



CSIRO Healthy Diet Score 2016

Australia's largest ever diet survey confirms we're not as healthy as we think we are

September 2016

CITATION

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Executive summary



Australia needs to take a reality check on its diet

We pride ourselves on being fit and healthy but with an average score of 59/100, the *CSIRO Healthy Diet Score 2016* suggests we're not. Australia is fortunate to have one of the best health systems in the world but it won't continue if we don't improve our eating habits.



Discretionary foods are our major diet downfall

We are eating about 3 serves of discretionary foods per day which exceeds recommendations. Our top weaknesses are: alcohol, chocolate and confectionary, cakes and biscuits, and sugar sweetened beverages.



None of us score 100% for healthy eating

The closest we get to meeting the *Australian Dietary Guidelines* is the fruit food group where 49% of respondents meet the recommended intake. That means 1 in 2 of us still have room to improve. More concerning is discretionary foods: this food group is superfluous to our nutrition needs, although only 1% abstain – meaning 99% of Australians are eating junk food their bodies really don't need.



Some of us will need more support to improve our diets

We all have room to improve, however, there are noticeable differences in Diet Scores between genders, ages and occupations. For example:

- Women score the equivalent of a C, and men a D
- Construction workers eat 76% more discretionary foods than health industry workers
- Australians aged 31-50 score 4 points less than Australians aged 50+
- Obese Australian males have the lowest Diet Score of all respondents (52/100)



We need more Australians to discover their Diet Score

Most of us think we generally eat healthily but Australia's largest ever diet survey suggests we don't. We need leaders in government, industry, media and healthcare to encourage all Australians to complete the CSIRO Healthy Diet Score and see how their eating habits measure up.



C'mon Australia, we can do better than 59/100!

Raising our average Diet Score to 70/100 could help Australia mitigate against growing rates of obesity and lifestyle diseases, such as heart disease, type 2 diabetes and a third of all cancers, which can be prevented through a healthy lifestyle.



Halve the bad, double the good

The average Australian could increase their score to 70/100 by:

- Halving discretionary foods
- Doubling vegetables

Background: CSIRO Healthy Diet Score

FAST FACTS

Australia's largest ever diet survey

Assesses eating habits against the *Australian Dietary Guidelines*

Provides a score out of 100

The higher the score,
the better the diet

About the CSIRO Healthy Diet Score

In May 2015, CSIRO launched the CSIRO Healthy Diet Score, an online survey freely available to all Australians at the website www.csirodietscore.com.

The CSIRO Healthy Diet Score is based on a scientifically validated online tool which assesses an individual's self-reported food intake against the *Australian Dietary Guidelines*. The unique tool provides individuals with a personalised Diet Score and feedback on how to improve their score.

An individual's score reflects their overall compliance with age and gender specific food group intake targets as described in the *Australian Dietary Guidelines*. Scores can range from 0-100, where 100 reflects greater compliance with the Guidelines and a higher diet quality.

The *Australian Dietary Guidelines* provide Australians with specific advice on the quantities of core and noncore foods to consume on a daily basis, based on their age and gender. To reflect these Guidelines as best as possible, the CSIRO Healthy Diet Score assesses the quantity, quality and variety of foods consumed.

Quantity components

Total amount of fruit, vegetables, breads and cereals, meat and alternatives, dairy and dairy substitutes, and discretionary foods is compared to age and gender specific recommendations.

Quality components

Frequency of wholegrains consumption, reduced fat dairy consumption, frequency of trimming meat, fat type of spreads used and water consumption (as a proportion of total beverage intake) is assessed.

Variety component

Variety of foods consumed within each core food group is scored.

Objectives of this report

This report provides a comprehensive assessment of the results of the CSIRO Healthy Diet Score data collected up to June 2016. In particular, this report highlights the:

- Diet Score results among different segments of the population including those who report to avoid certain foods;
- Discretionary food consumption among Australians;
- Gender differences in reported intake of all food groups and overall Diet Score.

Data characteristics

This report describes a sample of 86,611 Australian adults who have visited the CSIRO Healthy Diet Score website (www.csirodietscore.com) from May 2015 to June 2016 and completed the survey once.

Outliers were removed (n=784) based on extreme age (less than 18 and older than 100 years), Body Mass Index (less than 13 and greater than 97), height (less than 1m and greater than 3m), and weight (less than 13kg and greater than 250kg).

The majority of the sample who have completed the survey are female (72.9%). There is a relatively even distribution of people in the 18-30 (25.5% of the total sample), 31-50 (37.6%), 51-70 (32.8%) year age groups, but only 4% of the sample is aged 71 years and older (Table 1).

Using self-reported height and weight, it is estimated that half the sample is overweight or obese (50.2%), and 47.3% are in the normal weight category.

The survey is completed online, and therefore has attracted a national sample of participants. Almost one third of people who have completed the survey live in Victoria, and another 25% in New South Wales. Between 10-12% of the remaining participants reside in Queensland, Western Australia or South Australia (Table 1).



CSIRO Healthy Diet Score is freely available to all Australians



Individuals answer 70 questions about their diet



Individuals receive a Diet Score out of 100 and tips on how to improve

TABLE 1: CHARACTERISTICS OF THE CSIRO HEALTHY DIET SCORE SAMPLE (N=86,611)

SAMPLE CHARACTERISTICS	COUNT	PERCENTAGE OF SAMPLE (N=86,611)	AUSTRALIAN POPULATION (N=21,507,719)
Gender			
Male	23,506	27.10%	49.40%
Female	63,105	72.90%	50.60%
Age group			
18-30 years	22,090	25.50%	13.80%
31-50 years	32,607	37.60%	28.10%
51-70 years	28,443	32.80%	22.60%
71+ years	3,471	4.00%	9.70%
Weight status			
Underweight	2,165	2.50%	1.70%
Normal weight	40,937	47.30%	35.50%
Overweight	26,587	30.70%	35.30%
Obese	16,922	19.50%	27.50%
State or territory			
New South Wales	21,328	25.00%	32.20%
Queensland	10,658	12.50%	20.10%
Australian Capital Territory	3,376	4.00%	1.70%
Northern Territory	772	0.90%	1.00%
Tasmania	2,626	3.10%	2.30%
Victoria	27,805	32.60%	24.90%
Western Australia	8,658	10.20%	10.40%
South Australia	9,997	11.70%	7.40%

*Population estimates of the Australian population were taken from the 2011 Census data, available from the Australian Bureau of Statistics.

