing food

Respondents were asked how often they used mono or polyunsaturated fats when using fat or oil in food preparation (Table 53).

- The greatest proportion of WA adults (34.4%) reported that they 'always' choose mono or polyunsaturated fat when preparing food with fat or oil.
- Around one quarter of WA adults (27.2%) said that they did not understand the terms mono or polyunsaturated fat; another 4.5% could not remember what the terms meant.

Table 53: Frequency of using mono or polyunsaturated fat when preparing food, WA NMSS 2015

| n=1207                   | Always               | Often               | Sometimes          | Rarely             | Never              | Don't use fat or oil | Don't understand     | Don't remember terms |
|--------------------------|----------------------|---------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|
|                          | %<br>95% CI          | %<br>95% CI         | %<br>95% CI        | %<br>95% CI        | %<br>95% CI        | %<br>95% CI          | %<br>95% CI          | %<br>95% CI          |
| <b>Persons</b>           | 34.6<br>(29.7, 39.1) | 13.4<br>(9.8, 17.0) | 8.0<br>(5.4, 10.5) | 4.1<br>(2.4, 5.8)  | 4.9<br>(2.6, 7.2)  | 3.6<br>(1.4, 5.8)    | 27.2<br>(22.3, 32.0) | 4.5<br>(2.4, 6.6)    |
| Female                   | 34.6<br>(29.2, 40.1) | 15.0<br>(9.8, 20.2) | 7.7<br>(4.1, 11.3) | 3.9<br>(1.7, 6.1)  | 5.6<br>(3.1, 8.1)  | 1.6<br>(0.8, 2.3)    | 27.2<br>(21.6, 32.9) | 4.3<br>(1.4, 7.3)    |
| Male                     | 34.1<br>(26.5, 41.7) | 11.9<br>(7.0, 16.8) | 8.2<br>(4.6, 11.9) | 4.2<br>(1.6, 6.9)  | 4.3<br>(0.5, 8.1)  | 5.5<br>(1.3, 9.7)    | 27.1<br>(19.3, 34.9) | 4.6<br>(1.7, 7.6)    |
| <b>Age Group</b>         |                      |                     |                    |                    |                    |                      |                      |                      |
| 18 to<br>34 yrs          | 26.6<br>(16.9, 36.3) | 15.3<br>(7.5, 23.1) | 8.5<br>(3.1, 13.9) | 3.2<br>(0.3, 6.1)  | 6.3<br>(1.0, 11.5) | 3.5<br>(0.0, 8.4)    | 30.5<br>(19.9, 41.1) | 6.1<br>(1.3, 10.9)   |
| 35 to<br>44 yrs          | 36.8<br>(28.5, 45.2) | 13.6<br>(7.5, 19.8) | 7.0<br>(2.5, 11.4) | 6.2<br>(1.6, 10.9) | 5.2<br>(2.3, 8.1)  | 2.3<br>(0.0, 5.1)    | 26.8<br>(19.2, 34.3) | 2.0<br>(0.4, 3.6)    |
| 45 to<br>54 yrs          | 42.4<br>(35.9, 48.8) | 10.5<br>(6.9, 14.2) | 6.6<br>(3.2, 10.0) | 4.8<br>(1.9, 7.8)  | 2.6<br>(0.7, 4.6)  | 5.2<br>(2.0, 8.4)    | 23.0<br>(17.4, 28.5) | 4.8<br>(1.8, 7.7)    |
| 55 to<br>64 yrs          | 39.9<br>(34.1, 45.6) | 12.0<br>(7.9, 16.1) | 9.6<br>(5.9, 13.3) | 2.6<br>(1.0, 4.2)  | 4.3<br>(1.9, 6.6)  | 3.4<br>(1.2, 5.7)    | 24.8<br>(19.8, 29.9) | 3.5<br>(1.3, 5.6)    |
| <b>Area of Residence</b> |                      |                     |                    |                    |                    |                      |                      |                      |
| Perth<br>Metro           | 34.5<br>(28.7, 40.3) | 13.4<br>(9.0, 17.8) | 8.3<br>(5.1, 11.5) | 3.5<br>(1.5, 5.4)  | 4.4<br>(1.6, 7.1)  | 3.8<br>(1.0, 6.6)    | 27.6<br>(21.6, 33.5) | 4.6<br>(2.0, 7.2)    |
| Rest<br>of WA            | 33.7<br>(28.6, 38.8) | 13.4<br>(9.9, 17.0) | 6.7<br>(4.0, 9.4)  | 6.4<br>(3.0, 9.8)  | 7.2<br>(4.0, 10.3) | 2.8<br>(1.5, 4.1)    | 25.7<br>(20.3, 31.1) | 4.0<br>(1.9, 6.1)    |

### 5.2.3.4 Salt and salty foods

Respondents were asked about current salt and salty food intake and attempts to avoid foods high in salt or added salt (Tables 54 and 55).

## Intentions related to salt and salty food intake

Respondents chose one of four statements to describe their consumption of foods high in salt or added salt in their diet, and asked whether they were thinking about or trying to change intake (Table 54).

- Half of WA adults (54.1%) claimed they already ate a diet low in salt.
- One in ten (10.7%) was currently trying to eat fewer foods high in salt or added salt.
- Nearly a quarter (23.9%) were not thinking about cutting down on the amount of salty foods and added salt in their diet.
- Males were significantly more likely than females to say they were not thinking about cutting down on the amount of salty foods and added salt in their diet (30.1% compared with 17.5%).

Table 54: Intentions toward reducing salt in the diet, WA NMSS 2015

| n=1206                   | Already have a diet low in salt |              | Trying to eat fewer foods high in salt or added salt |              | Thinking about cutting down foods high in salt or added salt |             | Not thinking about cutting down foods high in salt or added salt |              |
|--------------------------|---------------------------------|--------------|--|--------------|--|-------------|--|--------------|
|                          | %                               | 95% CI       | %  | 95% CI       | %  | 95% CI      | %  | 95% CI       |
| <b>Persons</b>           | 54.1                            | (49.0, 59.3) | 10.7   | (8.0, 13.4)  | 11.2   | (7.3, 15.2) | 23.9   | (19.3, 28.5) |
| Female                   | 60.8                            | (54.7, 66.8) | 13.6   | (9.3, 18.0)  | 8.1  | (4.3, 12.0) | 17.5   | (12.9, 22.1) |
| Male                     | 47.8                            | (39.7, 55.9) | 7.9  | (4.8, 11.0)  | 14.2   | (7.5, 20.9) | 30.1   | (22.4, 37.8) |
| <b>Age Group</b>         |                                 |              |  |              |  |             |  |              |
| 18 to 34 yrs             | 50.1                            | (39.1, 61.2) | 9.0  | (3.7, 14.2)  | 16.6   | (7.6, 25.6) | 24.3   | (14.3, 34.2) |
| 35 to 44 yrs             | 55.6                            | (47.0, 64.2) | 10.1   | (4.9, 15.4)  | 8.4  | (3.8, 12.9) | 25.9   | (18.0, 33.8) |
| 45 to 54 yrs             | 53.8                            | (47.3, 60.3) | 15.7   | (10.7, 20.6) | 8.6  | (5.2, 12.0) | 22.0   | (16.6, 27.4) |
| 55 to 64 yrs             | 62.3                            | (56.5, 68.1) | 9.7  | (6.4, 13.0)  | 5.2  | (2.5, 7.9)  | 22.8   | (17.7, 27.9) |
| <b>Area of Residence</b> |                                 |              |  |              |  |             |  |              |
| Perth Metro              | 53.6                            | (47.3, 60.0) | 10.7   | (7.4, 14.0)  | 11.7   | (6.8, 16.6) | 24.0   | (18.3, 29.7) |
| Rest of WA               | 56.0                            | (50.4, 61.7) | 10.9   | (7.6, 14.2)  | 9.4  | (6.3, 12.4) | 23.7   | (18.8, 28.6) |

## Frequency of avoiding foods high in salt or added salt

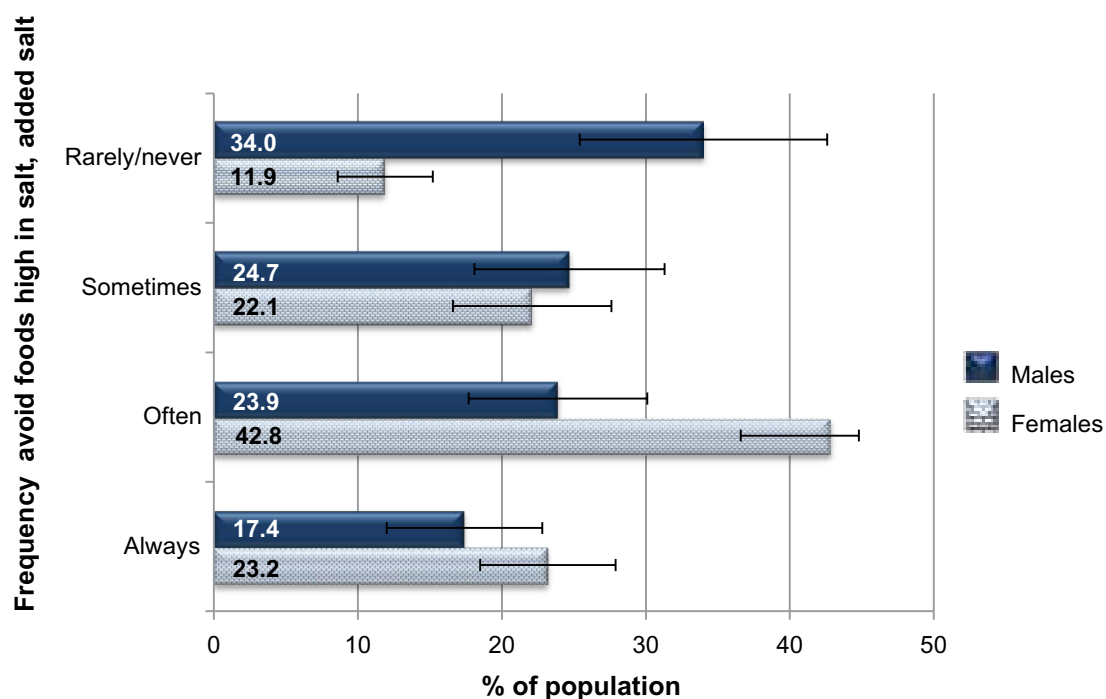
Respondents were asked how often they tried to avoid foods high in salt or added salt (Table 55 and Figure 12).

- More respondents said they often tried to avoid foods high in salt or added salt (33.3%) compared with those who always (20.3%), sometimes (23.4%) or rarely/never (23.1%) tried to avoid foods high in salt or added salt.
- Females (42.8%) were significantly more likely than males (23.9%) to 'often' avoid foods high in salt or added salt.
- Males were significantly more likely to 'rarely or never' avoid salt (34.0% compared with 11.9%).
- Frequency of 'always' avoiding foods high in salt and added salt increased with age; those in the 55 to 64 year age group were significantly more likely than all the other age groups to always avoid foods high in salt and added salt (37.9% compared with 25.3% for 45 to 54 year olds, 20.2% for 35 to 44 year olds and 10.2% for 18 to 34 year olds).
- Those adults aged 18 to 34 years were significantly more likely to 'rarely or never' avoid foods high in salt and added salt (31.7%) than those aged 55 to 64 years (13.7%).

Table 55: Frequency of trying to avoid foods high in salt or added salt, WA NMSS 2015

| n=1206                   | Always |              | Often |              | Sometimes |              | Rarely/never |              |
|--------------------------|--------|--------------|-------|--------------|-----------|--------------|--------------|--------------|
|                          | %      | 95% CI       | %     | 95% CI       | %         | 95% CI       | %            | 95% CI       |
| <b>Persons</b>           | 20.3   | (16.7, 23.9) | 33.3  | (28.6, 38.0) | 23.4      | (19.1, 27.6) | 23.1         | (18.0, 28.1) |
| Female                   | 23.2   | (18.5, 27.9) | 42.8  | (36.6, 49.1) | 22.1      | (16.6, 27.5) | 11.9         | (8.6, 15.3)  |
| Male                     | 17.4   | (12.0, 22.8) | 23.9  | (17.6, 30.3) | 24.7      | (18.1, 31.3) | 34.0         | (25.4, 42.6) |
| <b>Age Group</b>         |        |              |       |              |           |              |              |              |
| 18 to 34 yrs             | 10.2   | (3.3, 17.1)  | 33.6  | (23.5, 43.7) | 24.5      | (15.5, 33.5) | 31.7         | (20.6, 42.9) |
| 35 to 44 yrs             | 20.2   | (13.5, 26.9) | 36.4  | (28.1, 44.7) | 27.5      | (19.5, 35.6) | 15.8         | (9.8, 21.9)  |
| 45 to 54 yrs             | 25.3   | (19.4, 31.1) | 32.4  | (26.4, 38.4) | 20.5      | (15.2, 25.8) | 21.8         | (16.1, 27.6) |
| 55 to 64 yrs             | 37.9   | (32.2, 43.7) | 29.6  | (24.3, 34.9) | 18.8      | (14.0, 23.6) | 13.7         | (9.5, 17.9)  |
| <b>Area of Residence</b> |        |              |       |              |           |              |              |              |
| Perth Metro              | 20.6   | (16.2, 25.1) | 33.1  | (27.3, 38.8) | 23.7      | (18.4, 28.9) | 22.6         | (16.4, 28.9) |
| Rest of WA               | 18.9   | (15.3, 22.5) | 34.1  | (28.7, 39.5) | 22.3      | (17.6, 26.9) | 24.7         | (19.2, 30.2) |

Figure 12: Frequency of trying to avoid foods high in salt or added salt by gender, WA NMSS 2015



### 5.2.4 Breastfeeding

The fourth 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 be exclusively breastfed until around 6 months old, with continuation of breastfeeding until at least 12 months old as solid foods are introduced.

The NMSS asks a series of questions related to attitudes, knowledge and beliefs about breastfeeding. Results are presented in Tables 54 to 60, with significant findings highlighted below.

### 5.2.4.1 Perception of the importance of breastfeeding

Respondents were asked how important they thought it is for mothers to breastfeed their babies (Table 56).

- The majority of WA adults (75.3%), both males (73.4%) and females (77.3%) and from all age groups, thought it was 'very important' for mothers to breastfeed their babies.

Table 56: Perception of importance for mothers to breastfeed their babies, WA NMSS 2015

| n= 1186                  | Not at all /not very important / neither important nor unimportant | Somewhat important | Very important    |
|--------------------------|--|--------------------|-------------------|
|                          | % 95% CI   | % 95% CI           | % 95% CI          |
| <b>Persons</b>           | 5.2 (2.6, 7.8)   | 19.5 (15.3, 23.8)  | 75.3 (70.6, 79.9) |
| Female                   | 4.0 (1.7, 6.3)   | 18.7 (13.5, 23.9)  | 77.3 (71.8, 82.7) |
| Male                     | 6.3 (1.8, 10.8)  | 20.3 (13.6, 27.1)  | 73.4 (65.8, 80.9) |
| <b>Age Group</b>         |  |                    |                   |
| 18 to 34 yrs             | 6.3 (0.5, 12.1)  | 20.4 (11.1, 29.6)  | 73.3 (63.1, 83.5) |
| 35 to 44 yrs             | 5.2 (1.1, 9.2)   | 22.2 (14.7, 29.8)  | 72.6 (64.5, 80.7) |
| 45 to 54 yrs             | 3.9 (1.4, 6.5)   | 18.6 (13.2, 23.9)  | 77.5 (71.8, 83.2) |
| 55 to 64 yrs             | 4.3 (1.8, 6.7)   | 15.2 (10.9, 19.5)  | 80.5 (75.8, 85.2) |
| <b>Area of Residence</b> |  |                    |                   |
| Perth Metro              | 5.2 (2.0, 8.4)   | 20.3 (15.1, 25.6)  | 74.4 (68.7, 80.2) |
| Rest of WA               | 5.1 (2.7, 7.5)   | 16.6 (12.1, 21.1)  | 78.3 (73.4, 83.2) |

### 5.2.4.2 Breastfeeding duration

Respondents were asked how long they thought mothers should breastfeed their babies (Tables 57 to 59).