Chapter 1: Key findings

Results of the CSIRO Healthy Diet Score

FAST FACTS

Average Diet Score is 59/100

Women are doing better than men

Older Australians score higher than younger generations

Average Diet Score is similar nationwide but varies by occupation

How do Australian diets measure up?

Women have better diets than men

Australians' average Diet Score was 59 out of a possible 100.

The average Diet Score was 4 points higher in Australian women than men (60 vs. 56).

TABLE 2: AVERAGE DIET SCORE BY GENDER

	MALE	FEMALE	TOTAL
Mean	56	60	59
Standard Deviation	13	13	13
Median	56	61	59
Range	4-97	5-98	4-98

Older Australians have better diets

Australians' Diet Score tended to increase with age. Older Australians scored 3-6 points better than the younger generations. Australians aged 71+ had an average Diet Score of 63, compared to 31-50 year olds who had an average Diet Score of 57.

TABLE 3: AVERAGE DIET SCORE BY AGE GROUP AND GENERATION

	AGE GROUP/ GENERATION	MEAN	STANDARD DEVIATION
Age group	18-30 years	58	13
	31-50 years	57	13
	51-70 years	61	12
	71+ years	63	12
Generation	Generation Y	58	13
	Generation X	58	13
	Baby boomers	61	12
	Silent generation	63	12

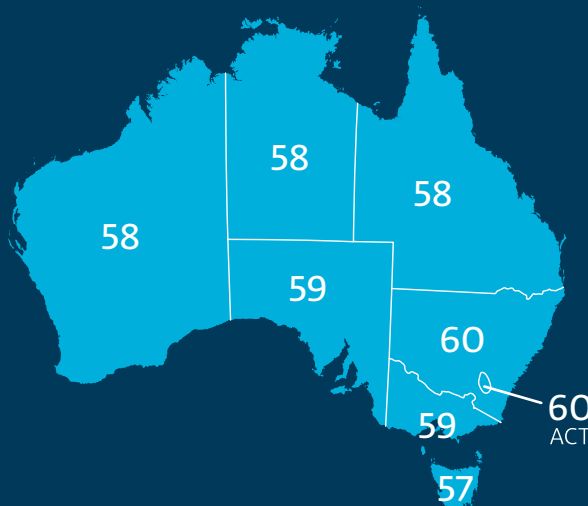
Diet quality is similar nationwide

The variation in the average Diet Score between states was small. Only 3 points separated Tasmania, with an average score of 57, from New South Wales and the Australian Capital Territory with a score of 60.

TABLE 4: AVERAGE DIET SCORE BY STATE/TERRITORY

STATE/TERRITORY	MEAN	STANDARD DEVIATION
New South Wales	60	13
Queensland	58	13
Australian Capital Territory	60	12
Northern Territory	58	13
Tasmania	57	13
Victoria	59	13
Western Australia	58	13
South Australia	59	13

Aussie diets fail the test



Of the 86,000 Australians who answered the survey, the average Diet Score was **59/100**

Consumption categories – high to low:
SCORES OUT OF 100



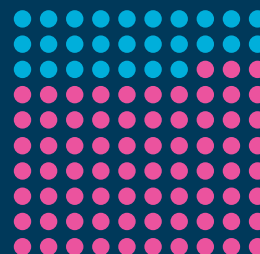
FEMALES

Fluids	93	GOOD
Vegetables	73	
Meat and Alternatives	70	
Fruit	69	
Variety	66	
Bread and Cereals	61	
Healthy Fats	55	POOR
Dairy and Alternatives	49	
Discretionary Foods	33	



MALES

Fluids	88	GOOD
Fruit	67	
Meat and Alternatives	66	
Variety	65	
Bread and Cereals	62	
Vegetables	61	
Healthy Fats	52	POOR
Dairy and Alternatives	47	
Discretionary Foods	26	



86K+ responders

27% MALE
73% FEMALE



Age matters

57 31-50 YEARS
AGE GROUP WITH THE LOWEST AVERAGE DIET SCORE

61 OVER 50S
AVERAGE DIET SCORE INCREASES WITH AGE



Gender matters

56 MEN
AVERAGE DIET SCORE OF AUSTRALIAN MALES

60 WOMEN
AVERAGE DIET SCORE OF AUSTRALIAN FEMALES



Job matters

62 HEALTH INDUSTRY & RETIRED
OCCUPATIONS WITH THE HIGHEST AVERAGE DIET SCORE

54 CONSTRUCTION & UNEMPLOYED
OCCUPATIONS WITH THE LOWEST AVERAGE DIET SCORE



Weight matters

56 OBESE
OBESE AUSTRALIANS HAVE A BELOW AVERAGE DIET SCORE

61 NORMAL WEIGHT
EVEN NORMAL WEIGHT AUSTRALIANS HAVE IMPROVEMENTS TO MAKE

Construction workers and the unemployed have the poorest quality diets

Diet Score varied by occupation. Retired Australians and those working in the health industry had a highest average Diet Score of 62 out of 100. Construction workers and Australians who were unemployed averaged 54 out of 100, which was the lowest of all occupations.

TABLE 5: AVERAGE DIET SCORE BY OCCUPATION

OCCUPATION	MEAN	STANDARD DEVIATION
Administration	58	13
Construction	54	14
Customer / Food Service	56	14
Education / Research	60	12
Health Industry	62	12
Homemaker	59	13
Management / Finance	58	12
Media / Arts	58	13
Public Servants / Real Estate	58	13
Retired	62	12
Sales / Distribution	55	14
Sales / Marketing / PR	57	12
Science / Programming	57	13
Student	59	14
Unemployed	54	15
Other	58	13

Chapter 2: Junk food nation

Discretionary foods – the worst offender

FAST FACTS

Australians exceed the maximum recommendations for discretionary foods

Alcohol, chocolate and confectionary, cakes and biscuits, and sugar sweetened beverages are the worst offenders

Men eat more discretionary foods than women

Construction workers eat significantly more discretionary foods than other occupations

How much discretionary foods do we eat?