- Most WA adults (68.5%) specified a length of time they thought mothers should breastfeed while 22.1% said that they did not know.
- Males were significantly more likely than females (32.8% compared with 11.0%) to say they did not know the length of time mothers should breastfeed their babies.
- WA adults aged 18 to 34 years (32.2%) were significantly more likely to say that they did not know how long mothers should breastfeed their babies compared with those 45 to 54 years (15.5%) and 55 to 64 years (12.9%).



Table 57: Percentage who specified a length of time mothers should breastfeed, WA NMSS 2015

| n=1201                   | 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       |
| <b>Persons</b>           | 0.4                                | (0.1, 0.7) | 68.5                       | (63.3, 73.7) | 9.0                 | (6.4, 11.5) | 22.1       | (17.0, 27.3) |
| Female                   | 0.8                                | (0.2, 1.4) | 78.2                       | (72.5, 83.9) | 10.0                | (6.4, 13.6) | 11.0       | (5.9, 16.1)  |
| Male                     | 0.0                                | (0.0, 0.1) | 59.2                       | (50.9, 67.4) | 8.0                 | (4.4, 11.6) | 32.8       | (24.4, 41.1) |
| <b>Age Group</b>         |                                    |            |                            |              |                     |             |            |              |
| 18 to 34 yrs             | -                                  |            | 59.9                       | (48.8, 71.0) | 7.9                 | (2.7, 13.0) | 32.2       | (21.2, 43.3) |
| 35 to 44 yrs             | 0.2                                | (0.0, 0.5) | 72.5                       | (64.3, 80.6) | 10.4                | (5.5, 15.4) | 16.9       | (9.4, 24.3)  |
| 45 to 54 yrs             | 1.3                                | (0.1, 2.6) | 74.9                       | (68.8, 80.9) | 8.3                 | (4.6, 12.0) | 15.5       | (10.3, 20.8) |
| 55 to 64 yrs             | 0.5                                | (0.0, 1.2) | 76.1                       | (70.9, 81.2) | 10.5                | (7.0, 14.0) | 12.9       | (8.6, 17.2)  |
| <b>Area of Residence</b> |                                    |            |                            |              |                     |             |            |              |
| Perth Metro              | 0.4                                | (0.0, 0.7) | 67.2                       | (60.7, 73.6) | 8.7                 | (5.6, 11.8) | 23.7       | (17.4, 30.0) |
| Rest of WA               | 0.5                                | (0.0, 0.9) | 73.4                       | (68.1, 78.7) | 9.9                 | (6.9, 13.0) | 16.2       | (11.4, 21.1) |

NA means cell number too small for reliable estimate (relative standard error over 50%)

### Length of time babies should be breastfed

Respondents were asked to specify the length of time mothers should breastfeed their babies. The responses were categorized as 'under six months', 'six months', 'seven to 12 months' and 'over 12 months'. This enabled a comparison of their knowledge with the recommendations (exclusive breastfeeding until around six months of age, then complementary breastfeeding until 12 months) (Table 58). Respondents who originally said 'as long as possible' were asked to give a specific length of time.

- The majority of WA adults who specified a length of time said mothers should breastfeed for seven to 12 months (43.8%), with only 9.5% specifying less than six months.

Table 58: Length of time mothers should breastfeed, WA NMSS 2015

| n=974                    | Under 6 months |             | 6 months |              | 7–12 months |              | Over 12 months |              |
|--------------------------|----------------|-------------|----------|--------------|-------------|--------------|----------------|--------------|
|                          | %              | 95% CI      | %        | 95% CI       | %           | 95% CI       | %              | 95% CI       |
| <b>Persons</b>           | 9.5            | (6.3, 12.7) | 30.8     | (25.3, 36.2) | 43.8        | (38.5, 49.2) | 15.9           | (11.9, 19.9) |
| Female                   | 9.5            | (5.4, 13.7) | 30.1     | (23.9, 36.2) | 47.5        | (41.1, 53.8) | 12.9           | (8.6, 17.2)  |
| Male                     | 9.5            | (4.4, 14.6) | 31.6     | (22.0, 41.2) | 39.3        | (30.4, 48.3) | 19.6           | (12.3, 26.8) |
| <b>Age Group</b>         |                |             |          |              |             |              |                |              |
| 18 to 34 yrs             | 10.2           | (2.5, 17.9) | 34.2     | (20.9, 47.6) | 41.0        | (28.4, 53.7) | 14.5           | (5.2, 23.8)  |
| 35 to 44 yrs             | 7.9            | (2.5, 13.4) | 29.0     | (20.2, 37.7) | 42.6        | (33.4, 51.9) | 20.5           | (12.5, 28.5) |
| 45 to 54 yrs             | 11.5           | (6.8, 16.1) | 30.6     | (24.0, 37.3) | 47.1        | (39.9, 54.3) | 10.8           | (6.4, 15.2)  |
| 55 to 64 yrs             | 7.9            | (4.5, 11.2) | 26.8     | (21.1, 32.4) | 46.5        | (40.0, 53.0) | 18.9           | (13.5, 24.3) |
| <b>Area of residence</b> |                |             |          |              |             |              |                |              |
| Perth Metro              | 10.0           | (6.0, 14.0) | 32.2     | (25.3, 39.1) | 42.9        | (36.2, 49.6) | 14.9           | (9.9, 20.0)  |
| Rest of WA               | 8.0            | (3.8, 12.2) | 25.8     | (20.5, 31.1) | 47.0        | (40.8, 53.3) | 19.1           | (14.4, 23.9) |

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

### Exclusive breastfeeding duration

Respondents who specified a duration for breastfeeding were then asked to specify the length of time it is important for babies to be exclusively breastfed (without any other fluids, including water and infant formula, or any solid foods) (Table 59).

- A third of these adults (36.4%) thought babies should be exclusively breastfed for six months, compared with 53.3% who said under six months and 3.9% did not give a time.
- Males were significantly more likely than females to say it was important to exclusively breastfeed a baby for over 6 months (12.0% compared to 2.6%).

Table 59: Length of time babies should be exclusively breastfed, WA NMSS 2015

| n=890                    | No time given |             | Under 6 months |              | 6 months |              | Over 6 months |             |
|--------------------------|---------------|-------------|----------------|--------------|----------|--------------|---------------|-------------|
|                          | %             | 95% CI      | %              | 95% CI       | %        | 95% CI       | %             | 95% CI      |
| <b>Persons</b>           | 3.9           | (1.9, 5.9)  | 53.3           | (47.4, 59.2) | 36.4     | (30.7, 42.2) | 6.3           | (3.1, 9.5)  |
| Female                   | 2.5           | (1.3, 3.7)  | 59.4           | (53.1, 65.7) | 35.5     | (29.4, 41.7) | 2.6           | (1.3, 3.8)  |
| Male                     | 6.0           | (1.4, 10.6) | 44.3           | (33.7, 54.8) | 37.8     | (26.9, 48.8) | 12.0          | (4.4, 19.5) |
| <b>Age Group</b>         |               |             |                |              |          |              |               |             |
| 18 to 34 yrs             | 1.7           | (0.0, 4.9)  | 56.8           | (43.1, 70.5) | 37.3     | (24.0, 50.6) | 4.2           | (0.0, 11.7) |
| 35 to 44 yrs             | 5.6           | (0.1, 11.1) | 44.8           | (35.4, 54.2) | 43.0     | (33.4, 52.6) | 6.6           | (2.0, 11.3) |
| 45 to 54 yrs             | 5.7           | (2.6, 8.9)  | 52.8           | (45.2, 60.4) | 33.4     | (26.3, 40.5) | 8.1           | (3.3, 12.8) |
| 55 to 64 yrs             | 4.0           | (1.1, 6.9)  | 58.2           | (51.3, 65.2) | 29.7     | (23.4, 36.1) | 8.1           | (4.0, 12.2) |
| <b>Area of Residence</b> |               |             |                |              |          |              |               |             |
| Perth Metro              | 4.1           | (1.6, 6.6)  | 54.2           | (46.8, 61.6) | 35.5     | (28.3, 42.7) | 6.3           | (2.2, 10.4) |
| Rest of WA               | 3.3           | (1.8, 4.9)  | 50.4           | (43.8, 56.9) | 39.8     | (33.5, 46.2) | 6.5           | (3.8, 9.1)  |

Base: Those who specified a time, including those who originally said as long as possible. Excludes respondents who didn't know how long babies should breastfeed.

Note: Exclusively breastfed means breastfed without any other fluids or solids

### 5.2.4.3 Benefits of breastfeeding

Breast milk is the most appropriate and natural food for infants. Research shows that aside from providing immediate nutritional support for babies, breastfeeding also has immediate and enduring health benefits for the mother and child.

#### Perceived benefits of breastfeeding for babies

Respondents were asked what they thought were the benefits of breastfeeding for babies (Table 60 and Figure 13).

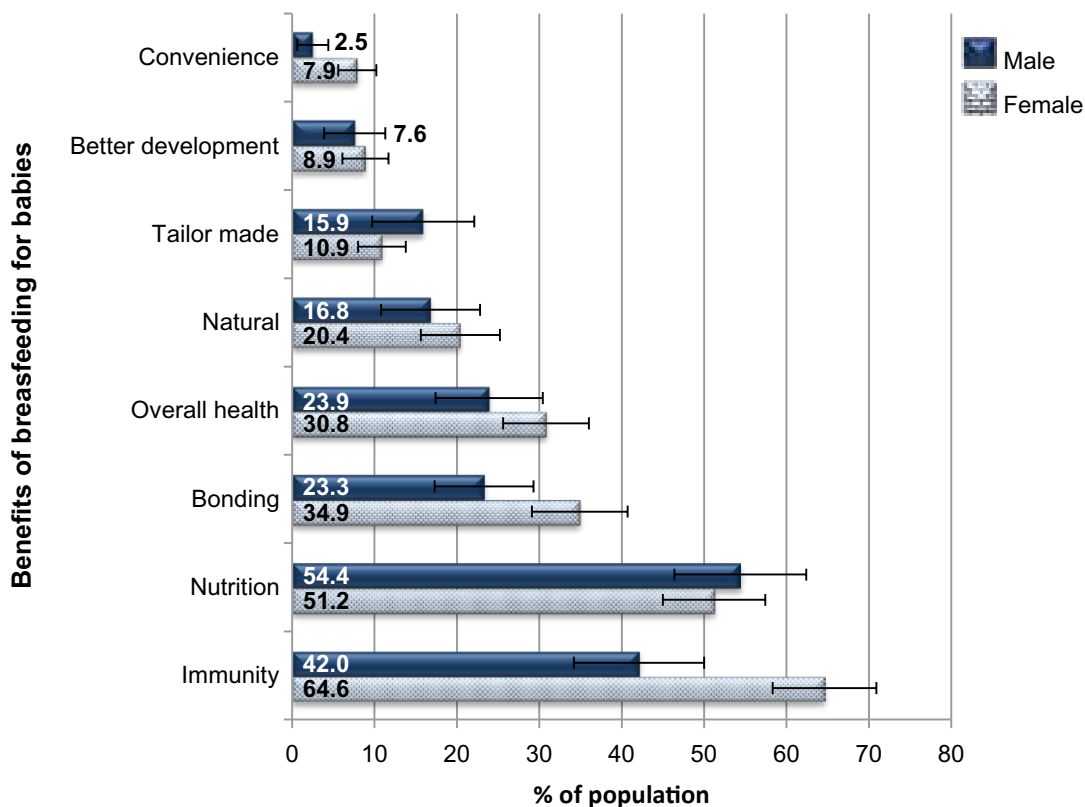
- The most frequently mentioned benefits were 'immunity' (53.0%) and 'vitamins and minerals or nutrition' (52.8%).
- Females were significantly more likely than males to have said 'immunity' (64.6% compared with 42.0%) and 'convenience' (7.9% compared with 2.5%).
- Males were significantly more likely than females to say they didn't know what the benefits of breastfeeding were (13.4% compared with 3.4%).
- WA Adults aged 18 to 34 years (41.1%) were significantly less likely than those 35 to 44 years (63.1%) and those aged 55 to 64 years (63.2%) to have reported 'immunity' as a benefit of breastfeeding for babies.
- WA adults aged 18 to 34 years were significantly more likely than those aged 55 to 64 years to specify nutrition (61.0% compared with 43.4%) as a benefit of breastfeeding.
- WA adults aged 18 to 34 years (1.8%) were significantly less likely to specify 'convenience' than those aged 45 to 54 years (8.7%) and those aged 55 to 64 years (7.8%).
- WA adults aged 18 to 34 years were significantly more likely than those aged 55 to 64 years to say that they could not identify any benefits of breastfeeding for babies (14.6% compared with 2.3%).
- WA adults in the Perth metropolitan area were significantly more likely than those from elsewhere in WA to say that they could not identify any benefits of breastfeeding for babies (10.0% compared with 2.9%).

Table 60: Perceived benefits of breastfeeding for babies, WA NMSS 2015

| n=1207                   | Immunity             | Vitamins & minerals/nutrition | Bonding/security/love | Health benefits/good for baby | No chemicals/natural | Tailor made/perfect food | Better development  | Convenient/easier  | Don't know          |
|--------------------------|----------------------|-------------------------------|-----------------------|-------------------------------|----------------------|--------------------------|---------------------|--------------------|---------------------|
|                          | %<br>95% CI          | %<br>95% CI                   | %<br>95% CI           | %<br>95% CI                   | %<br>95% CI          | %<br>95% CI              | %<br>95% CI         | %<br>95% CI        | %<br>95% CI         |
| <b>Persons</b>           | 53.0<br>(47.8, 58.2) | 52.8<br>(47.7, 57.9)          | 29.0<br>(24.7, 33.3)  | 27.3<br>(23.1, 31.5)          | 18.5<br>(14.7, 22.4) | 13.4<br>(9.9, 16.9)      | 8.2<br>(5.9, 10.5)  | 5.2<br>(3.7, 6.6)  | 8.5<br>(4.6, 12.4)  |
| Female                   | 64.6<br>(58.3, 70.9) | 51.2<br>(45.0, 57.3)          | 34.9<br>(29.1, 40.8)  | 30.8<br>(25.6, 36.0)          | 20.4<br>(15.6, 25.1) | 10.9<br>(8.0, 13.8)      | 8.9<br>(6.1, 11.7)  | 7.9<br>(5.6, 10.2) | 3.4<br>(0.5, 6.3)   |
| Male                     | 42.0<br>(34.1, 49.9) | 54.4<br>(46.4, 62.4)          | 23.3<br>(17.3, 29.4)  | 23.9<br>(17.4, 30.4)          | 16.8<br>(10.8, 22.8) | 15.9<br>(9.7, 22.0)      | 7.6<br>(3.9, 11.3)  | 2.5<br>(0.6, 4.4)  | 13.4<br>(6.5, 20.2) |
| <b>Age group</b>         |                      |                               |                       |                               |                      |                          |                     |                    |                     |
| 18 to 34 yrs             | 41.1<br>(30.4, 51.9) | 61.0<br>(50.4, 71.7)          | 22.7<br>(14.0, 31.5)  | 22.0<br>(13.4, 30.6)          | 18.2<br>(9.9, 26.6)  | 12.8<br>(5.2, 20.4)      | 6.3<br>(2.0, 10.5)  | 1.8<br>(0.0, 4.0)  | 14.6<br>(5.8, 23.4) |
| 35 to 44 yrs             | 63.1<br>(54.7, 71.6) | 52.9<br>(44.3, 61.5)          | 35.4<br>(27.2, 43.7)  | 27.2<br>(20.1, 34.3)          | 14.1<br>(8.7, 19.6)  | 10.3<br>(5.2, 15.5)      | 10.6<br>(5.3, 16.0) | 6.0<br>(2.5, 9.5)  | 5.0<br>(1.0, 9.1)   |
| 45 to 54 yrs             | 57.1<br>(50.6, 63.7) | 44.4<br>(37.9, 50.9)          | 30.6<br>(24.7, 36.4)  | 33.2<br>(27.1, 39.4)          | 20.9<br>(15.4, 26.3) | 17.4<br>(12.4, 22.5)     | 8.3<br>(4.5, 12.0)  | 8.7<br>(5.6, 11.8) | 5.3<br>(1.9, 8.7)   |
| 55 to 64 yrs             | 63.2<br>(57.4, 69.0) | 43.4<br>(37.5, 49.2)          | 33.7<br>(28.0, 39.4)  | 32.6<br>(27.1, 38.1)          | 22.2<br>(17.3, 27.0) | 14.0<br>(10.0, 18.0)     | 9.7<br>(6.2, 13.1)  | 7.8<br>(4.9, 10.8) | 2.3<br>(0.6, 4.0)   |
| <b>Area of residence</b> |                      |                               |                       |                               |                      |                          |                     |                    |                     |
| Perth Metro              | 52.4<br>(46.0, 58.8) | 52.9<br>(46.6, 59.1)          | 28.7<br>(23.4, 34.1)  | 25.1<br>(20.1, 30.2)          | 18.6<br>(13.9, 23.4) | 12.6<br>(8.3, 16.8)      | 8.3<br>(5.5, 11.2)  | 4.6<br>(2.9, 6.2)  | 10.0<br>(5.2, 14.8) |
| Rest of WA               | 55.3<br>(49.6, 61.0) | 52.6<br>(47.0, 58.2)          | 30.0<br>(25.1, 34.9)  | 35.3<br>(29.8, 40.8)          | 18.2<br>(13.8, 22.6) | 16.6<br>(11.8, 21.4)     | 7.8<br>(5.2, 10.5)  | 7.4<br>(4.2, 10.5) | 2.9<br>(1.3, 4.5)   |

Note: Respondents encouraged to identify all perceived benefits, so total responses are more than 100%.