Figure 1: Weekly serves of discretionary foods for the average Australian male

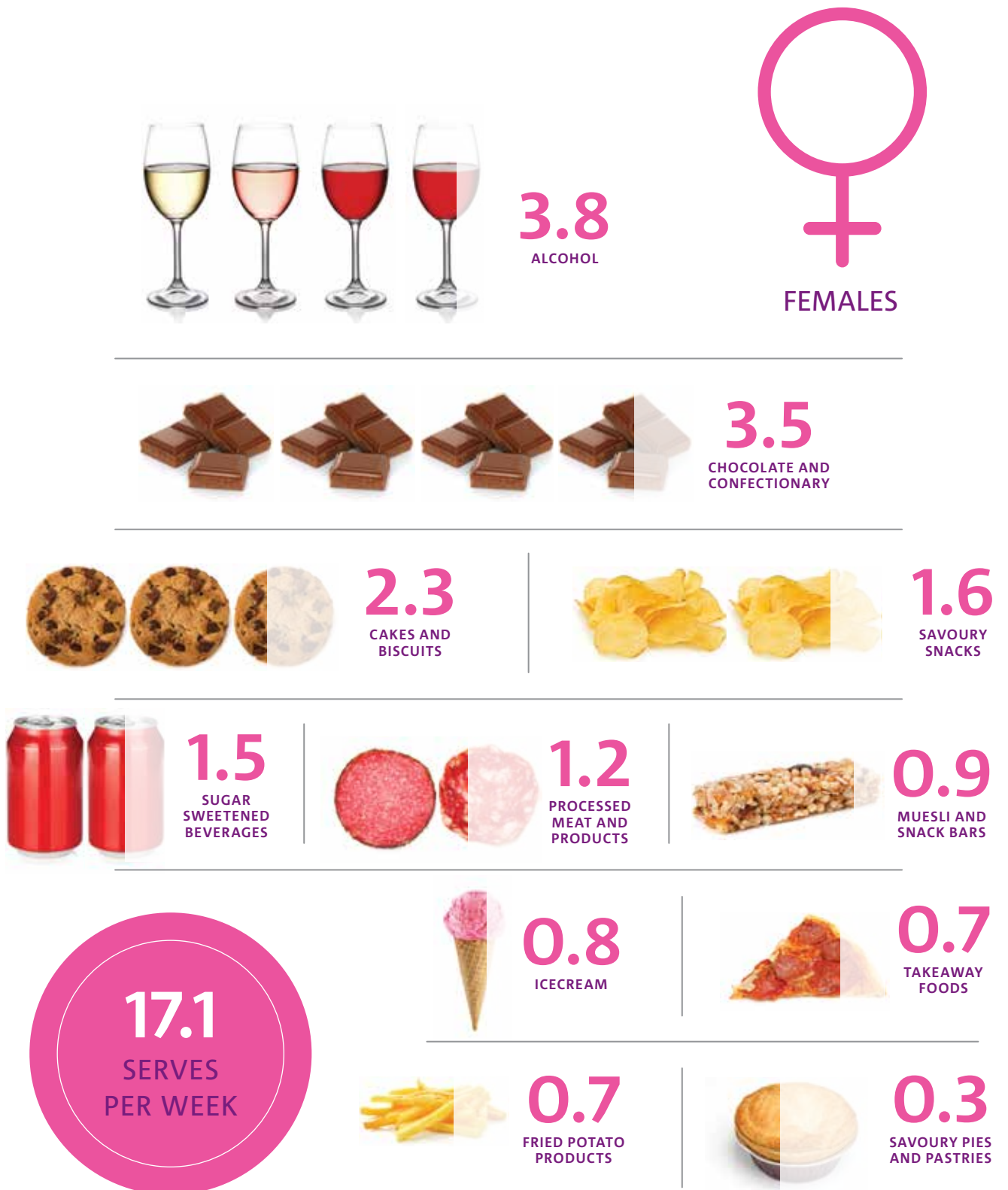


Figure 2: Weekly serves of discretionary foods for the average Australian female

Why discretionary foods are a problem

Discretionary foods are not a necessary part of a healthy dietary pattern. These foods are high in saturated fat, sugar, and/or salt, and are usually high in energy and low in essential nutrients.

Examples of what the discretionary food group includes are: high fat takeaway foods, cakes and biscuits, savoury pies and pastries, chocolate and confectionary, processed meats and icecream, sugar sweetened beverages and alcohol. Consumption of these foods and beverages may be associated with an increased risk of obesity and chronic disease.

Intake of discretionary foods is too high

On average, Australians reported to consume 2.7 serves of discretionary foods each day, which equates to 19 serves per week. This exceeds the average maximum recommendation of 0-2.5 serves per day.

Australian men reported to consume 1 extra serve of discretionary foods each day compared to women (3.4 vs. 2.4 serves).