Figure 13: **Perceived benefits of breastfeeding for babies by gender, WA NMSS 2015**



Note: Respondents encouraged to identify all perceived benefits, so total responses are more than 100%.

### Benefits of breastfeeding for mothers

Respondents were asked to name the benefits of breastfeeding for mothers (Table 61 and Figure 14).

- The most frequent response was ‘bonding’ (70.9%) followed by ‘getting back to pre-pregnancy weight’ (23.9%) and ‘convenience’ (17.5%).
- Females were significantly more likely than males to mention ‘getting back to pre-pregnancy weight’ (38.2% compared with 10.1%), ‘convenient/easier’ (23.6% compared with 11.7%) and ‘cheap/cost effective’ (13.4% compared with 4.5%) as benefits for mothers from breastfeeding.
- Those aged 18 to 34 years (7.5%) were significantly less likely than respondents in all other age groups to specify convenience as a benefit for mothers from breastfeeding (23.1% of those aged 35 to 44 years, 25.2% of those aged 45 to 54 years, 24.6% of those aged 55 to 64 years).

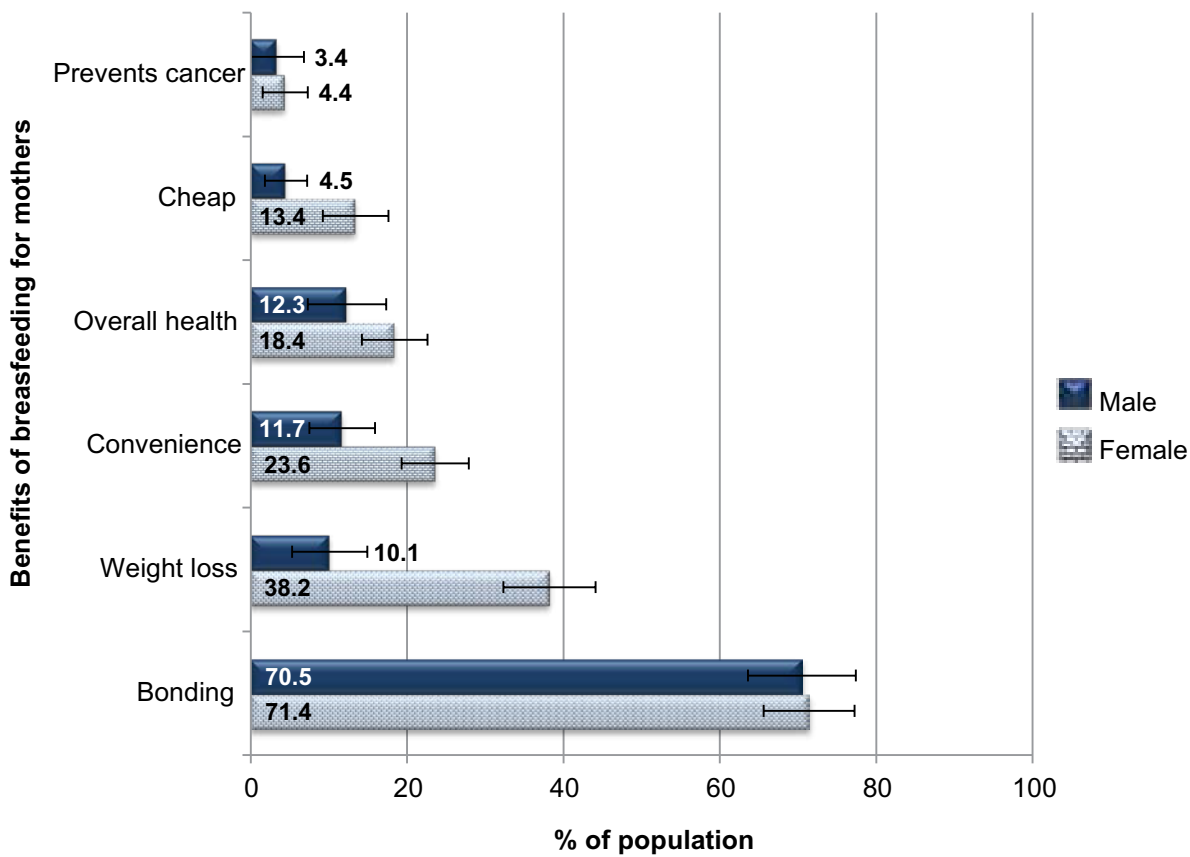
Table 61: Perceived benefits of breastfeeding for mothers, WA NMSS 2015

| n=1207                   | Bonding/<br>security | Weight loss/<br>pregnancy | Convenient/<br>Easier | Overall health    | Cheap/<br>cost effective | Prevents cancer | Prevents<br>diabetes | None           |
|--------------------------|----------------------|---------------------------|-----------------------|-------------------|--------------------------|-----------------|----------------------|----------------|
|                          | %<br>95% CI          | %<br>95% CI               | %<br>95% CI           | %<br>95% CI       | %<br>95% CI              | %<br>95% CI     | %<br>95% CI          | %<br>95% CI    |
| <b>Persons</b>           | 70.9 (66.4, 75.5)    | 23.9 (19.8, 27.9)         | 17.5 (14.5, 20.5)     | 15.3 (12.0, 18.5) | 8.8 (6.3, 11.4)          | 3.9 (1.5, 6.3)  | 0.2 (0.0, 0.5)       | 1.2 (0.3, 2.2) |
| Female                   | 71.4 (65.6, 77.2)    | 38.2 (32.3, 44.1)         | 23.6 (19.3, 27.8)     | 18.4 (14.2, 22.5) | 13.4 (9.2, 17.6)         | 4.4 (1.5, 7.4)  | NA                   | 1.8 (0.0, 3.6) |
| Male                     | 70.5 (63.6, 77.4)    | 10.1 (5.3, 14.9)          | 11.7 (7.5, 15.8)      | 12.3 (7.3, 17.3)  | 4.5 (1.7, 7.2)           | 3.4 (0.0, 7.1)  | NA                   | 1.8 (0.0, 3.6) |
| <b>Age group</b>         |                      |                           |                       |                   |                          |                 |                      |                |
| 18 to 34 yrs             | 69.2 (59.5, 78.9)    | 22.6 (14.1, 31.1)         | 7.5 (2.8, 12.2)       | 13.1 (6.3, 19.8)  | 6.7 (1.6, 11.7)          | 5.3 (0.0, 10.8) | 0.1 (0.0, 0.4)       | 1.4 (0.0, 3.5) |
| 35 to 44 yrs             | 74.0 (66.3, 81.6)    | 28.0 (20.5, 35.4)         | 23.1 (16.2, 30.1)     | 15.7 (10.1, 21.3) | 12.9 (7.3, 18.5)         | 2.2 (0.4, 4.1)  | 0.7 (0.0, 1.5)       | 0.6 (0.0, 1.1) |
| 45 to 54 yrs             | 68.7 (62.5, 74.9)    | 24.5 (19.3, 29.6)         | 25.2 (19.8, 30.6)     | 16.2 (11.6, 20.9) | 8.2 (5.3, 11.1)          | 4.3 (1.4, 7.2)  | 0.2 (0.0, 0.5)       | 2.2 (0.3, 4.1) |
| 55 to 64 yrs             | 73.8 (68.6, 79.0)    | 20.8 (16.4, 25.3)         | 24.6 (19.6, 29.6)     | 18.7 (14.0, 23.4) | 9.5 (6.3, 12.8)          | 2.2 (0.3, 4.1)  | NA                   | 0.7 (0.0, 1.5) |
| <b>Area of residence</b> |                      |                           |                       |                   |                          |                 |                      |                |
| Perth Metro              | 71.0 (65.4, 76.5)    | 23.5 (18.5, 28.4)         | 17.3 (13.7, 21.0)     | 14.5 (10.6, 18.4) | 8.7 (5.6, 11.8)          | 4.2 (1.2, 7.2)  | 0.1 (0.0, 0.4)       | 1.0 (0.0, 2.1) |
| Rest of WA               | 70.7 (65.4, 76.0)    | 25.3 (20.4, 30.2)         | 18.1 (14.0, 22.2)     | 18.2 (13.3, 23.0) | 9.3 (6.0, 12.6)          | 2.6 (1.2, 4.1)  | 0.5 (0.0, 1.1)       | 1.9 (0.2, 3.7) |

NA means cell number too small for reliable estimate (relative standard error over 50%)

Note: Respondents encouraged to identify all perceived benefits, so total responses are more than 100%

Figure 14: **Perceived benefits of breastfeeding for mothers by gender, WA NMSS 2015**



Note: Respondents were encouraged to identify all perceived benefits, so total responses are more than 100%.

**Perceived difficulties for women to continue to breastfeed**

Respondents were asked what factors make it difficult for women to continue breastfeeding for at least six months (Table 62 and Figure 15).

The main difficulty perceived by almost half of WA adults (42.1%) was the need to return to work. Other difficulties commonly cited included: poor breast milk supply (30.1%); problems with breast feeding (such as sore nipples) (28.1%); and low public acceptance and support for breastfeeding (23.9%).

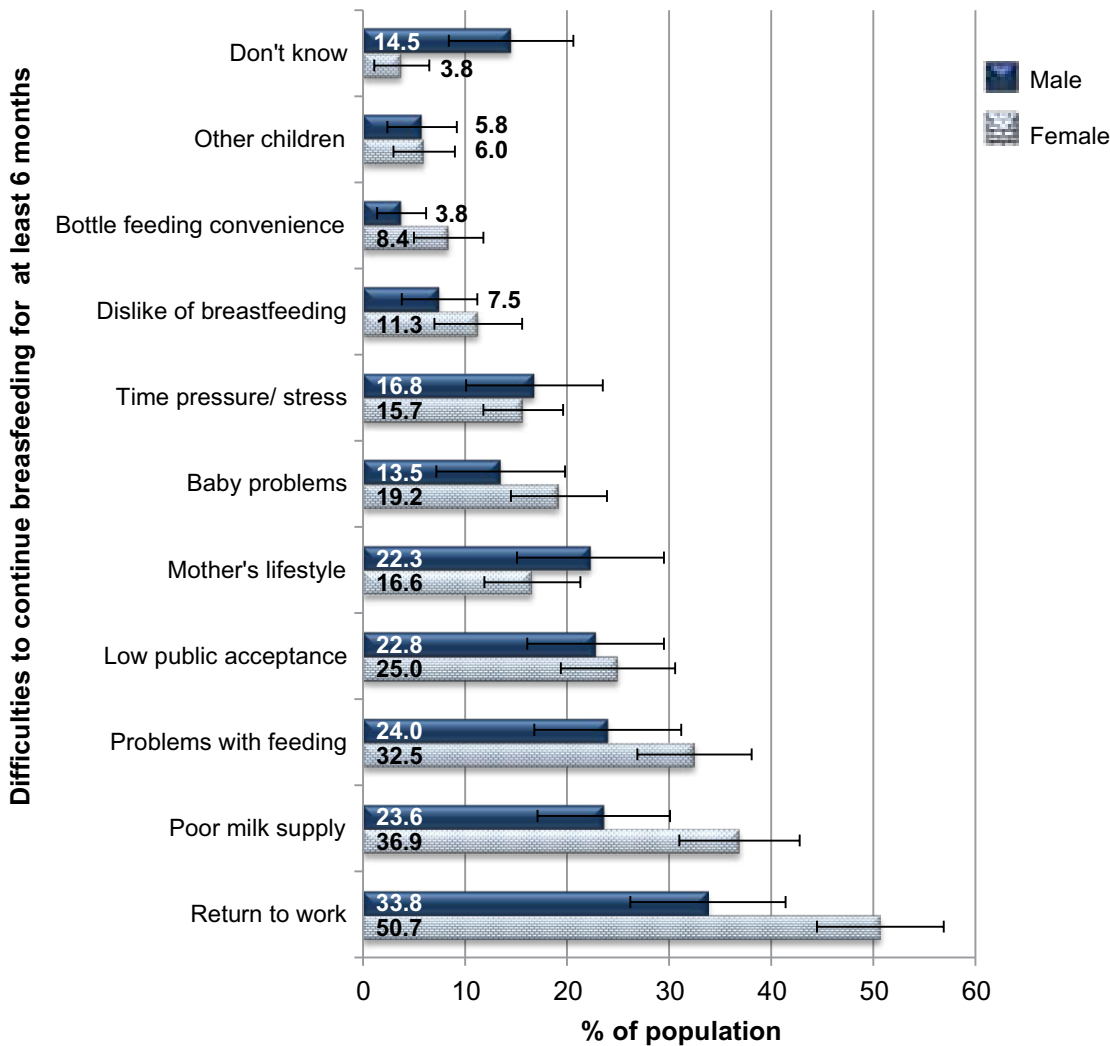
Table 62: Perceived difficulties for women to continue breastfeeding for at least 6 months, WA NMSS 2015

| n=1207                   | Need to return to work | Poor breast milk supply | Problems with breast feeding | Low public acceptance | Mother's lifestyle/ socialising | Problems with baby e.g. teething | Stress/ pressure/ no time | Don't like breastfeeding/ Embarrassment | Convenience of bottle feeding | Managing other children/ family | Don't know          |
|--------------------------|------------------------|-------------------------|------------------------------|-----------------------|---------------------------------|----------------------------------|---------------------------|---|-------------------------------|---------------------------------|---------------------|
|                          | %<br>95% CI            | %<br>95% CI             | %<br>95% CI                  | %<br>95% CI           | %<br>95% CI                     | %<br>95% CI                      | %<br>95% CI               | %<br>95% CI                             | %<br>95% CI                   | %<br>95% CI                     | %<br>95% CI         |
| <b>Persons</b>           | 42.1<br>(37.1, 47.1)   | 30.1<br>(25.6, 34.6)    | 28.1<br>(23.6, 32.7)         | 23.9<br>(19.5, 28.3)  | 19.5<br>(15.1, 23.8)            | 16.3<br>(12.4, 20.2)             | 16.3<br>(12.4, 20.2)      | 9.3<br>(6.5, 12.1)                      | 6.1<br>(4.0, 8.1)             | 5.9<br>(3.6, 8.1)               | 9.3<br>(5.9, 12.7)  |
| Female                   | 50.7<br>(44.6, 56.9)   | 36.9<br>(31.0, 42.9)    | 32.5<br>(26.9, 38.1)         | 25.0<br>(19.5, 30.6)  | 16.6<br>(11.9, 21.3)            | 19.2<br>(14.5, 23.8)             | 15.7<br>(11.8, 19.7)      | 11.3<br>(7.0, 15.6)                     | 8.4<br>(5.0, 11.8)            | 6.0<br>(3.0, 9.1)               | 3.8<br>(1.1, 6.5)   |
| Male                     | 33.8<br>(26.1, 41.6)   | 23.6<br>(17.1, 30.1)    | 24.0<br>(16.8, 31.1)         | 22.8<br>(16.2, 29.5)  | 22.3<br>(15.1, 29.4)            | 13.5<br>(7.3, 19.8)              | 16.8<br>(10.1, 23.5)      | 7.5<br>(3.8, 11.1)                      | 3.8<br>(1.4, 6.2)             | 5.8<br>(2.4, 9.1)               | 14.5<br>(8.5, 20.6) |
| <b>Age group</b>         |                        |                         |                              |                       |                                 |                                  |                           |   |                               |                                 |                     |
| 18 to 34 yrs             | 38.5<br>(27.8, 49.3)   | 27.9<br>(18.3, 37.5)    | 28.2<br>(18.3, 38.0)         | 24.3<br>(14.9, 33.7)  | 22.5<br>(13.1, 31.9)            | 21.3<br>(12.4, 30.1)             | 16.1<br>(7.6, 24.5)       | 9.5<br>(3.6, 15.4)                      | 5.3<br>(1.2, 9.3)             | 4.9<br>(0.7, 9.1)               | 10.4<br>(3.0, 17.9) |
| 35 to 44 yrs             | 43.0<br>(34.5, 51.5)   | 30.2<br>(22.7, 37.6)    | 31.1<br>(23.5, 38.7)         | 24.0<br>(16.9, 31.1)  | 21.7<br>(13.9, 29.4)            | 12.0<br>(7.8, 16.2)              | 19.0<br>(11.9, 26.1)      | 11.8<br>(6.0, 17.6)                     | 7.1<br>(2.7, 11.6)            | 9.5<br>(3.6, 15.4)              | 8.3<br>(3.3, 13.4)  |
| 45 to 54 yrs             | 43.3<br>(36.9, 49.7)   | 33.2<br>(27.1, 39.2)    | 27.7<br>(22.0, 33.3)         | 24.7<br>(18.9, 30.5)  | 17.0<br>(12.2, 21.8)            | 15.0<br>(10.6, 19.2)             | 15.9<br>(11.3, 20.6)      | 7.0<br>(4.0, 10.0)                      | 6.5<br>(3.2, 9.7)             | 4.2<br>(1.5, 6.9)               | 9.6<br>(5.1, 14.1)  |
| 55 to 64 yrs             | 47.9<br>(42.0, 53.8)   | 31.6<br>(26.1, 37.1)    | 24.8<br>(19.9, 29.8)         | 21.8<br>(16.9, 26.8)  | 12.5<br>(8.7, 16.3)             | 11.5<br>(7.8, 15.2)              | 13.8<br>(9.9, 17.7)       | 8.4<br>(5.2, 11.6)                      | 6.1<br>(3.2, 8.9)             | 5.6<br>(3.1, 8.1)               | 7.5<br>(4.2, 10.8)  |
| <b>Area of residence</b> |                        |                         |                              |                       |                                 |                                  |                           |   |                               |                                 |                     |
| Perth Metro              | 42.9<br>(36.6, 49.1)   | 28.9<br>(23.5, 34.4)    | 27.5<br>(21.9, 33.1)         | 25.1<br>(19.7, 30.5)  | 19.5<br>(14.2, 24.9)            | 16.7<br>(11.8, 21.5)             | 15.8<br>(10.9, 20.6)      | 9.4<br>(6.0, 12.9)                      | 6.5<br>(3.9, 9.0)             | 5.9<br>(3.2, 8.6)               | 9.7<br>(5.4, 13.9)  |
| Rest of WA               | 39.2<br>(33.8, 44.7)   | 34.5<br>(29.0, 40.0)    | 30.6<br>(25.5, 35.8)         | 19.3<br>(14.8, 23.8)  | 19.4<br>(14.2, 24.5)            | 14.8<br>(10.9, 18.7)             | 18.2<br>(13.7, 22.7)      | 8.9<br>(5.1, 12.7)                      | 4.5<br>(1.5, 7.5)             | 5.8<br>(2.5, 9.1)               | 7.9<br>(5.1, 10.8)  |

Note: Respondents probed for more than one response, so total responses are more than 100%. 3.0% said they saw no difficulties for women continuing to breastfeed for at least 6 months, ranging from 1.1% to 4.7% within subgroups



Figure 15: **Perceived difficulties for women to continue breastfeeding for at least 6 months by gender, WA NMSS 2015**



- Significantly more females than males perceived the need to return to work (50.7% compared with 33.8%) and poor milk supply (36.9% compared with 23.6%) as reasons women may have difficulties maintaining breastfeeding for at least six months.
- Significantly more males than females said they did not know of any reasons that would prevent a woman from breastfeeding for at least six months (14.5% compared with 3.8%).

## 5.2.5 Care for food

The fifth dietary guideline advises people to ‘Care for your food; prepare and store it safely.’ The survey asks about cold food transport, storage practices and experience of food poisoning symptoms.

### 5.2.5.1 Transporting food safely

Respondents were asked how often they put cold or frozen food into an ‘Esky’ to transport it home from the shop (Table 63).

- Almost two thirds of WA adults (63.2%) said they ‘never’ use an Esky to transport food.
- The likelihood of using an Esky increased with age: adults aged 18 to 34 years (73.8%) were significantly more likely to ‘never’ use an esky than those aged 45 to 54 years (57.2%) or those aged 55 to 64 years (46.9%).
- WA adults living outside the Perth metropolitan area were significantly more likely than those within the Perth metropolitan area to always use an Esky to transport food (19.9% compared with 10.7%).

Table 63: Frequency of transporting cold or frozen food in an Esky from shops to home, WA NMSS 2015

| n=1200                   | Always |              | Usually |             | Sometimes |              | Usually not |             | Never |              |
|--------------------------|--------|--------------|---------|-------------|-----------|--------------|-------------|-------------|-------|--------------|
|                          | %      | 95% CI       | %       | 95% CI      | %         | 95% CI       | %           | 95% CI      | %     | 95% CI       |
| <b>Persons</b>           | 12.7   | (9.6, 15.7)  | 7.2     | (5.0, 9.4)  | 9.6       | (7.2, 11.9)  | 7.4         | (5.2, 9.6)  | 63.2  | (58.6, 67.8) |
| Female                   | 13.8   | (10.2, 17.4) | 8.3     | (4.9, 11.7) | 10.5      | (7.4, 13.6)  | 8.1         | (5.1, 11.0) | 59.3  | (53.5, 65.2) |
| Male                     | 11.6   | (6.7, 16.4)  | 6.1     | (3.3, 8.9)  | 8.7       | (5.2, 12.2)  | 6.7         | (3.4, 10.1) | 66.9  | (59.9, 73.8) |
| <b>Age group</b>         |        |              |         |             |           |              |             |             |       |              |
| 18 to 34 yrs             | 10.1   | (3.6, 16.5)  | 5.5     | (1.0, 10.1) | 5.8       | (1.7, 9.8)   | 4.8         | (0.8, 8.9)  | 73.8  | (64.8, 82.9) |
| 35 to 44 yrs             | 11.2   | (6.6, 15.8)  | 6.5     | (2.8, 10.3) | 10.5      | (5.2, 15.8)  | 9.9         | (4.7, 15.2) | 61.8  | (53.6, 70.0) |
| 45 to 54 yrs             | 15.1   | (11.0, 19.3) | 7.7     | (4.6, 10.9) | 11.5      | (7.4, 15.6)  | 8.5         | (4.8, 12.2) | 57.2  | (50.8, 63.6) |
| 55 to 64 yrs             | 17.7   | (13.4, 22.0) | 11.2    | (7.4, 15.0) | 15.2      | (10.9, 19.4) | 9.0         | (5.7, 12.3) | 46.9  | (41.0, 52.8) |
| <b>Area of residence</b> |        |              |         |             |           |              |             |             |       |              |
| Perth Metro              | 10.7   | (7.1, 14.3)  | 6.7     | (4.0, 9.3)  | 9.0       | (6.2, 11.8)  | 7.9         | (5.1, 10.7) | 65.7  | (60.1, 71.3) |
| Rest of WA               | 19.9   | (15.4, 24.4) | 9.0     | (5.5, 12.5) | 11.8      | (8.0, 15.6)  | 5.4         | (3.6, 7.3)  | 53.8  | (48.2, 59.5) |

### 5.2.5.2 Storing food safely

Respondents were asked if they have a thermometer in their main refrigerator at home (to monitor the temperature of the refrigerator) (Table 64).

- Around half (46.6%) said they had a thermometer in their main refrigerator.
- Those adults 18 to 34 years of age (56.0%) and 35 to 44 years of age (48.2%) were significantly more likely than those aged 55 to 64 years (32.8%) to say they have a thermometer in their refrigerator.
- Those living in the Perth metropolitan area were significantly more likely to have a thermometer in their refrigerator than those living outside the Perth metropolitan area (50.2% compared with 33.5%).

Table 64: WA adults who have a thermometer in main home refrigerator, WA NMSS 2015

| n=1172                   | Have a thermometer in main refrigerator at home |              |
|--------------------------|---|--------------|
|                          | %   | 95% CI       |
| <b>Persons</b>           | 46.6  | (41.3, 51.9) |
| Female                   | 43.3  | (37.2, 49.4) |
| Male                     | 49.7  | (41.4, 58.1) |
| <b>Age group</b>         |   |              |
| 18 to 34 yrs             | 56.0  | (44.7, 67.3) |
| 35 to 44 yrs             | 48.2  | (39.4, 56.9) |
| 45 to 54 yrs             | 38.8  | (32.4, 45.2) |
| 55 to 64 yrs             | 32.8  | (27.1, 38.5) |
| <b>Area of residence</b> |   |              |
| Perth Metro              | 50.2  | (43.7, 56.6) |
| Rest of WA               | 33.5  | (28.1, 39.0) |

Note: Excludes respondents who don't have a fridge (n=3)

Respondents were asked if they knew the maximum required operating temperature for a refrigerator in order to keep food in good condition (Table 65).

- Half (52.7%) correctly identified 5° Celsius as the maximum safe operating temperature of a food refrigerator.
- Females were significantly more likely than males to say they did not know the safe operating temperature of a food refrigerator (38.9% compared with 24.7%).
- Those aged 55 to 64 years (44.2%) were significantly more likely than those aged 35 to 44 years (25.4%) and those aged 45 to 54 (28.9%) years to say they did not know the safe operating temperature of a food refrigerator.

**Table 65: Recommended maximum operational temperature for a refrigerator to keep food in good condition, WA NMSS 2015**

| n=1203                   | Up to 5° Celsius |              | Over 5° Celsius |              | Don't know |              |
|--------------------------|------------------|--------------|-----------------|--------------|------------|--------------|
|                          | %                | 95% CI       | %               | 95% CI       | %          | 95% CI       |
| <b>Persons</b>           | 52.7             | (47.6, 57.9) | 15.6            | (11.6, 19.6) | 31.7       | (26.9, 36.4) |
| Female                   | 47.6             | (41.4, 53.8) | 13.5            | (8.5, 18.4)  | 38.9       | (33.0, 44.9) |
| Male                     | 57.6             | (49.5, 65.8) | 17.6            | (11.3, 23.9) | 24.7       | (17.5, 32.0) |
| <b>Age group</b>         |                  |              |                 |              |            |              |
| 18 to 34 yrs             | 48.3             | (37.3, 59.4) | 20.5            | (11.5, 29.4) | 31.2       | (21.0, 41.5) |
| 35 to 44 yrs             | 61.4             | (53.1, 69.7) | 13.2            | (7.3, 19.1)  | 25.4       | (18.2, 32.6) |
| 45 to 54 yrs             | 59.2             | (52.8, 65.5) | 12.0            | (7.7, 16.2)  | 28.9       | (23.1, 34.6) |
| 55 to 64 yrs             | 44.4             | (38.5, 50.3) | 11.4            | (7.5, 15.3)  | 44.2       | (38.4, 50.0) |
| <b>Area of residence</b> |                  |              |                 |              |            |              |
| Perth Metro              | 52.0             | (45.7, 58.4) | 15.0            | (10.1, 19.9) | 33.0       | (27.1, 38.8) |
| Rest of WA               | 55.5             | (49.9, 61.2) | 17.7            | (12.5, 22.9) | 26.8       | (22.0, 31.5) |

### 5.2.5.3 Experience of food poisoning

Respondents were asked if they had experienced vomiting and/or diarrhoea in the past 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 (Table 66).

- Ten per cent of WA adults (10.2%) had symptoms in the past six months they suspected was due to food poisoning.
- Of those experiencing symptoms, 22.8% had food poisoning confirmed by a doctor or nurse.

Table 66: Experience of food poisoning in past six months, WA NMSS 2015

| n= 1202                  | Had symptoms of food poisoning | Had symptoms confirmed by a doctor or nurse* |
|--------------------------|--------------------------------|--|
|                          | % 95% CI                       | % 95% CI                                     |
| <b>Persons</b>           | 10.2 (6.9, 13.5)               | 22.8 (8.3, 37.4)                             |
| Female                   | 12.1 (7.3, 16.9)               | 34.0 (12.3, 55.7)                            |
| Male                     | 8.4 (3.9, 12.8)                | 7.3 (0.0, 16.3)                              |
| <b>Age group</b>         |                                |  |
| 18 to 34 yrs             | 13.4 (6.0, 20.9)               | 28.3 (2.2, 54.4)                             |
| 35 to 44 yrs             | 7.5 (3.7, 11.3)                | 7.4 (0.0, 14.8)                              |
| 45 to 55 yrs             | 10.0 (6.0, 13.9)               | 20.7 (3.9, 37.5)                             |
| 55 to 64 yrs             | 6.2 (3.6, 8.9)                 | 26.7 (7.5, 45.9)                             |
| <b>Area of residence</b> |                                |  |
| Perth Metro              | 9.5 (5.5, 13.6)                | 24.8 (5.6, 44.1)                             |
| Rest of WA               | 12.7 (9.0, 16.4)               | 17.2 (4.4, 29.9)                             |

\*Base for this column is those respondents who had reported symptoms of food poisoning (n=109)

### 5.3 Concerns related to food supply

Respondents were asked to rate their level of concern about eight aspects of food and food supply. These 'concerns' have been grouped below as either aspects of 'food composition and portion size' or 'food access and quality'.

#### 5.3.1 Concerns about food composition and portion size

Respondents were asked to rate their level of concern about four aspects of food composition and portion size on a five point scale from 'very concerned' to 'not at all concerned'. Those respondents who were 'quite concerned' or 'very concerned' about aspects of food composition and portion size were asked about their level of concern over four specific issues (Table 67 and Figure 16).

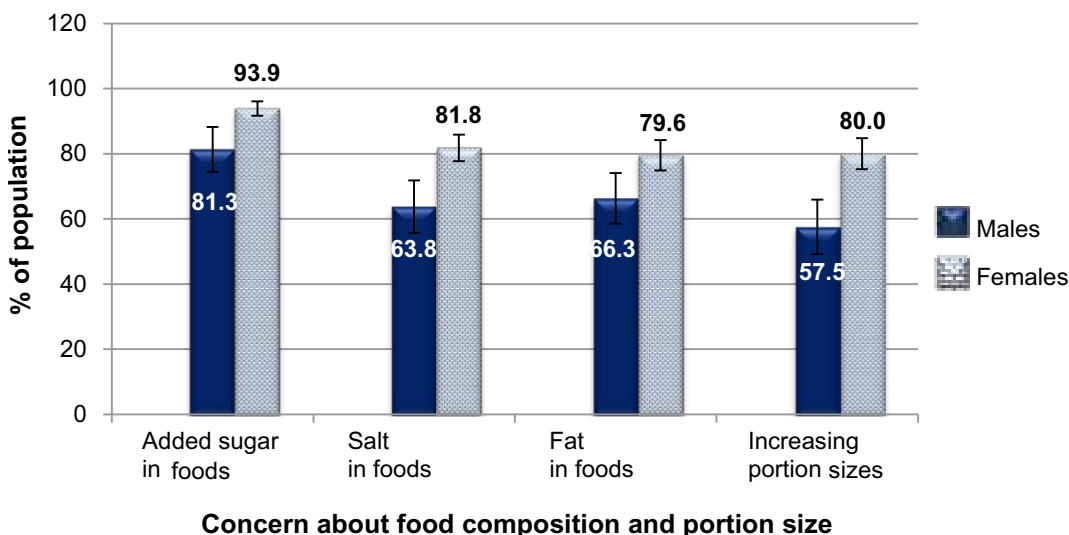
- The highest level of concern shown was about the amount of added sugar in foods and drinks with most adults (87.5%) being either 'very concerned' (66.1% (95% CI [60.9, 71.3]) or 'quite concerned' (21.4% (95% CI [16.8, 26.0])).
- Almost three quarters of WA adults were also 'quite concerned' or 'very concerned' about the amount of fat (72.8%) and the amount of salt (72.6%) in foods.
- Two thirds (68.6%) were 'very concerned' (47.1% (95% CI [42.0, 52.2]) or 'quite concerned' (21.5% (95% CI [17.5, 25.4]) about the increasing portion size of foods.
- Females were significantly more likely than males to be 'quite concerned' or 'very concerned' about all of the four aspects of food composition and portion size.