#1

ALCOHOL

4.5

SERVES PER WEEK



#2

CHOCOLATE AND CONFECTIONARY

3.3

SERVES PER WEEK



#3

CAKES AND BISCUITS

2.3

SERVES PER WEEK



#4

SUGAR SWEETENED BEVERAGES

1.8

SERVES PER WEEK



Australians' top 4 discretionary foods of choice

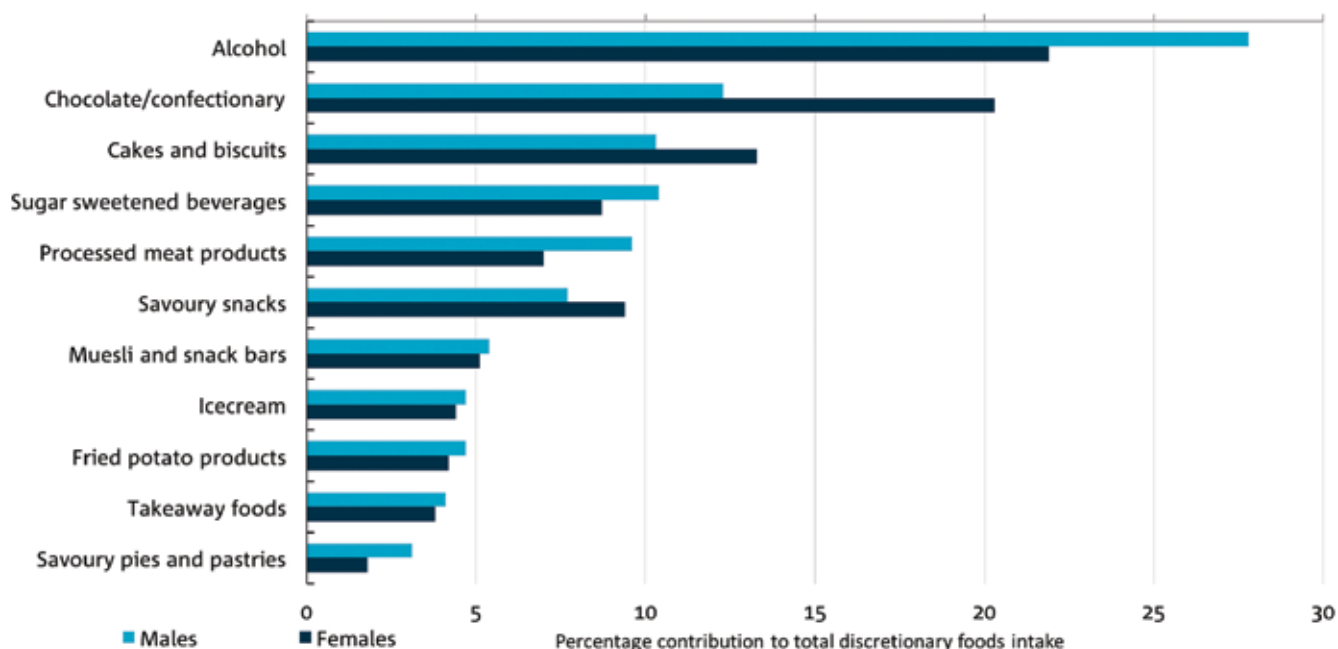
TABLE 6: AVERAGE SERVES OF DISCRETIONARY FOOD CONSUMED BY GENDER

	DAILY			WEEKLY		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Alcohol	1.0	0.5	0.7	6.6	3.8	4.5
Cakes and biscuits	0.4	0.3	0.3	2.5	2.3	2.3
Chocolate and confectionary	0.4	0.5	0.5	2.9	3.5	3.3
Fried potato products	0.2	0.1	0.1	1.1	0.7	0.8
Icecream	0.2	0.1	0.1	1.1	0.8	0.9
Muesli and snack bars	0.2	0.1	0.1	1.3	0.9	1.0
Processed meat and products	0.3	0.2	0.2	2.3	1.2	1.5
Savoury pies and pastries	0.1	0.0	0.1	0.7	0.3	0.4
Savoury snacks	0.3	0.2	0.2	1.8	1.6	1.7
Sugar sweetened beverages	0.4	0.2	0.3	2.5	1.5	1.8
Takeaway foods	0.1	0.1	0.1	1.0	0.7	0.7
Total discretionary food	3.4	2.4	2.7	23.9	17.1	18.9

Gender differences: Men eat more discretionary foods than women

For Australian men, alcohol contributed more than one quarter of their total discretionary food intake. For women, alcohol and chocolate/confectionary were the biggest contributors to total discretionary food intake.

FIGURE 3: GENDER DIFFERENCES IN THE PERCENTAGE CONTRIBUTION TO WEEKLY DISCRETIONARY FOOD INTAKE



His and her discretionary foods



Men's #1 discretionary food is alcohol. Women's biggest contributors are alcohol and chocolate/confectionary.

Age differences: Older Australians drink more alcohol but younger generations eat more discretionary foods

Australians under 50 years reported to consume slightly more discretionary foods than older Australians (19.7 vs. 17.6 serves per week)

Among discretionary foods, alcohol is the greatest contributor to total intake for all age groups, except 18-30 year olds.

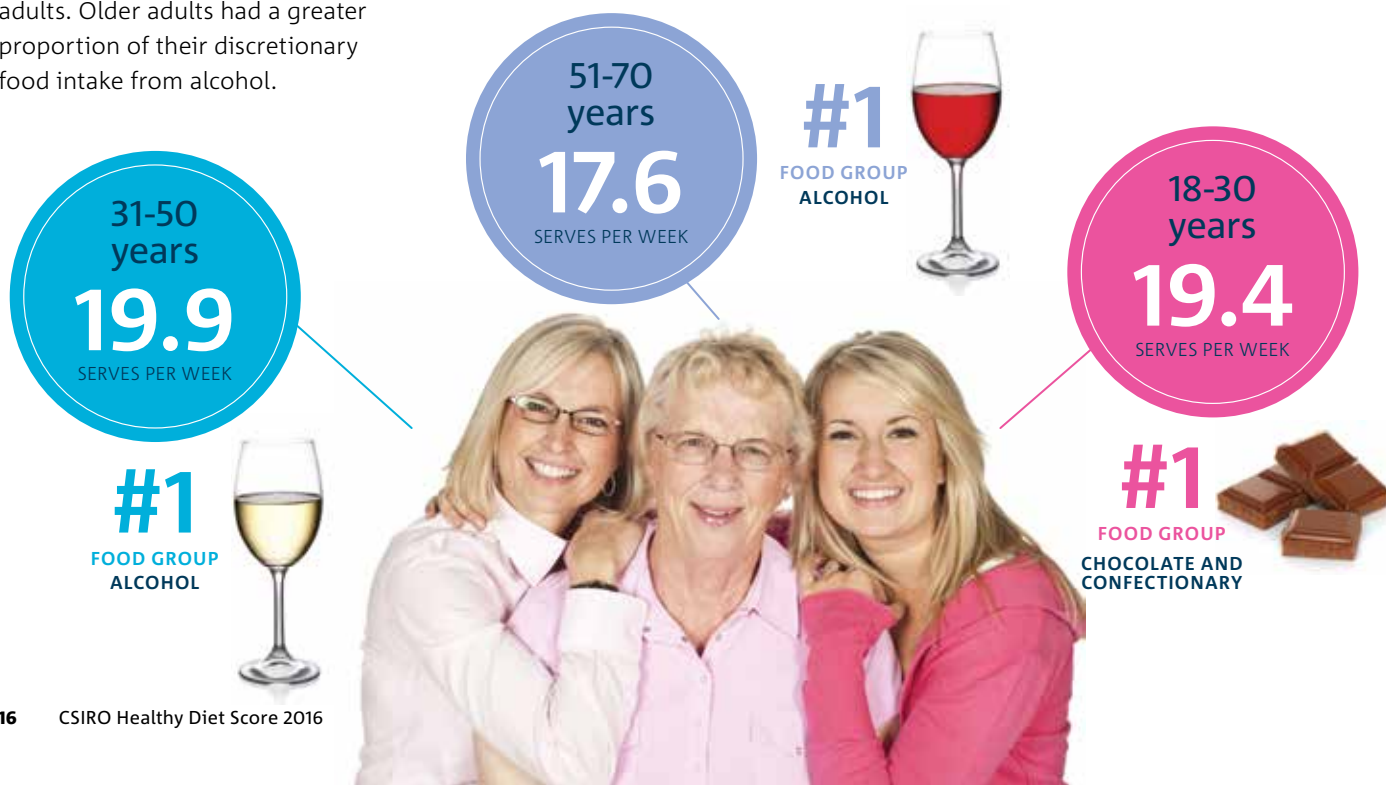
For young adults (18-30 years) chocolate and confectionary was the greatest contributor to total discretionary food intake, followed by alcohol, sugar sweetened beverages and cakes and biscuits. Savoury snacks (such as crisps and pretzels) also contributed significantly to young adults' discretionary food intake.

Sugar sweetened beverages contributed a greater proportion to total discretionary food intake for Australians under 50, than for older adults. Older adults had a greater proportion of their discretionary food intake from alcohol.

TABLE 7: WEEKLY AVERAGE SERVES OF DISCRETIONARY FOOD CONSUMED BY AGE GROUP

	18-30 YEARS	31-50 YEARS	51-70 YEARS	71+ YEARS
Alcohol	2.5	4.7	5.8	6.0
Cakes and biscuits	2.2	2.2	2.4	3.1
Chocolate and confectionary	3.6	3.7	2.8	2.2
Fried potato products	1.1	0.9	0.6	0.5
Icecream	0.9	0.8	0.9	1.1
Muesli and snack bars	1.5	1.0	0.7	0.4
Processed meat and products	1.8	1.6	1.2	1.2
Savoury pies and pastries	0.5	0.4	0.3	0.3
Savoury snacks	1.9	1.8	1.4	1.2
Sugar sweetened beverages	2.3	2.1	1.1	0.8
Takeaway foods	1.1	0.8	0.4	0.2
Total discretionary food	19.4	19.9	17.6	17.1

Weekly discretionary food intake by age group



Occupational differences: Construction workers eat the most discretionary foods

Workers in the health industry, public servants / real estate and retired Australians reported the lowest discretionary food intakes.

Individuals who work in sales / distribution (25.3 serves per week), were unemployed (24.5 serves per week) or working in customer / food service (23.3 serves per week) were also among the greatest consumers of discretionary foods.

Construction workers had the highest average weekly discretionary food intake, reporting to consume 29.4 serves of discretionary foods per week. Their intake of alcohol was higher than all other occupations, and their sugar sweetened beverage consumption was also one of the highest across the different occupations.

Best to worst discretionary food intake by occupation

AVERAGE
RECOMMENDATION

0-17.5

SERVES PER WEEK



HEALTH
INDUSTRY
16.7
SERVES
PER WEEK

RETIRES
17.4
SERVES
PER WEEK

CUSTOMER /
FOOD SERVICE
23.3
SERVES
PER WEEK

SALES /
DISTRIBUTION
25.3
SERVES
PER WEEK

CONSTRUCTION
29.4
SERVES
PER WEEK

TABLE 8: WEEKLY AVERAGE SERVES OF DISCRETIONARY FOOD CONSUMED BY OCCUPATION

	ADMIN	CONSTRUCTION	CUSTOMER / FOOD SERVICE	EDUCATION / RESEARCH	HEALTH INDUSTRY	HOMEMAKER	OTHER
Alcohol	4.3	8.3	4.3	4.4	3.7	3.5	4.8
Cakes and biscuits	2.3	2.5	2.5	2.3	2.2	2.8	2.3
Chocolate and confectionary	3.7	3.3	4.3	3.3	3.5	3.7	3.4
Fried potato products	0.8	1.2	1.2	0.7	0.7	0.8	0.8
Icecream	0.7	1.1	1.0	0.8	0.8	0.8	0.9
Muesli and snack bars	1.0	1.7	1.1	1.0	0.9	0.6	1.0
Processed meat and products	1.3	3.0	1.9	1.3	1.2	1.6	1.6
Savoury pies and pastries	0.3	1.0	0.6	0.4	0.3	0.3	0.5
Savoury snacks	1.7	2.4	1.9	1.7	1.5	1.8	1.6
Sugar sweetened beverages	1.8	3.6	3.5	1.4	1.3	2.0	2.1
Takeaway foods	0.7	1.3	1.1	0.6	0.6	0.7	0.8
Total discretionary food	18.6	29.4	23.3	18.0	16.7	18.5	19.6

MANAGEMENT / FINANCE	PUBLIC SERVANT / REAL ESTATE	RETIRED	SALES / DISTRIBUTION	SALES / PR / MARKETING	SCIENCE / PROGRAMMING	STUDENT	UNEMPLOYED
5.4	5.3	6.1	6.4	5.7	4.7	1.9	3.7
2.0	1.8	2.9	2.4	2.0	2.1	2.3	3.0
3.2	3.2	2.3	3.8	3.4	3.0	3.5	4.2
0.8	0.7	0.6	1.2	0.8	0.9	1.1	1.4
0.8	0.7	1.0	1.2	0.7	0.8	1.0	1.2
0.9	0.9	0.4	1.3	1.0	1.2	1.7	1.1
1.4	1.1	1.2	1.8	1.6	1.7	1.9	2.3
0.4	0.4	0.3	0.8	0.4	0.5	0.5	0.8
1.6	1.4	1.3	1.9	1.7	1.6	2.1	2.1
1.5	1.4	0.9	3.3	1.8	1.7	2.0	3.6
0.7	0.6	0.3	1.1	0.8	0.8	1.0	1.3
18.7	17.4	17.4	25.3	20.0	18.9	18.9	24.5

State differences: Tasmania and NT eat the most discretionary foods

Average weekly discretionary food intake was highest in Tasmania and the Northern Territory, and lowest in the Australian Capital Territory. These differences could be due to the age and occupation profile of the states.