Table 67: Concern about aspects of food composition and portion size, WA NMSS 2015

|                          | Amount of added sugar in foods and drinks | Amount of salt in food | Amount of fat in food | Increasing portion size of food |
|--------------------------|---|------------------------|-----------------------|---------------------------------|
|                          | n=1202                                    | n=1198                 | n=1200                | n=1190                          |
|                          | % 95% CI                                  | % 95% CI               | % 95% CI              | % 95% CI                        |
| <b>Persons</b>           | 87.5 (83.7, 91.2)                         | 72.6 (67.8, 77.3)      | 72.8 (68.1, 77.5)     | 68.6 (63.4, 73.7)               |
| Female                   | 93.9 (91.7, 96.1)                         | 81.8 (77.7, 85.9)      | 79.6 (74.9, 84.2)     | 80.0 (75.2, 84.8)               |
| Male                     | 81.3 (74.5, 88.2)                         | 63.8 (55.7, 71.8)      | 66.3 (58.5, 74.1)     | 57.5 (49.2, 65.9)               |
| <b>Age Group</b>         |   |                        |                       |                                 |
| 18 to 34 yrs             | 85.8 (77.6, 94.0)                         | 72.0 (61.8, 82.2)      | 70.6 (60.5, 80.6)     | 61.5 (50.4, 72.5)               |
| 35 to 44 yrs             | 89.2 (83.3, 95.0)                         | 70.7 (62.6, 78.9)      | 74.4 (66.6, 82.2)     | 73.2 (65.4, 81.1)               |
| 45 to 54 yrs             | 86.4 (81.7, 91.2)                         | 70.7 (64.5, 76.9)      | 69.8 (63.6, 76.0)     | 73.2 (67.2, 79.2)               |
| 55 to 64 yrs             | 90.6 (86.8, 94.3)                         | 78.6 (73.6, 83.7)      | 79.7 (74.8, 84.6)     | 73.9 (68.5, 79.3)               |
| <b>Area of residence</b> |   |                        |                       |                                 |
| Perth Metro              | 88.1 (83.5, 92.8)                         | 74.1 (68.3, 80.0)      | 73.9 (68.2, 79.7)     | 69.0 (62.7, 75.4)               |
| Rest of WA               | 84.9 (80.2, 89.7)                         | 66.8 (60.9, 72.6)      | 68.5 (63.0, 74.0)     | 66.7 (61.0, 72.5)               |

Note: Base is those respondents who were 'quite concerned' or 'very concerned' about aspects of food composition and portion size.

Figure 16: Concern about aspects of food composition and portion size by gender, WA NMSS 2015



### 5.3.2 Concerns about food access and quality

Respondents were asked to rate their level of concern about various aspects of food access and quality on a five point scale from 'very concerned' to 'not at all concerned'. Those respondents who were 'quite concerned' or 'very concerned' about aspects of food access and quality were asked about their level of concern over four specific issues (Table 68).

- Most WA adults (84.7%) were 'very concerned' (69.7% (95% CI [64.7, 74.7]) or 'quite concerned' (15.0% (95% CI [10.8, 19.1]) about the sale of high caffeine drinks to children 12 years and younger.
- Females were significantly more likely than males to be 'very concerned' or 'quite concerned' about the sale of high caffeine drinks to children 12 years and younger (93.1% compared with 76.7%).
- Most WA adults (79.0%) were 'very concerned' (55.8% (95% CI [50.6, 61.0]) or 'quite concerned' (23.2% (95% CI [18.6, 27.8]) about the effect of the environment on the future of food supplies.
- Two in three WA adults (68.6%) were 'very concerned' (46.4% (95% CI [41.3, 51.5]) or 'quite concerned' (22.2% (95% CI [18.0, 26.4]) about the location of fast food outlets near schools.
- Over half of WA adults (61.1%) were 'very concerned' (38.7% (95% CI [33.7, 43.8]) or 'quite concerned' (22.4% (95% CI [17.7, 27.0]) about the health effects of genetically modified foods.
- Females were significantly more likely than males to be 'very concerned' or 'quite concerned' about the health effects of genetically modified foods (73.4% compared with 49.0%).

Table 68: **Concern about food access and quality issues, WA NMSS 2015**

|                          | Sale of high caffeine drinks to children 12 years and younger | Effect of the environment on the future of food supplies | Location of fast food outlets near schools | Health effects of eating genetically modified food |
|--------------------------|---|--|--|--|
|                          | n=1195  | n=1185   | n=1193                                     | n=1108   |
|                          | % 95% CI  | % 95% CI   | % 95% CI                                   | % 95% CI   |
| <b>Persons</b>           | 84.7 (80.8, 88.6)   | 79.0 (74.8, 83.2)  | 68.6 (63.6, 73.6)                          | 61.1 (55.9, 66.3)                                  |
| Female                   | 93.1 (90.3, 96.0)   | 84.7 (80.0, 89.4)  | 75.2 (70.2, 80.1)                          | 73.4 (68.2, 78.5)                                  |
| Male                     | 76.7 (69.8, 83.5)   | 73.6 (66.7, 80.6)  | 73.6 (66.7, 80.6)                          | 49.0 (40.5, 57.4)                                  |
| <b>Age Group</b>         |   |  |  |  |
| 18 to 34 yrs             | 81.1 (72.8, 89.4)   | 80.7 (72.0, 89.4)  | 66.5 (55.7, 77.2)                          | 62.7 (51.6, 73.9)                                  |
| 35 to 44 yrs             | 85.3 (78.4, 92.1)   | 77.6 (69.5, 85.6)  | 69.4 (61.1, 77.6)                          | 59.9 (50.8, 68.9)                                  |
| 45 to 54 yrs             | 85.5 (80.4, 90.6)   | 76.7 (70.6, 82.7)  | 65.5 (59.1, 71.8)                          | 60.0 (53.3, 66.7)                                  |
| 55 to 64 yrs             | 91.5 (87.8, 95.3)   | 79.6 (74.7, 84.6)  | 76.5 (71.5, 81.6)                          | 60.3 (54.0, 66.5)                                  |
| <b>Area of residence</b> |   |  |  |  |
| Perth Metro              | 85.7 (81.1, 90.4)   | 79.3 (74.1, 84.4)  | 68.6 (62.4, 74.8)                          | 63.1 (56.7, 69.5)                                  |
| Rest of WA               | 80.8 (75.0, 86.5)   | 77.9 (72.3, 83.6)  | 68.5 (63.2, 73.9)                          | 53.6 (47.8, 59.4)                                  |

## 5.4 Making healthy eating easier

Many factors can influence individual food choice and consumption. Understanding these influences can help to inform policy and initiatives that will make healthy eating choices easier choices. Respondents were asked what factors would make it easier for them and their family to eat a healthy diet. They were then presented with a list of common factors likely to make it easier for them and their family to eat a healthy diet, to which they responded in the affirmative or negative.

### 5.4.1 Perceived enablers of healthy eating

Respondents were asked which of 13 factors would make it easier for them or their families to eat a healthy diet (multiple responses permitted) (Table 69).

- At least eight in ten adults agreed that each of the following factors would make it easier to eat a healthy diet:
  - detailed and easy to understand information on food labels (89.4%)
  - cheaper healthy foods (87.4%)
  - if all unhealthy foods had a coloured symbol on the label (84.6%)
  - if I knew quicker ways to prepare healthier foods (82.1%)
  - if I could buy more healthy food snacks (80.9%)
  - if children were not exposed to advertising and promotion of unhealthy foods and drinks (80.8%).
- Those in the 35 to 44 year old age group (91.0%) were significantly more likely than those in the 55 to 64 year old age group (79.7%) to identify cheaper healthy foods as an enabling factor.
- Those in the 18 to 34 year old age group (89.0%) were significantly more likely than those in the 45 to 54 year old age group (73.4%) and those in the 55 to 64 year old age group (74.4%) to choose 'If I knew quicker ways to prepare healthier foods' as an enabling factor.
- Those in the 18 to 34 year old age group (88.3%) and the 35 to 44 year old age group (86.3%) were significantly more likely than those in the 45 to 54 year old age group (72.7%) and those in the 55-64 year old age group (65.7%) to choose 'If you could buy more healthy food snacks' as an enabling factor.
- Those in the 18 to 34 year old age group (81.2%) were significantly more likely than those in the 45 to 54 year old age group (63.6%) to choose 'If I knew more ways to prepare healthy foods' as an enabling factor.
- Those in the 18 to 34 year old age group (77.8%) were significantly more likely than those in the 55 to 64 year old age group (60.3%) to choose 'If my family/partner enjoyed healthy foods' as an enabling factor.
- Those in the 18 to 34 year old age group (72.1%) were significantly more likely than those in the 45 to 54 year old age group (51.6%) and those in the 55 to 64 year old age group (51.3%) to choose 'If I knew more about cooking' as an enabling factor.

Table 69: Factors that would support self or family to eat a healthy diet, WA NMSS 2015

| n=1544  | Persons |              | Gender |         | Age group    |              |              |              |             | Area of residence |      |              |
|---|---------|--------------|--------|---------|--------------|--------------|--------------|--------------|-------------|-------------------|------|--------------|
|   | %       | 95% CI       | Males  | Females | 18 to 34 yrs | 35 to 44 yrs | 45 to 54 yrs | 55 to 64 yrs | Perth Metro | Rest of WA        |      |              |
|   |         |              | %      | %       | %            | %            | %            | %            | %           | %                 |      |              |
| <b>What would make it easier to eat a healthy diet?</b> | %       | 95% CI       | %      | 95% CI  | %            | 95% CI       | %            | 95% CI       | %           | 95% CI            | %    | 95% CI       |
| Detailed, easily understood information on food labels  | 89.4    | (86.1, 92.7) | 86.2   | 92.8    | 89.1         | 89.5         | 89.5         | 89.8         | 89.8        | 88.0              | 89.8 | (84.2, 91.9) |
| Cheaper healthy foods                                   | 87.4    | (84.0, 90.7) | 85.9   | 88.9    | 91.1         | 91.0         | 82.6         | 79.7         | 87.5        | 87.2              | 87.5 | (83.9, 90.4) |
| If all unhealthy foods had a coloured symbol on label   | 84.6    | (81.0, 88.2) | 81.9   | 87.5    | 87.8         | 84.2         | 80.8         | 82.3         | 85.7        | 80.4              | 85.7 | (81.4, 90.1) |
| If I knew quicker ways of preparing healthy foods       | 82.1    | (78.7, 85.5) | 81.1   | 83.2    | 89.0         | 83.5         | 73.4         | 74.4         | 83.1        | 78.2              | 83.1 | (79.0, 87.2) |
| If could buy more healthy food snacks                   | 80.9    | (77.1, 84.7) | 79.1   | 82.7    | 88.3         | 86.3         | 72.7         | 65.7         | 81.4        | 78.8              | 81.4 | (76.8, 86.1) |
| If children not exposed to unhealthy food & drinks ads  | 80.8    | (76.5, 85.2) | 76.8   | 85.1    | 78.2         | 82.7         | 81.7         | 83.6         | 80.0        | 83.8              | 80.0 | (74.7, 85.4) |
| More healthy food options in takeaway/fast food outlets | 75.6    | (71.1, 80.1) | 71.1   | 80.3    | 78.2         | 73.0         | 73.6         | 75.2         | 76.2        | 73.2              | 76.2 | (70.7, 81.8) |
| If I knew more ways of preparing healthy foods          | 75.0    | (70.8, 79.3) | 72.3   | 77.9    | 81.2         | 75.8         | 63.6         | 73.1         | 76.0        | 71.2              | 76.0 | (66.2, 76.2) |
| More information to help decide if foods are healthy    | 73.9    | (69.5, 78.3) | 72.5   | 75.3    | 79.0         | 68.9         | 68.9         | 74.1         | 74.5        | 71.3              | 74.5 | (66.3, 76.3) |
| If my family/partner enjoyed healthy foods              | 71.3    | (66.9, 75.7) | 72.6   | 69.9    | 77.8         | 69.5         | 69.2         | 60.3         | 71.6        | 70.0              | 71.6 | (64.9, 75.1) |
| No advertising at all of unhealthy foods or drinks      | 69.7    | (64.9, 74.5) | 65.3   | 74.3    | 69.8         | 71.0         | 66.5         | 71.8         | 69.3        | 71.1              | 69.3 | (63.4, 75.3) |
| If healthier food were easier to find in supermarkets   | 68.3    | (63.4, 73.1) | 65.2   | 71.4    | 69.8         | 70.9         | 62.9         | 67.8         | 68.0        | 69.4              | 68.0 | (62.0, 73.9) |
| If I knew more about cooking                            | 61.2    | (56.4, 66.0) | 65.6   | 56.5    | 72.1         | 57.7         | 51.6         | 51.3         | 63.1        | 54.1              | 63.1 | (48.4, 59.7) |



## 5.4.2 Affordability of food

Food affordability can determine the amount and quality of food available for consumption. Respondents were asked if anyone in their household had eaten less than they should because they couldn't afford enough food in the past 12 months (Table 70).

- One in fifteen adults in WA (6.5%) reported that they or someone in their household had eaten less than they should because they couldn't afford enough food in the past 12 months.
- When income was considered, those with an annual household income less than \$60,000 were significantly more likely than those with a higher household income to have eaten less than they should because they couldn't afford enough food (17.8% compared with 3.9%).

Table 70: Ate less than should as could not afford enough food, WA NMSS 2015

| n=1204                                 | Yes              |
|--|------------------|
|  | % 95% CI         |
| <b>Persons</b>                         | 6.5 (3.5, 9.5)   |
| Female                                 | 7.3 (2.8, 11.7)  |
| Male                                   | 5.8 (1.7, 9.9)   |
| <b>Age Group</b>                       |                  |
| 18 to 34 yrs                           | 10.6 (3.6, 17.6) |
| 35 to 44 yrs                           | 3.8 (0.6, 6.9)   |
| 45 to 54 yrs                           | 4.8 (1.9, 7.7)   |
| 55 to 64 yrs                           | 2.4 (0.7, 4.1)   |
| <b>Area of residence</b>               |                  |
| Perth Metro                            | 5.9 (2.3, 9.6)   |
| Rest of WA                             | 8.7 (4.7, 12.7)  |
| <b>Annual household income, n=1060</b> |                  |
| Up to \$60,000                         | 17.8 (7.7, 27.8) |
| \$60,000 and over                      | 3.9 (0.7, 7.2)   |

## 5.4.3 Access to healthy foods

Access to healthy foods is critical for consumption of healthy foods. If a wide selection of healthy foods is readily available, healthier choices become easier.

### 5.4.3.1 Availability of fruits and vegetables

Respondents were asked their level of agreement or disagreement with the statement that in their neighbourhood 'a large selection of fruits and vegetables are available' (Table 71 and Figure 17).