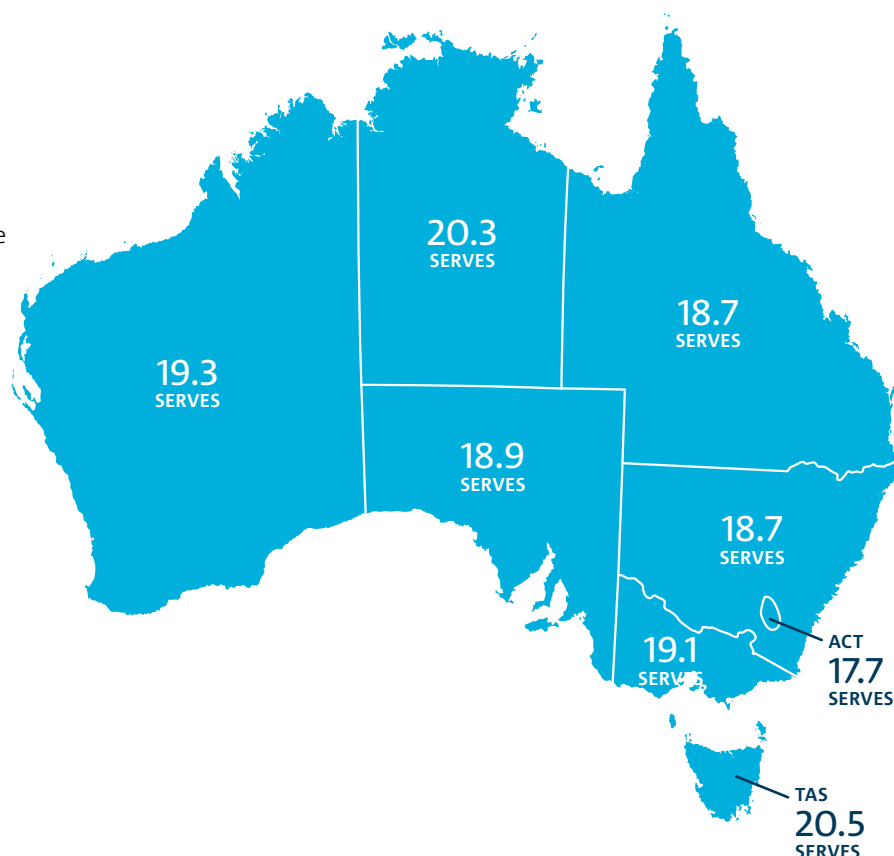


TABLE 9: WEEKLY AVERAGE SERVES OF DISCRETIONARY FOOD CONSUMED BY STATE

	NSW	QLD	ACT	NT	TAS	VIC	WA	SA
Alcohol	4.7	4.6	4.1	6.5	4.3	4.4	4.9	4.3
Cakes and biscuits	2.2	2.2	2.2	1.7	2.5	2.5	2.3	2.3
Chocolate and confectionary	3.4	3.0	3.5	2.6	3.8	3.4	3.3	3.2
Fried potato products	0.8	0.8	0.7	0.8	1.0	0.8	0.9	0.8
Icecream	0.9	0.9	0.8	0.7	0.9	0.9	0.9	0.8
Muesli and snack bars	0.9	0.9	1.0	0.8	1.2	1.1	0.9	1.1
Processed meat and products	1.4	1.4	1.4	1.8	1.6	1.5	1.6	1.6
Savoury pies and pastries	0.4	0.4	0.4	0.5	0.6	0.4	0.5	0.5
Savoury snacks	1.6	1.6	1.6	1.6	1.8	1.7	1.6	1.7
Sugar sweetened beverages	1.6	1.9	1.4	2.6	2.0	1.7	1.7	2.0
Takeaway foods	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7
Total discretionary food	18.7	18.7	17.7	20.3	20.5	19.1	19.3	18.9

Chapter 3: The gender gap

Ladies trump the gents

FAST FACTS

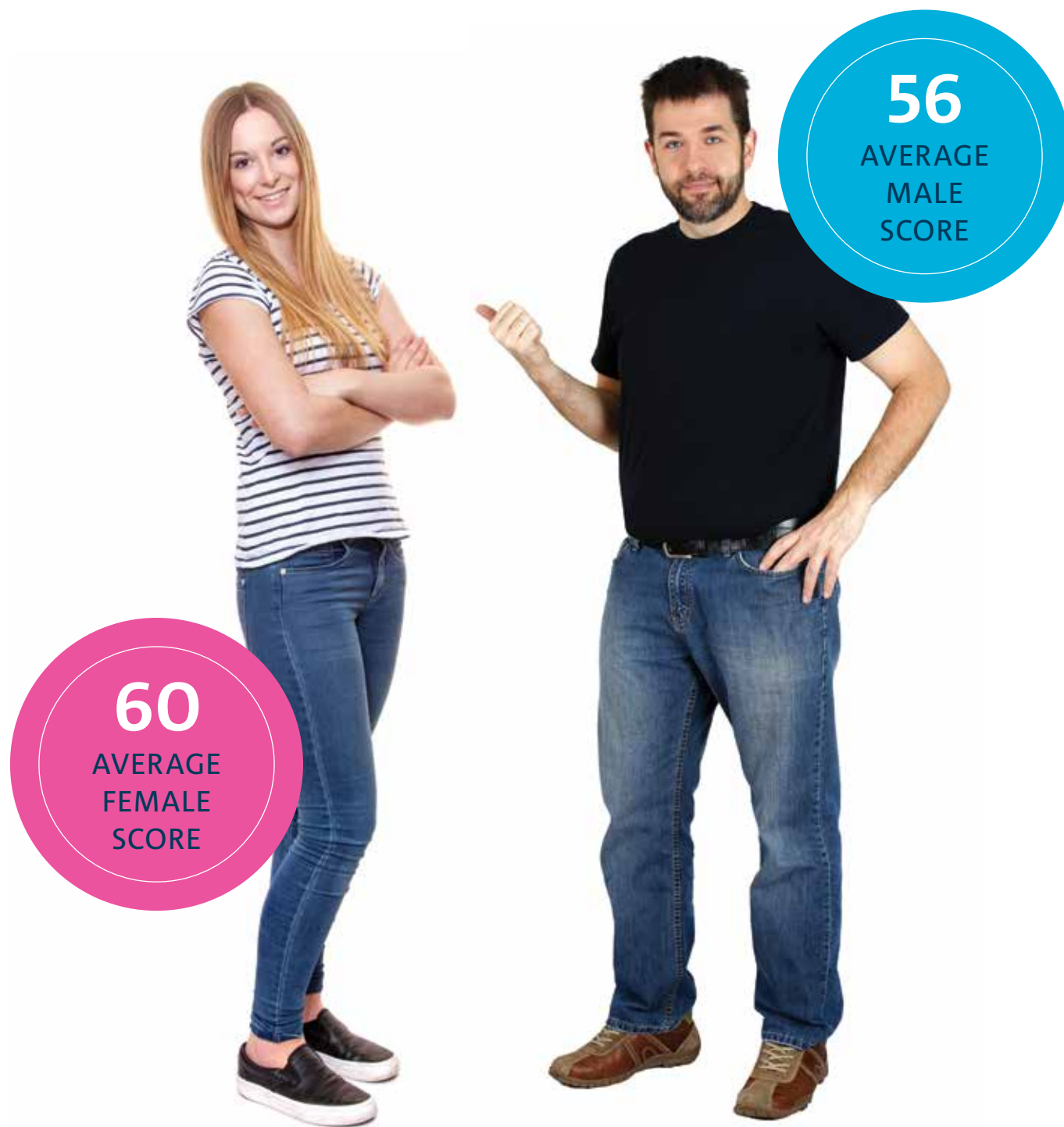
Australian women have better diets than men

She scores the equivalent of a C

He scores the equivalent of a D

Both men and women still have room for improvement

How do the diets of Australian men and women compare?



- Her diet is the equivalent of a C
- She eats significantly more vegetables
- She eats fewer discretionary foods, but still too much

- His diet is the equivalent of a D
- Breads and cereals is the only food group where his diet is better than hers

Women eat more vegetables and fewer discretionary foods

Australian women reported a higher Diet Score than men (60 vs. 56), which means Australian women consume diets more in line with the *Australian Dietary Guidelines* than men.

Women scored better on all food group components, except for breads and cereals where men scored better.

The greatest differences in intake were in vegetables, with women scoring 12 points higher than men (73 vs. 61); discretionary foods (women scored 7 points higher than men) and fluids (women scored 6 points higher than men).

TABLE 10: AVERAGE DIET SCORE AND FOOD GROUP COMPONENT SCORES BY GENDER

	MALE	FEMALE
Overall score (out of 100)	56	60
Component score (expressed out of 100)		
Vegetables	60.6	73.4
Fruit	66.5	68.9
Breads and cereals	62.4	61.2
Meat and alternatives	66.5	69.5
Dairy and alternatives	46.7	48.9
Fluids	87.6	93.2
Discretionary foods	25.8	33.1
Healthy fats	51.8	54.7
Variety	65.0	65.7

Age matters in the gender comparison

Differences in intake between men and women is influenced by age.

Only men aged 50 or less reported a higher breads and cereals score than women. Although the sample is relatively small, women aged 71+ actually scored higher than men for breads and cereals.

For meat and alternatives, men aged 18-30 years scored better than women in this age group. But for all other food groups women scored better than men across all age groups.

There were a few large differences between men and women within specific age groups.

- Women aged 51-70 scored 12 points higher than men for discretionary foods.
- Women aged 71 years and older scored 11 points higher than men for meat and alternatives.
- For vegetable intake, women scored 11 points or more higher than men across all age groups.

TABLE 11: AVERAGE DIET SCORE AND FOOD GROUP COMPONENT SCORES BY GENDER AND AGE GROUP

	AGE GROUP (YEARS)							
	18-30		31-50		51-70		71+	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
Overall Diet Score	55	59	55	58	57	63	59	65
Component score (expressed out of 100)								
Vegetables	58.6	71.1	57.6	72.4	63.6	75.8	68.6	79.1
Fruit	60.2	66.7	62.1	63.9	72.8	75.2	79.4	84.7
Breads and cereals	61.3	57.0	59.7	57.6	64.1	67.3	73.2	78.5
Meat and alternatives	68.9	65.3	64.3	66.9	67.7	75.7	63.4	73.8
Dairy and alternatives	47.0	46.8	48.1	50.9	45.0	48.1	46.1	50.2
Fluids	86.7	92.0	88.1	93.0	87.8	94.3	86.2	93.0
Discretionary foods	26.3	33.9	26.8	30.5	24.3	35.8	27.0	32.3
Healthy fats	51.8	57.4	50.4	52.8	52.8	54.6	55.0	55.2
Variety	62.6	62.9	64.2	65.1	66.7	68.3	68.7	71.2

Chapter 4: Diet Score and the scales

Being overweight negatively impacts Diet Score

FAST FACTS

Diet Score decreases as weight increases

Obese men have the worst Diet Score

Do normal weight Australians have better diets?

Diet Score decreased as weight status increased. Normal weight Australians had an average score of 61, compared to overweight who scored 58 and obese who scored 56.