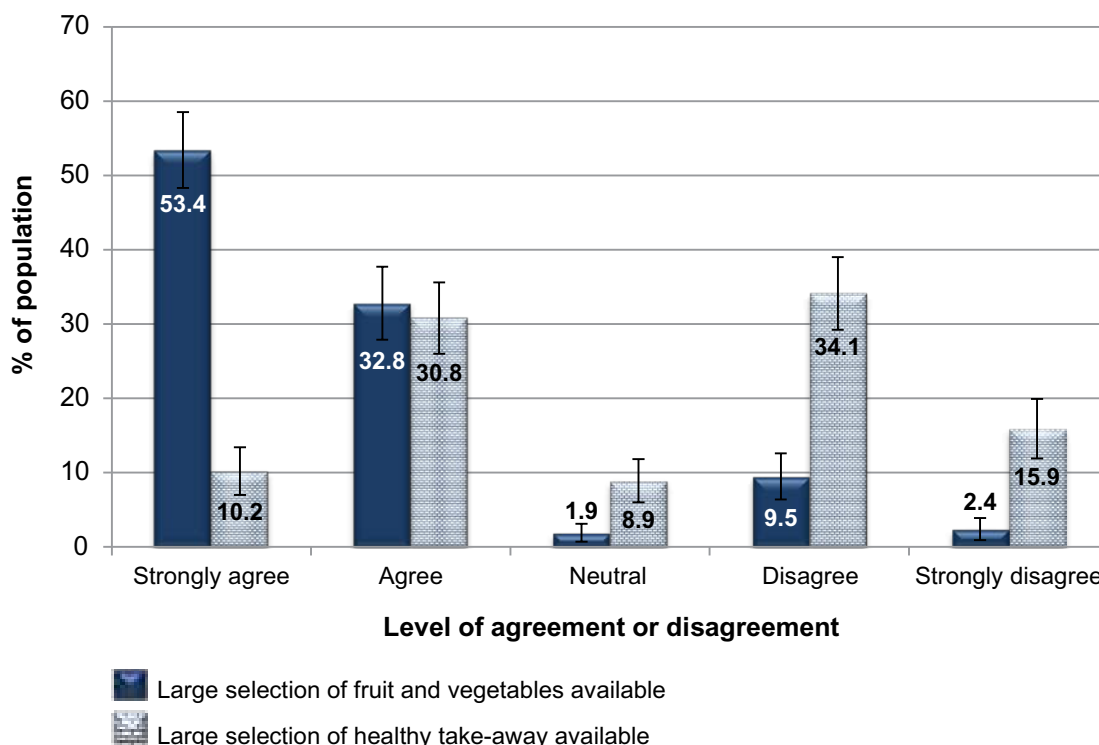
- Most adults (86.2%) 'agreed' (32.8%) or 'strongly agreed' (53.4%) that a large selection of fruits and vegetables is available.

- Those in the 55 to 64 year old age group (65.7%) were significantly more likely than those in the 35 to 44 year old age group (50.9%) and those in the 18 to 34 year old age group (47.9%) to 'strongly agree' that a large selection of fruits and vegetables is available.
- Adults living outside the Perth metropolitan area were significantly less likely than those living in the Perth metropolitan area to 'strongly agree' there is a large selection of fruits and vegetables available (42.2% compared with 56.4%).

Table 71: Large selection of fruits and vegetables available, WA NMSS 2015

| n=1203                   | Strongly agree |              | Agree |              | Neither agree nor disagree |            | Disagree |              | Strongly disagree |             |
|--------------------------|----------------|--------------|-------|--------------|----------------------------|------------|----------|--------------|-------------------|-------------|
|                          | %              | 95% CI       | %     | 95% CI       | %                          | 95% CI     | %        | 95% CI       | %                 | 95% CI      |
| <b>Persons</b>           | 53.4           | (48.3, 58.6) | 32.8  | (27.9, 37.7) | 1.9                        | (0.7, 3.1) | 9.5      | (6.4, 12.5)  | 2.4               | (0.9, 3.9)  |
| Female                   | 50.0           | (43.8, 56.1) | 33.2  | (27.3, 39.0) | 2.4                        | (0.7, 4.1) | 11.3     | (6.9, 15.7)  | 3.1               | (0.5, 5.7)  |
| Male                     | 56.7           | (48.6, 64.8) | 32.5  | (24.7, 40.2) | 1.4                        | (0.0, 3.1) | 7.7      | (3.4, 11.9)  | 1.7               | (0.0, 3.4)  |
| <b>Age Group</b>         |                |              |       |              |                            |            |          |              |                   |             |
| 18 to 34 yrs             | 47.9           | (36.8, 59.0) | 33.9  | (23.4, 44.4) | 2.2                        | (0.0, 4.9) | 12.5     | (5.6, 19.4)  | 3.5               | (0.0, 7.1)  |
| 35 to 44 yrs             | 50.9           | (42.3, 59.5) | 36.6  | (28.2, 45.0) | 1.6                        | (0.1, 3.0) | 9.5      | (4.9, 14.0)  | 1.5               | (0.0, 3.1)  |
| 45 to 54 yrs             | 56.9           | (50.5, 63.3) | 31.8  | (25.9, 37.7) | 2.2                        | (0.3, 4.0) | 6.9      | (3.7, 10.0)  | 2.3               | (0.9, 3.7)  |
| 55 to 64 yrs             | 65.7           | (60.2, 71.2) | 26.5  | (21.4, 31.7) | 1.2                        | (0.3, 2.0) | 5.4      | (2.8, 7.9)   | 1.2               | (0.4, 2.1)  |
| <b>Area of residence</b> |                |              |       |              |                            |            |          |              |                   |             |
| Perth Metro              | 56.4           | (50.1, 62.7) | 32.2  | (26.2, 38.3) | 1.7                        | (0.2, 3.1) | 8.3      | (4.5, 12.0)  | 1.4               | (0.0, 3.0)  |
| Rest of WA               | 42.2           | (36.9, 47.6) | 35.0  | (29.4, 40.5) | 2.8                        | (1.4, 4.1) | 14.0     | (10.2, 17.9) | 6.0               | (1.9, 10.1) |

Figure 17: Level of agreement regarding availability of a large selection of food by food type (fruits and vegetables, healthy takeaway), WA NMSS 2015 available



### 5.4.3.2 Selection of healthy takeaway foods

Respondents were asked their level of agreement or disagreement with the statement that ‘a large selection of healthy takeaway foods is available’ in their neighbourhood (Table 72).

- A third of WA adults (34.1%) ‘disagreed’ and 15.9% ‘strongly disagreed’ that a large selection of healthy take-away foods is available in their neighbourhood while 30.8% agreed with the statement and 10.2% ‘strongly agreed’.
- There was no significant difference in level of agreement between respondents from the Perth metropolitan area and those outside the Perth metropolitan area.

Table 72: Large selection of healthy takeaway foods available in the neighbourhood, WA NMSS 2015

| n=1173                   | Strongly agree |              | Agree |              | Neither agree nor disagree |             | Disagree |              | Strongly disagree |              |
|--------------------------|----------------|--------------|-------|--------------|----------------------------|-------------|----------|--------------|-------------------|--------------|
|                          | %              | 95% CI       | %     | 95% CI       | %                          | 95% CI      | %        | 95% CI       | %                 | 95% CI       |
| <b>Persons</b>           | 10.2           | (7.0, 13.4)  | 30.8  | (26.0, 35.6) | 8.9                        | (6.0, 11.7) | 34.1     | (29.2, 39.0) | 15.9              | (11.9, 20.0) |
| Female                   | 9.5            | (6.6, 12.4)  | 28.8  | (22.9, 34.7) | 7.8                        | (5.1, 10.5) | 36.9     | (30.8, 43.0) | 17.0              | (12.1, 21.9) |
| Male                     | 10.9           | (5.3, 16.5)  | 32.8  | (25.2, 40.4) | 10.0                       | (5.0, 14.9) | 31.4     | (23.9, 39.0) | 14.9              | (8.4, 21.4)  |
| <b>Age Group</b>         |                |              |       |              |                            |             |          |              |                   |              |
| 18 to 34 yrs             | 7.9            | (1.1, 14.6)  | 29.7  | (19.6, 39.7) | 7.1                        | (1.3, 12.8) | 36.4     | (25.9, 46.8) | 19.0              | (9.9, 28.1)  |
| 35 to 44 yrs             | 11.1           | (5.7, 16.4)  | 37.2  | (28.7, 45.8) | 10.8                       | (5.4, 16.2) | 29.4     | (21.5, 37.4) | 11.5              | (7.2, 15.8)  |
| 45 to 54 yrs             | 10.2           | (6.2, 14.2)  | 29.0  | (23.0, 35.1) | 8.9                        | (4.8, 12.9) | 34.2     | (28.1, 40.4) | 17.6              | (12.5, 22.8) |
| 55 to 64 yrs             | 15.3           | (10.8, 19.7) | 27.3  | (21.9, 32.7) | 10.9                       | (7.1, 14.7) | 34.5     | (28.7, 40.3) | 12.0              | (8.2, 15.8)  |
| <b>Area of residence</b> |                |              |       |              |                            |             |          |              |                   |              |
| Perth Metro              | 10.4           | (6.4, 14.4)  | 31.8  | (25.8, 37.7) | 9.3                        | (5.8, 12.9) | 33.2     | (27.2, 39.2) | 15.3              | (10.3, 20.3) |
| Rest of WA               | 9.7            | (6.9, 12.6)  | 27.3  | (21.9, 32.6) | 7.3                        | (4.9, 9.6)  | 37.4     | (31.8, 43.1) | 18.3              | (14.1, 22.6) |

### 5.4.3.3 Selection of healthy purchased meal choices available

Respondents were asked a series of questions about buying a meal from a restaurant, take-away, lunch bar or canteen. These questions asked about meals bought the day prior to survey, as well as the availability of, their preference for and their purchase of healthy choices.

#### Meals purchased the day prior

Respondents were asked if they had purchased breakfast, lunch or dinner from a restaurant, takeaway, lunch bar, canteen or other food outlet on the day prior to the survey (Table 73).

- The majority of WA adults (70.0%) did not purchase a prepared meal on the day prior to the survey
- Females were less likely to purchase a meal from a food outlet than males (61.3% compared with 79.1%).
- About one sixth (16.1%) of the adult population had purchased lunch, 9.0% had purchased dinner and 1.8% had purchased breakfast.
- Those in the 55 to 64 year old age group (7.6%) were significantly less likely to have purchased lunch than those in the 45 to 54 year old age group (16.6%) or those in the 18 to 34 year old age group (22.0%).

Table 73: Meals purchased from a food outlet the day prior to the survey, WA NMSS 2015

| n=1206                   | Breakfast only | Lunch only        | Dinner only      | Two or more meals | Didn't buy a meal out |
|--------------------------|----------------|-------------------|------------------|-------------------|-----------------------|
|                          | % 95% CI       | % 95% CI          | % 95% CI         | % 95% CI          | % 95% CI              |
| <b>Persons</b>           | 1.8 (0.7, 3.0) | 16.1 (11.7, 20.6) | 9.0 (6.1, 11.9)  | 3.0 (0.9, 5.2)    | 70.0 (64.9, 75.1)     |
| Female                   | 1.0 (0.3, 1.7) | 11.1 (6.8, 15.4)  | 7.7 (5.0, 10.4)  | 1.1 (0.3, 1.8)    | 79.1 (74.2, 84.0)     |
| Male                     | 2.6 (0.5, 4.8) | 20.9 (13.5, 28.4) | 10.3 (5.2, 15.3) | 4.9 (0.8, 9.1)    | 61.3 (53.0, 69.5)     |
| <b>Age Group</b>         |                |                   |                  |                   |                       |
| 18 to 34 yrs             | 1.6 (0.0, 3.8) | 22.0 (12.2, 31.9) | 8.0 (2.0, 14.1)  | 4.3 (0.0, 9.2)    | 64.0 (53.1, 75.0)     |
| 35 to 44 yrs             | 2.9 (0.0, 5.8) | 11.4 (5.7, 17.1)  | 11.5 (5.7, 17.3) | 2.9 (0.0, 5.9)    | 71.2 (63.2, 79.3)     |
| 45 to 54 yrs             | 1.2 (0.0, 2.8) | 16.6 (11.5, 21.8) | 8.9 (5.0, 12.8)  | 0.8 (0.0, 1.6)    | 72.5 (66.4, 78.6)     |
| 55 to 64 yrs             | 1.7 (0.5, 3.0) | 7.6 (4.4, 10.7)   | 8.2 (4.8, 11.6)  | 3.0 (0.7, 5.4)    | 79.5 (74.6, 84.4)     |
| <b>Area of residence</b> |                |                   |                  |                   |                       |
| Perth Metro              | 1.6 (0.2, 2.9) | 17.0 (11.5, 22.5) | 10.2 (6.5, 13.8) | 2.9 (0.2, 5.6)    | 68.4 (62.1, 74.6)     |
| Rest of WA               | 2.8 (0.8, 4.7) | 12.8 (8.5, 17.1)  | 4.6 (2.4, 6.9)   | 3.7 (1.5, 5.8)    | 76.1 (71.0, 81.2)     |

Note: Food outlet includes restaurant, take-away outlet, lunch bar and canteen

### Healthy choices available when buying a meal

Respondents were asked whether there were enough healthy choices available the last time they bought a meal from a restaurant, takeaway, lunch bar or canteen (Table 74). 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 adults (65.8%) said there were enough healthy choices.
- Less than a quarter of adults (23.9%) said there were not enough healthy choices.
- Only 2.1% of adults reported 'not knowing what a healthy choice is' or being 'uninterested in healthy choices'.

Table 74: Availability of healthy choices at last purchase from a food outlet, WA NMSS 2015

| n=1168                   | No not enough |              | Yes enough |              | Yes but didn't want any of them |             | I don't know what a healthy choice is |            | I am uninterested in healthy choices |            |
|--------------------------|---------------|--------------|------------|--------------|---------------------------------|-------------|---------------------------------------|------------|--------------------------------------|------------|
|                          | %             | 95% CI       | %          | 95% CI       | %                               | 95% CI      | %                                     | 95% CI     | %                                    | 95% CI     |
| <b>Persons</b>           | 23.9          | (19.3, 28.6) | 65.8       | (60.6, 71.0) | 8.2                             | (4.9, 11.6) | 0.4                                   | (0.0, 0.7) | 1.7                                  | (0.0, 3.6) |
| Female                   | 19.8          | (14.4, 25.2) | 71.9       | (66.1, 77.7) | 7.1                             | (3.9, 10.3) | 0.4                                   | (0.0, 0.8) | 0.8                                  | (0.2, 1.4) |
| Male                     | 27.8          | (20.4, 35.3) | 60.0       | (51.6, 68.4) | 9.3                             | (3.6, 15.1) | 0.4                                   | (0.0, 1.0) | 2.5                                  | (0.0, 6.2) |
| <b>Age Group</b>         |               |              |            |              |                                 |             |                                       |            |                                      |            |
| 18 to 34 yrs             | 26.9          | (16.8, 37.0) | 58.3       | (47.1, 69.5) | 11.9                            | (4.4, 19.4) | N/A                                   |            | 2.9                                  | (0.0, 7.5) |
| 35 to 44 yrs             | 19.1          | (12.8, 25.4) | 74.5       | (67.2, 81.7) | 6.2                             | (1.8, 10.6) | N/A                                   |            | 0.2                                  | (0.0, 0.7) |
| 45 to 54 yrs             | 27.5          | (21.2, 33.8) | 66.5       | (60.0, 72.9) | 4.0                             | (1.7, 6.4)  | 1.3                                   | (0.0, 3.0) | 0.7                                  | (0.0, 1.5) |
| 55 to 64 yrs             | 18.5          | (13.6, 23.3) | 72.0       | (66.5, 77.5) | 7.2                             | (4.0, 10.4) | 0.6                                   | (0.0, 1.5) | 1.7                                  | (0.3, 3.1) |
| <b>Area of residence</b> |               |              |            |              |                                 |             |                                       |            |                                      |            |
| Perth Metro              | 24.6          | (18.8, 30.3) | 65.1       | (58.6, 71.5) | 8.3                             | (4.3, 12.4) | 0.4                                   | (0.0, 0.9) | 1.7                                  | (0.0, 4.1) |
| Rest of WA               | 21.5          | (16.9, 26.0) | 68.7       | (63.1, 74.2) | 8.0                             | (3.9, 12.1) | 0.2                                   | (0.0, 0.5) | 1.7                                  | (0.2, 3.2) |

NA means cell number too small for reliable estimate (relative standard error over 50%)

Note: Food outlet includes restaurant, take-away outlet, lunch bar and canteen

### Frequency of choosing healthy foods when buying a meal

Respondents were asked how often they try to choose healthy foods when buying a meal (Table 75 and Figure 18).

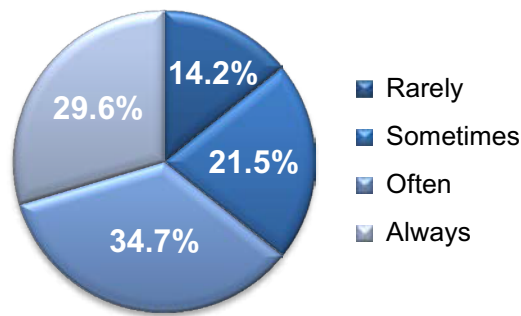
- Almost two thirds of WA adults (64.3%) said they 'always' (29.6%) or 'often' (34.7%) try to choose healthy foods.
- Those in the 35 to 44 year old age group were significantly more likely than those in the 55 to 64 year old age group to 'often' choose healthy meals when buying a meal (45.1% compared with 28.5%).

Table 75: Frequency of choosing healthy foods when buying a meal, WA NMSS 2015

| n=1205                   | Always |              | Often |              | Sometimes |              | Rarely |             | Never |            | I don't buy meals |            |
|--------------------------|--------|--------------|-------|--------------|-----------|--------------|--------|-------------|-------|------------|-------------------|------------|
|                          | %      | 95% CI       | %     | 95% CI       | %         | 95% CI       | %      | 95% CI      | %     | 95% CI     | %                 | 95% CI     |
| <b>Persons</b>           | 29.6   | (25.1, 34.2) | 34.7  | (29.8, 39.5) | 21.5      | (17.0, 26.0) | 7.7    | (4.5, 11.0) | 3.8   | (2.1, 5.5) | 2.7               | (1.4, 3.9) |
| Female                   | 33.7   | (27.9, 39.5) | 38.6  | (32.6, 44.6) | 15.8      | (11.4, 20.2) | 5.1    | (2.2, 8.1)  | 4.0   | (1.3, 6.8) | 2.7               | (1.0, 4.4) |
| Male                     | 25.8   | (19.0, 32.6) | 30.9  | (23.4, 38.4) | 26.9      | (19.3, 34.5) | 10.2   | (4.5, 15.8) | 3.6   | (1.6, 5.6) | 2.6               | (0.7, 4.5) |
| <b>Age Group</b>         |        |              |       |              |           |              |        |             |       |            |                   |            |
| 18 to 34 yrs             | 25.8   | (16.3, 35.4) | 32.5  | (22.3, 42.7) | 25.2      | (15.3, 35.1) | 10.7   | (3.2, 18.1) | 3.4   | (0.1, 6.7) | 2.4               | (0.0, 5.0) |
| 35 to 44 yrs             | 26.8   | (19.4, 34.2) | 45.1  | (36.4, 53.7) | 20.2      | (13.3, 27.1) | 4.1    | (0.9, 7.4)  | 3.7   | (0.4, 6.9) | 0.1               | (0.0, 0.3) |
| 45 to 54 yrs             | 32.2   | (26.1, 38.4) | 33.0  | (27.0, 39.1) | 19.2      | (13.8, 24.6) | 7.4    | (4.1, 10.7) | 4.2   | (1.5, 7.0) | 3.9               | (1.3, 6.5) |
| 55 to 64 yrs             | 39.3   | (33.6, 45.0) | 28.5  | (23.2, 33.8) | 17.1      | (12.4, 21.8) | 5.6    | (2.8, 8.4)  | 4.4   | (2.1, 6.7) | 5.1               | (2.6, 7.6) |
| <b>Area of residence</b> |        |              |       |              |           |              |        |             |       |            |                   |            |
| Perth Metro              | 29.8   | (24.3, 35.4) | 35.8  | (29.8, 41.8) | 21.7      | (16.1, 27.3) | 7.2    | (3.2, 11.1) | 3.0   | (1.1, 5.0) | 2.5               | (0.9, 4.0) |
| Rest of WA               | 28.9   | (24.2, 33.6) | 30.4  | (25.4, 35.5) | 20.7      | (15.9, 25.5) | 9.8    | (5.2, 14.3) | 6.8   | (3.7, 9.8) | 3.4               | (1.9, 5.0) |

Note: Food outlet includes restaurant, take-away outlet, lunch bar and canteen

Figure 18: Frequency of choosing healthy when buying a meal, WA NMSS 2015



Note: 'Rarely' includes 'Rarely', 'Never' and 'Don't buy meals'.

### Importance of having healthy choices available when buying a meal

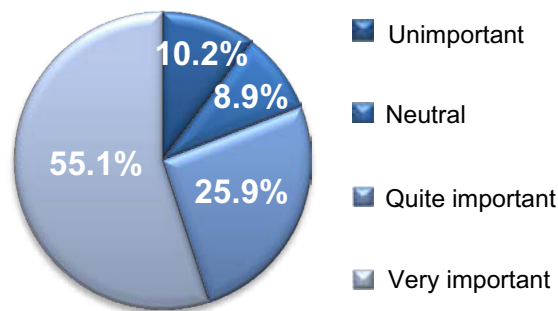
Respondents rated the importance of having healthy choices available when buying a meal (Table 76 and Figure 19).

- Half of WA adults (55.1%) said it was 'very important' to have healthy choices available when buying a meal and only 5.1% said it was 'not at all important'.
- Females were significantly more likely to rate the availability of healthy choices as 'very important' than males (69.5% compared with 41.3%).
- Males were significantly more likely than females to be neutral about the importance of healthy choices when buying a meal (13.5% compared with 4.2%).

Table 76: Importance of healthy choice availability when buying a meal, WA NMSS 2015

| n=1204                   | Very important |              | Quite important |              | Neither important nor unimportant |             | Quite unimportant |             | Not at all important |             |
|--------------------------|----------------|--------------|-----------------|--------------|-----------------------------------|-------------|-------------------|-------------|----------------------|-------------|
|                          | %              | 95% CI       | %               | 95% CI       | %                                 | 95% CI      | %                 | 95% CI      | %                    | 95% CI      |
| <b>Persons</b>           | 55.1           | (49.9, 60.3) | 25.9            | (21.6, 30.1) | 8.9                               | (5.4, 12.5) | 5.1               | (2.2, 7.9)  | 5.1                  | (2.8, 7.4)  |
| Female                   | 69.5           | (64.1, 74.9) | 21.0            | (16.4, 25.6) | 4.2                               | (1.9, 6.5)  | 2.0               | (0.9, 3.0)  | 3.3                  | (0.7, 5.9)  |
| Male                     | 41.3           | (33.3, 49.3) | 30.5            | (23.4, 37.5) | 13.5                              | (7.1, 19.9) | 8.0               | (2.5, 13.5) | 6.8                  | (3.0, 10.5) |
| <b>Age Group</b>         |                |              |                 |              |                                   |             |                   |             |                      |             |
| 18 to 34 yrs             | 55.5           | (44.5, 66.6) | 19.6            | (11.3, 27.9) | 11.7                              | (3.7, 19.7) | 7.1               | (0.3, 13.9) | 6.2                  | (1.3, 11.0) |
| 35 to 44 yrs             | 53.8           | (45.1, 62.5) | 32.8            | (24.5, 41.2) | 5.7                               | (1.5, 9.8)  | 2.3               | (0.4, 4.2)  | 5.4                  | (0.7, 10.1) |
| 45 to 54 yrs             | 55.2           | (48.6, 61.8) | 29.7            | (23.5, 35.9) | 6.5                               | (3.0, 10.1) | 4.0               | (1.8, 6.2)  | 4.6                  | (1.7, 7.5)  |
| 55 to 64 yrs             | 55.7           | (49.8, 61.7) | 27.2            | (21.8, 32.6) | 9.5                               | (5.7, 13.2) | 5.1               | (2.2, 7.9)  | 2.5                  | (1.0, 4.0)  |
| <b>Area of residence</b> |                |              |                 |              |                                   |             |                   |             |                      |             |
| Perth Metro              | 56.4           | (50.1, 62.8) | 24.2            | (19.1, 29.4) | 8.7                               | (4.3, 13.0) | 5.3               | (1.6, 8.9)  | 5.4                  | (2.5, 8.3)  |
| Rest of WA               | 50.1           | (44.4, 55.8) | 31.9            | (26.5, 37.3) | 9.9                               | (5.7, 14.2) | 4.3               | (2.2, 6.4)  | 3.8                  | (1.8, 5.7)  |

Figure 19: Importance of healthy choice availability when buying a meal, WA NMSS 2015



Note: 'Unimportant' includes 'Quite unimportant' and 'Not at all important'.

#### 5.4.4 Food preparation skills

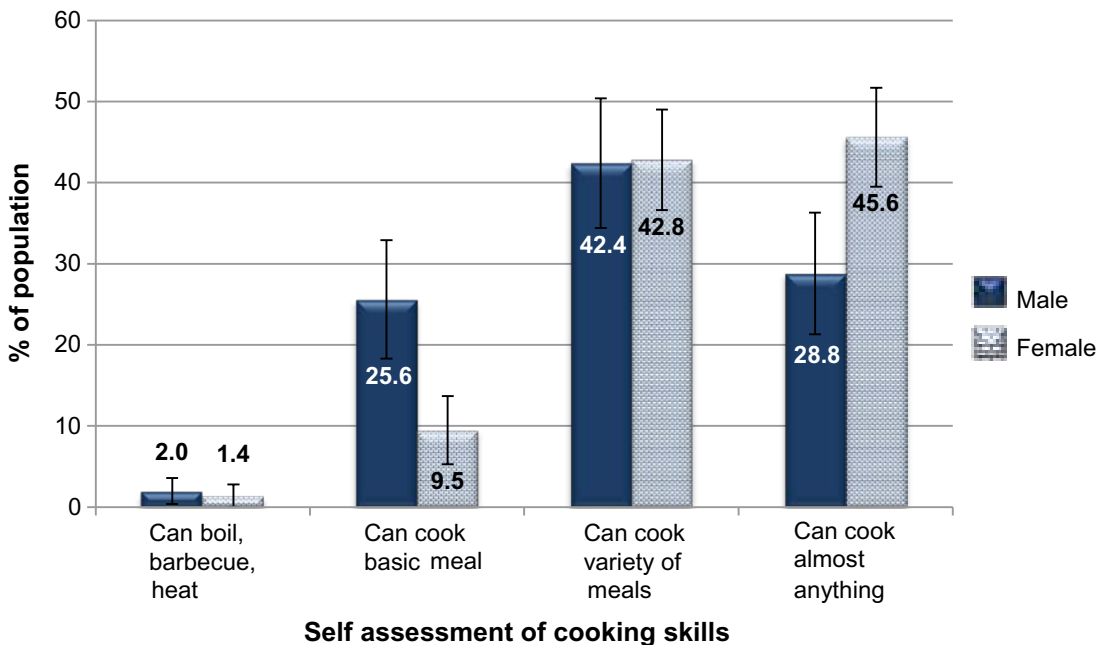
Having skills and confidence to prepare food not only increases food choice options but can also make healthier choices easier. Respondents were asked to rate their cooking skills from 'can't cook' through to 'can cook almost anything' (Table 77 and Figure 20).

- Most adults (79.6%) indicated good cooking skills with 42.6% claiming they 'can cook a wide variety of foods' and 37.0% saying they 'can cook almost anything'.
- Females were significantly more likely than males to say they 'can cook almost anything' (45.6% compared with 28.8%).
- Males were more likely than females to say they 'can cook a basic meat and 3 vegetables type meal' (25.6% compared with 9.5%).
- In a separate question, a majority of adults reported that 'knowing quicker ways of preparing healthy foods' (82.1%), 'knowing more ways of preparing healthy foods' (75.0%) and 'knowing more about cooking' (61.2%) would help them and their families to eat a healthier diet (Table 67).

Table 77: **Self-assessment of cooking skills, WA NMSS 2015**

| n=1205                   | Can't cook |            | Can boil an egg, BBQ meat or heat frozen meals |            | Can cook basic meat 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       |
| <b>Persons</b>           | 1.0        | (0.0, 2.1) | 1.7  | (0.2, 3.1) | 17.8                                    | (13.4, 22.1) | 42.6                             | (37.5, 47.6) | 37.0                     | (32.1, 41.8) |
| Female                   | 0.8        | (0.0, 2.2) | 1.4  | (0.0, 3.8) | 9.5                                     | (5.3, 13.8)  | 42.8                             | (36.6, 48.9) | 45.6                     | (39.5, 51.6) |
| Male                     | 1.2        | (0.0, 2.9) | 2.0  | (0.4, 3.6) | 25.6                                    | (18.3, 32.9) | 42.4                             | (34.4, 50.4) | 28.8                     | (21.3, 36.3) |
| <b>Age Group</b>         |            |            |  |            |   |              |                                  |              |                          |              |
| 18 to 34 yrs             | 1.9        | (0.0, 4.4) | 2.3  | (0.0, 5.4) | 21.9                                    | (12.4, 31.4) | 41.5                             | (30.7, 52.4) | 32.4                     | (22.1, 42.7) |
| 35 to 44 yrs             | -          |            | 1.4  | (0.0, 4.0) | 14.7                                    | (7.8, 21.5)  | 42.7                             | (34.1, 51.2) | 41.3                     | (32.9, 49.7) |
| 45 to 54 yrs             | 0.8        | (0.0, 2.3) | 0.3  | (0.0, 0.8) | 12.3                                    | (7.6, 17.0)  | 46.6                             | (40.0, 53.1) | 40.0                     | (33.8, 46.2) |
| 55 to 64 yrs             | 0.7        | (0.0, 1.4) | 2.3  | (0.2, 4.4) | 18.5                                    | (13.5, 23.5) | 40.0                             | (34.2, 45.8) | 38.5                     | (32.9, 44.2) |
| <b>Area of residence</b> |            |            |  |            |   |              |                                  |              |                          |              |
| Perth Metro              | 1.2        | (0.0, 2.6) | 1.6  | (0.0, 3.3) | 18.7                                    | (13.3, 24.0) | 42.8                             | (36.6, 49.1) | 35.7                     | (29.8, 41.7) |
| Rest of WA               | 0.3        | (0.0, 0.7) | 2.0  | (0.0, 4.1) | 14.4                                    | (10.0, 18.7) | 41.6                             | (36.0, 47.3) | 41.7                     | (36.2, 47.1) |

Figure 20: **Self-assessment of cooking skills, WA NMSS 2015**



Note: 0.8% females and 1.2% males who said 'Can't cook' not included

### 5.4.5 Sources of nutrition information

Reliable nutrition information is important for shaping consumers' food and nutrition attitudes, knowledge and behaviour. Respondents were asked to specify the main sources of nutrition and diet information they had accessed over the past 12 months. Up to five responses were allowed (Table 78).

- The top five sources of information were: the Internet or websites (39.3%); TV programs (19.1%); family and friends (17.8%); magazine articles (17.7%); and television advertisements (16.8%).



Table 78: **Main sources of nutrition and dietary information in the past 12 months, WA NMSS 2015**

| Main source of information                       | %    | 95% CI       |
|--|------|--------------|
| Internet/website                                 | 39.3 | (34.3, 44.2) |
| TV programs                                      | 19.1 | (15.4, 22.9) |
| Family and friends                               | 17.8 | (13.6, 22.0) |
| TV ads   | 17.7 | (13.8, 21.5) |
| Books  | 16.8 | (12.8, 20.7) |
| Magazine articles                                | 14.1 | (11.2, 16.9) |
| Doctors  | 9.4  | (6.5, 12.3)  |
| Newspaper articles                               | 8.6  | (6.4, 10.8)  |
| Food labels/packaging                            | 6.2  | (3.8, 8.7)   |
| At uni/part of training/am a health professional | 5.9  | (3.0, 8.7)   |
| Dietitians                                       | 5.7  | (3.8, 7.5)   |
| Don't look it up/nowhere                         | 5.3  | (3.7, 6.9)   |
| Social media                                     | 3.9  | (1.8, 5.9)   |

Respondents allowed up to 5 answers. Total will not equal 100%

## 5.4.6 Government food regulation and nutrition promotion

Government policies and actions can help to create a supportive environment for healthy eating. Respondents were asked how important they thought it was that governments regulate or have control over aspects of the food supply and marketing, as well as providing financial support for various nutrition promotion activities. Importance was rated on a five point scale; 'very important', 'quite important', 'neither important nor unimportant', 'not very important' and 'not at all important'.

### 5.4.6.1 Importance of government food control and regulations

The proportion of the population who rated government control or regulation as 'very' or 'quite important' for each issue are shown in Table 79.

- Most WA adults (95.9%) said it was 'quite' or 'very important' for government to regulate nutrition information on food labels.
- Most (94.4%) said that it was 'quite' or 'very important' that government regulate or control a health rating on food labels.
- Females were significantly more likely than males to say that it is important for government to regulate the supply of environmentally friendly foods (89.3% compared with 76.1%).

Table 79: ‘Quite important’ and ‘very important’ for government food control or regulation of food activities, WA NMSS 2015

|                          | Nutrition information on food labels | Health rating on food labels | Food advertising  | Supply of environmentally friendly food | Genetically modified foods |
|--------------------------|--------------------------------------|------------------------------|-------------------|---|----------------------------|
|                          | n=1198                               | n=1190                       | n=1188            | n=1164                                  | n=1160                     |
|                          | % 95% CI                             | % 95% CI                     | % 95% CI          | % 95% CI                                | % 95% CI                   |
| <b>Persons</b>           | 95.9 (93.5, 98.3)                    | 94.4 (92.1, 96.8)            | 83.5 (79.8, 87.2) | 82.5 (78.2, 86.8)                       | 79.2 (75.1, 83.4)          |
| Female                   | 97.0 (94.4, 99.6)                    | 96.3 (94.9, 97.8)            | 85.5 (81.7, 89.3) | 89.3 (85.6, 92.9)                       | 84.3 (79.9, 88.7)          |
| Male                     | 94.8 (90.8, 98.8)                    | 92.6 (88.3, 97.0)            | 81.6 (75.4, 87.8) | 76.1 (68.7, 83.5)                       | 74.3 (67.3, 81.2)          |
| <b>Age Group</b>         |                                      |                              |                   |   |                            |
| 18 to 34 yrs             | 94.6 (89.1, 100.0)                   | 94.9 (89.7, 100.0)           | 85.3 (77.5, 93.1) | 81.6 (72.1, 91.0)                       | 82.7 (74.4, 91.0)          |
| 35 to 44 yrs             | 98.2 (95.4, 100.0)                   | 95.3 (91.8, 98.8)            | 85.9 (79.7, 92.1) | 87.2 (81.4, 93.0)                       | 74.2 (65.9, 82.6)          |
| 45 to 54 yrs             | 96.4 (93.9, 98.9)                    | 92.5 (89.0, 96.0)            | 79.8 (74.5, 85.0) | 78.5 (72.5, 84.4)                       | 78.4 (72.7, 84.2)          |
| 55 to 64 yrs             | 95.5 (93.2, 97.9)                    | 94.6 (92.0, 97.2)            | 80.4 (75.7, 85.1) | 83.3 (78.7, 87.8)                       | 78.4 (73.4, 83.5)          |
| <b>Area of residence</b> |                                      |                              |                   |   |                            |
| Perth Metro              | 96.3 (93.3, 99.2)                    | 95.0 (92.1, 97.9)            | 84.3 (79.7, 88.8) | 83.4 (78.2, 88.7)                       | 80.0 (75.0, 85.1)          |
| Rest of WA               | 94.5 (91.5, 97.4)                    | 92.2 (89.2, 95.2)            | 80.4 (76.2, 84.7) | 78.9 (73.7, 84.1)                       | 76.2 (71.0, 81.3)          |

#### 5.4.6.2 Importance of government financial support of nutrition activities

Respondents were asked how important it is that governments financially support food and nutrition related activities: monitoring activities (Table 80); and promotional activities (Table 81).

#### Government financial support of monitoring food supply and consumption

The proportion of the population rating government financial support as ‘very important’ or ‘quite important’ for: monitoring the food supply quality and consumption; and working with food industry to increase availability of healthy foods are shown in Table 80.

- Nine in ten WA adults rated government financial support as ‘very important’ or ‘quite important’ for:
  - monitoring the quality of the food supply (96.5%)
  - working with food industry to increase availability of healthy foods (94.9%)
  - research investigating ‘what Western Australians are eating’ and how our diet is changing over time (90.7%).
- Females were significantly more likely than males to rate government support of monitoring the quality of the food supply as being ‘quite important’ or ‘very important’ (98.6% compared with 94.4%).

Table 80: ‘Very’ and ‘quite’ important that food supply and diet monitoring activities receive government financial support, WA NMSS 2015

|                          | Monitoring the quality of the food supply | Working with food industry to increase the availability of healthy foods | Research investigating WA diets and changes over time |
|--------------------------|---|--|---|
|                          | n=1194                                    | n=1192   | n=1196  |
|                          | % 95% CI                                  | % 95% CI   | % 95% CI  |
| <b>Persons</b>           | 96.5 (94.8, 98.2)                         | 94.9 (92.6, 97.2)  | 90.7 (88.1, 93.4)                                     |
| Female                   | 98.6 (97.8, 99.3)                         | 96.1 (94.3, 98.0)  | 90.2 (87.4, 93.0)                                     |
| Male                     | 94.4 (91.2, 97.7)                         | 93.7 (89.5, 97.8)  | 91.2 (86.7, 95.7)                                     |
| <b>Age Group</b>         |   |  |   |
| 18 to 34 yrs             | 96.7 (93.3, 100.0)                        | 96.3 (91.4, 100.0)   | 93.4 (87.9, 98.9)                                     |
| 35 to 44 yrs             | 97.7 (94.8, 100.0)                        | 95.2 (91.3, 99.2)  | 91.1 (86.5, 95.7)                                     |
| 45 to 54 yrs             | 93.9 (90.5, 97.3)                         | 92.6 (89.2, 96.0)  | 87.7 (83.7, 91.8)                                     |
| 55 to 64 yrs             | 97.4 (95.6, 99.3)                         | 93.7 (90.9, 96.6)  | 87.5 (83.7, 91.3)                                     |
| <b>Area of residence</b> |   |  |   |
| Perth Metro              | 96.5 (94.4, 98.6)                         | 95.0 (92.1, 97.8)  | 91.5 (88.2, 94.8)                                     |
| Rest of WA               | 96.2 (94.4, 97.9)                         | 94.5 (92.4, 96.7)  | 87.8 (84.6, 91.1)                                     |

### Government support of activities to promote healthy eating

The total proportion of WA adults who rated government financial support as ‘very important’ or ‘quite important’ for a range of promotional activities are shown in Table 81.

- Around 90% of adults rated government financial support as ‘very important’ or ‘quite important’ for:
  - supporting schools to provide better nutrition information and programs (97.3%)
  - providing nutrition publications for the general public (89.0%)
  - advertising campaigns to promote healthy eating to the public (88.6%)
  - advertising campaigns to promote healthy weight to the public (87.7%).

Table 81: 'Very important' and 'quite important' that nutrition promotion activities receive government financial support, WA NMSS 2015

|                          | Supporting schools to provide better nutrition information and programs | Providing nutrition publications for the general public | Advertising campaigns to promote healthy eating to the public | Advertising campaigns to promote healthy weight to the public |
|--------------------------|---|---|---|---|
|                          | n=1196  | n=1194  | n=1198  | n=1196  |
|                          | % 95% CI  | % 95% CI  | % 95% CI  | % 95% CI  |
| <b>Persons</b>           | 97.3 (95.9, 98.6)   | 89.0 (86.1, 91.9)                                       | 88.6 (85.6, 91.7)   | 87.7(84.9, 90.5)  |
| Female                   | 98.2 (97.4, 99.1)   | 88.3 (84.4, 92.1)                                       | 91.1 (88.2, 94.1)   | 86.2 (82.1, 90.3)   |
| Male                     | 96.4 (93.8, 98.9)   | 89.7 (85.5, 93.9)                                       | 86.3 (81.0, 91.5)   | 89.2 (85.5, 92.8)   |
| <b>Age Group</b>         |   |   |   |   |
| 18 to 34 yrs             | 98.1 (95.9, 100.0)  | 89.6 (83.8, 95.4)                                       | 91.4 (85.5, 97.3)   | 90.6 (85.3, 95.9)   |
| 35 to 44 yrs             | 96.5 (92.7, 100.0)  | 88.8 (83.4, 94.1)                                       | 87.0 (80.5, 93.5)   | 88.4 (83.3, 93.4)   |
| 45 to 54 yrs             | 95.7 (93.0, 98.4)   | 87.4 (83.2, 91.7)                                       | 88.5 (84.1, 92.9)   | 84.0 (79.1, 88.9)   |
| 55 to 64 yrs             | 98.2 (97.0, 99.4)   | 89.7 (86.1, 93.4)                                       | 89.1 (85.4, 92.8)   | 88.7 (85.5, 92.0)   |
| <b>Area of residence</b> |   |   |   |   |
| Perth Metro              | 97.6 (96.0, 99.2)   | 89.2 (85.7, 92.7)                                       | 89.1 (85.4, 92.8)   | 88.7 (85.5, 92.0)   |
| Rest of WA               | 96.0 (93.7, 98.3)   | 88.3 (84.4, 92.2)                                       | 86.9 (82.8, 91.0)   | 83.9 (79.5, 88.4)   |

### Priority topics for government community nutrition education programs

Respondents were provided with a list of five potential government community nutrition education program topics and asked to rank them in order of priority, starting with one as the highest priority. The proportions of the population who ranked each topic as a one or two are shown in Table 82 and Figure 21.

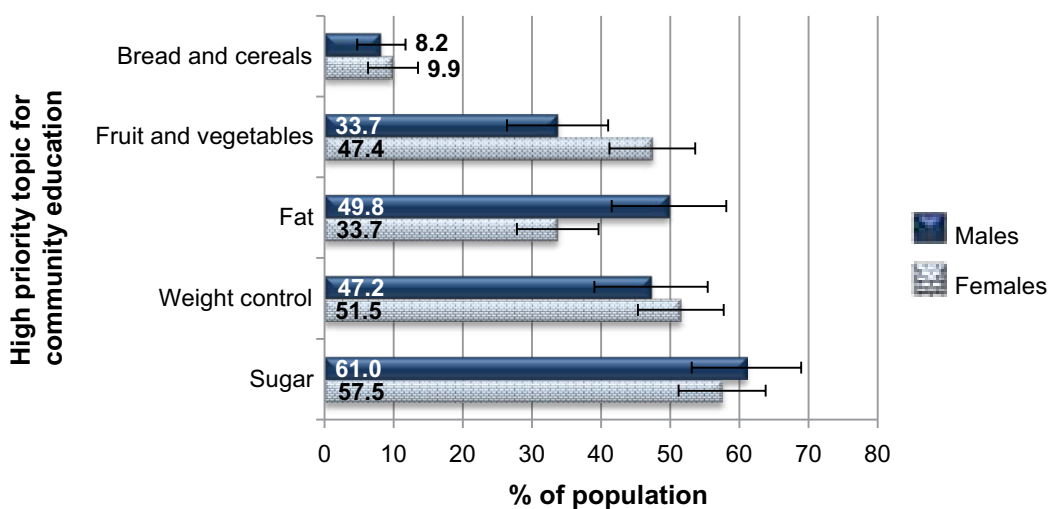
- The five highest ranking topics were:
  - sugar (59.3%)
  - weight control (49.3%)
  - fat (41.9%)
  - fruit and vegetables (40.4%)
  - bread and cereals (9.0%).
- Significant gender differences in priority topics were seen as follows:
  - more males than females gave high priority to fat education (49.8% compared with 33.7%)
  - more females than males gave high priority to fruit and vegetable education (47.4% compared to 33.7%).

Table 82: High priority topics for government community nutrition education programs, WA NMSS 2015

| n=1182                   | Sugar |              | Weight and weight control |              | Fat  |              | Fruit and vegetables |              | Bread and cereals |             |
|--------------------------|-------|--------------|---------------------------|--------------|------|--------------|----------------------|--------------|-------------------|-------------|
|                          | %     | 95% CI       | %                         | 95% CI       | %    | 95% CI       | %                    | 95% CI       | %                 | 95% CI      |
| <b>Persons</b>           | 59.3  | (54.2, 64.4) | 49.3                      | (44.1, 54.6) | 41.9 | (36.6, 47.2) | 40.4                 | (35.4, 45.4) | 9.0               | (6.5, 11.6) |
| Female                   | 57.5  | (51.2, 63.8) | 51.5                      | (45.3, 57.7) | 33.7 | (27.8, 39.6) | 47.4                 | (41.2, 53.7) | 9.9               | (6.3, 13.5) |
| Male                     | 61.0  | (53.1, 69.0) | 47.2                      | (39.0, 55.5) | 49.8 | (41.5, 58.1) | 33.7                 | (26.4, 40.9) | 8.2               | (4.7, 11.7) |
| <b>Age Group</b>         |       |              |                           |              |      |              |                      |              |                   |             |
| 18 to 34 yrs             | 57.2  | (46.3, 68.1) | 51.1                      | (40.0, 62.2) | 42.6 | (31.3, 53.9) | 41.8                 | (31.1, 52.4) | 7.4               | (2.5, 12.2) |
| 35 to 44 yrs             | 64.0  | (55.8, 72.2) | 45.8                      | (37.2, 54.5) | 41.9 | (33.2, 50.5) | 38.5                 | (30.2, 46.8) | 9.8               | (4.9, 14.8) |
| 45 to 54 yrs             | 57.7  | (51.1, 64.3) | 51.5                      | (44.9, 58.1) | 40.1 | (33.6, 46.7) | 41.1                 | (34.6, 47.6) | 9.5               | (5.6, 13.5) |
| 55 to 64 yrs             | 60.1  | (54.2, 65.9) | 47.1                      | (41.2, 53.1) | 42.3 | (36.4, 48.3) | 38.9                 | (33.1, 44.7) | 11.5              | (7.6, 15.5) |
| <b>Area of residence</b> |       |              |                           |              |      |              |                      |              |                   |             |
| Perth Metro              | 59.6  | (53.3, 65.8) | 48.9                      | (42.5, 54.6) | 43.9 | (37.4, 50.4) | 39.2                 | (33.1, 45.2) | 8.4               | (5.5, 11.3) |
| Rest of WA               | 58.2  | (52.5, 63.9) | 51.0                      | (45.4, 56.7) | 34.2 | (29.1, 39.3) | 45.3                 | (39.5, 51.0) | 11.3              | (6.6, 16.0) |

Note: High priority includes topics ranked 1 or 2. Total exceeds 100% as respondents could give two responses

Figure 21: High priority topics for government community nutrition education programs by gender, WA NMSS 2015



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# Appendices

## Appendix 1 Australian Dietary Guidelines 2013

The Australian Dietary Guidelines<sup>1</sup>, developed by the National Health and Medical Research Council, are developed using the best available scientific evidence. They make dietary recommendations - relating to types and amounts of foods, food groups and dietary patterns - to promote health and wellbeing and reduce the risk of diet-related disease.

The 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.

| Australian Dietary Guidelines 2013 |   |
|------------------------------------|---|
| 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"> <li>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.</li> <li>Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.</li> </ul>  |
| 2                                  | <p>Enjoy a wide variety of nutritious foods from these five groups every day:</p> <ul style="list-style-type: none"> <li>Plenty of vegetables, including different types and colours, and legumes/beans.</li> <li>Fruit.</li> <li>Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley.</li> <li>Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans.</li> <li>Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years).</li> <li>And drink plenty of water.</li> </ul>  |
| 3                                  | <p>Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.</p> <p>a. Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.</p> <ul style="list-style-type: none"> <li>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, spreads, nut butters/pastes and avocado.</li> <li>Low fat diets are not suitable for children under the age of 2 years.</li> </ul> <p>b. Limit intake of foods and drinks containing added salt.</p> <ul style="list-style-type: none"> <li>Read labels to choose lower sodium options among similar foods.</li> <li>Do not add salt to foods in cooking or at the table.</li> </ul> <p>c. Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports 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.  |

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in alternative formats on request for  
a person with disability.

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