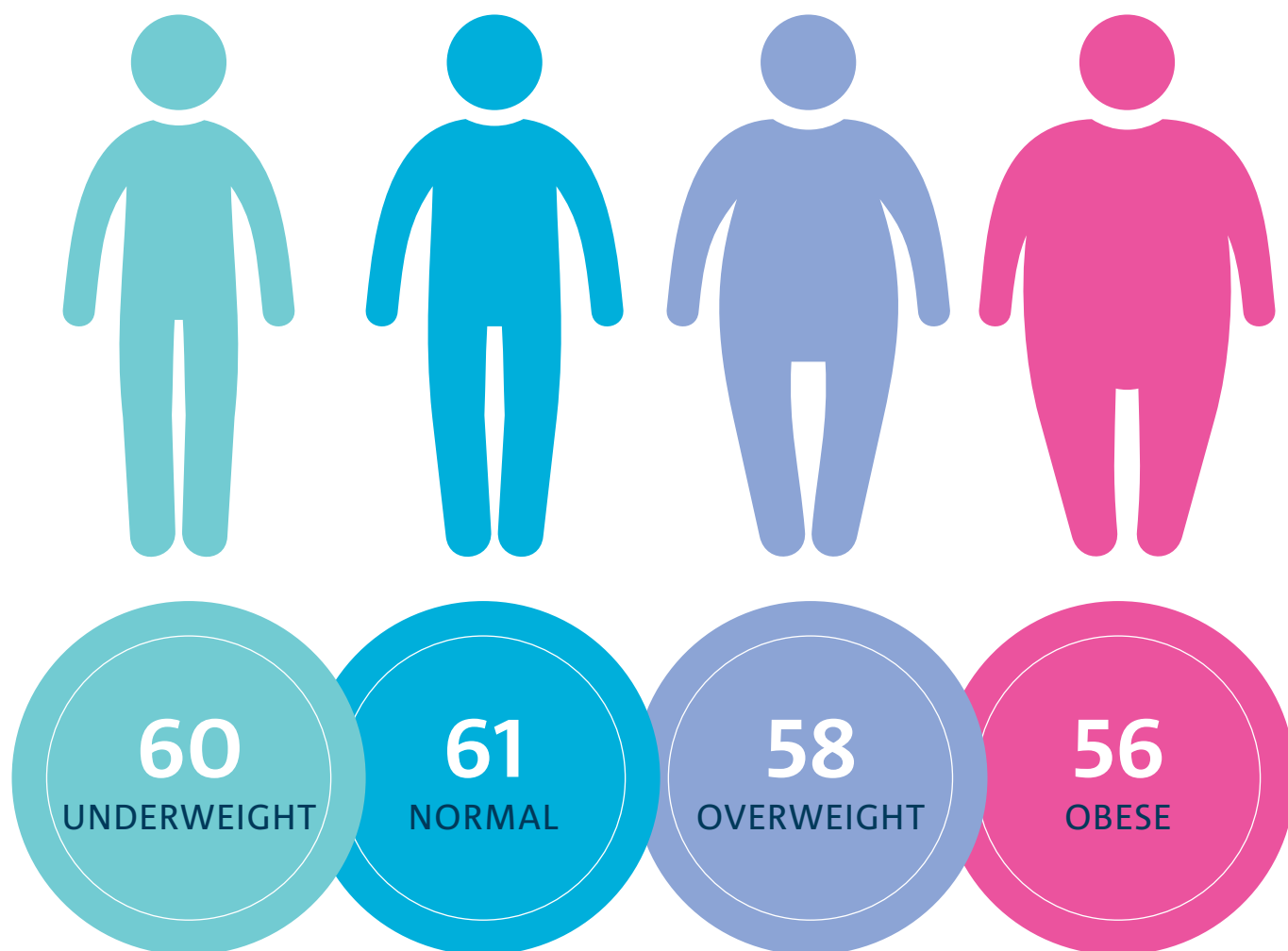
Normal weight adults scored higher than obese adults for vegetables, fruit, fluids, healthy fats, variety and discretionary foods – meaning their diets were more compliant with the *Australian Dietary Guidelines* for these foods.

Obese Australians scored slightly better for dairy foods than normal weight Australians.

TABLE 12: TOTAL DIET SCORE AND FOOD GROUP COMPONENT SCORES BY WEIGHT STATUS

	UNDERWEIGHT	NORMAL WEIGHT	OVERWEIGHT	OBESE
Overall Diet Score	60	61	58	56
Component score (expressed out of 100)				
Vegetable	72.0	71.8	68.5	67.5
Fruit	71.6	72.4	67.7	58.8
Breads and cereals	59.7	62.2	61.7	60.0
Meat and alternatives	63.6	68.3	69.2	69.5
Dairy and alternatives	43.7	47.3	49.0	50.3
Fluids	90.0	93.1	91.4	88.7
Discretionary foods	37.4	34.8	28.6	25.6
Healthy fats	59.4	56.4	52.8	48.9
Variety	64.6	66.8	65.5	62.6

The more you weigh, the lower your Diet Score



Average Diet Score by weight status

Obese men have the most room to improve

Normal weight men scored 58 out of 100. This was higher than overweight and obese men, who scored 56 and 52 respectively.

Different from women, normal weight men also scored higher for breads and cereals than obese men.

Normal weight men scored higher than obese men for vegetables, fruit, fluids, healthy fats, variety, and discretionary foods.

TABLE 13: TOTAL DIET SCORE AND FOOD GROUP COMPONENT SCORES FOR MALES BY WEIGHT STATUS

	UNDERWEIGHT	NORMAL WEIGHT	OVERWEIGHT	OBESE
Overall Diet Score	53	58	56	52
Component score (expressed out of 100)				
Vegetable	59.2	62.2	60.7	57.3
Fruit	66.1	70.1	67.5	56.9
Breads and cereals	58.6	64.8	62.1	58.6
Meat and alternatives	63.0	66.4	66.5	66.9
Dairy and alternatives	44.9	46.0	47.2	47.1
Fluids	80.2	88.9	88.0	84.6
Discretionary foods	23.7	29.2	24.7	21.2
Healthy fats	47.6	54.4	51.7	47.1
Variety	63.9	66.7	65.0	61.6

**Obese men have
the worst Diet
Score and the worst
discretionary foods
component score**



Normal weight women have better than average diets, although still have room to improve

Generally women had a higher Diet Score than men.

Normal weight women scored 62 out of 100, compared to overweight women who scored 60 and obese women 57.

Normal weight women scored higher than obese women for vegetables, fruit, fluids, healthy fats, variety, and discretionary foods.

Normal weight women scored slightly poorer on the dairy food component than obese women.

TABLE 14: TOTAL DIET SCORE AND FOOD GROUP COMPONENT SCORES FOR FEMALES BY WEIGHT STATUS

	UNDERWEIGHT	NORMAL WEIGHT	OVERWEIGHT	OBESE
Overall Diet Score	61	62	60	57
Component score (expressed out of 100)				
Vegetable	74.1	74.6	72.8	71.1
Fruit	72.6	73.0	67.8	59.5
Breads and cereals	59.9	61.5	61.4	60.4
Meat and alternatives	63.7	68.8	70.8	70.5
Dairy and alternatives	43.5	47.6	50.0	51.5
Fluids	91.6	94.4	93.3	90.1
Discretionary foods	39.7	36.4	30.8	27.1
Healthy fats	61.4	57.0	53.4	49.5
Variety	64.7	66.9	65.7	63.0

Chapter 5: Food avoidance

A growing trend in the Australian diet

FAST FACTS

1 in 3 Australians are avoiding foods such as gluten, dairy or meat

Women aged 18-30 are the biggest group of avoiders

Avoiders eat fewer discretionary foods which helps to boost their overall Diet Score

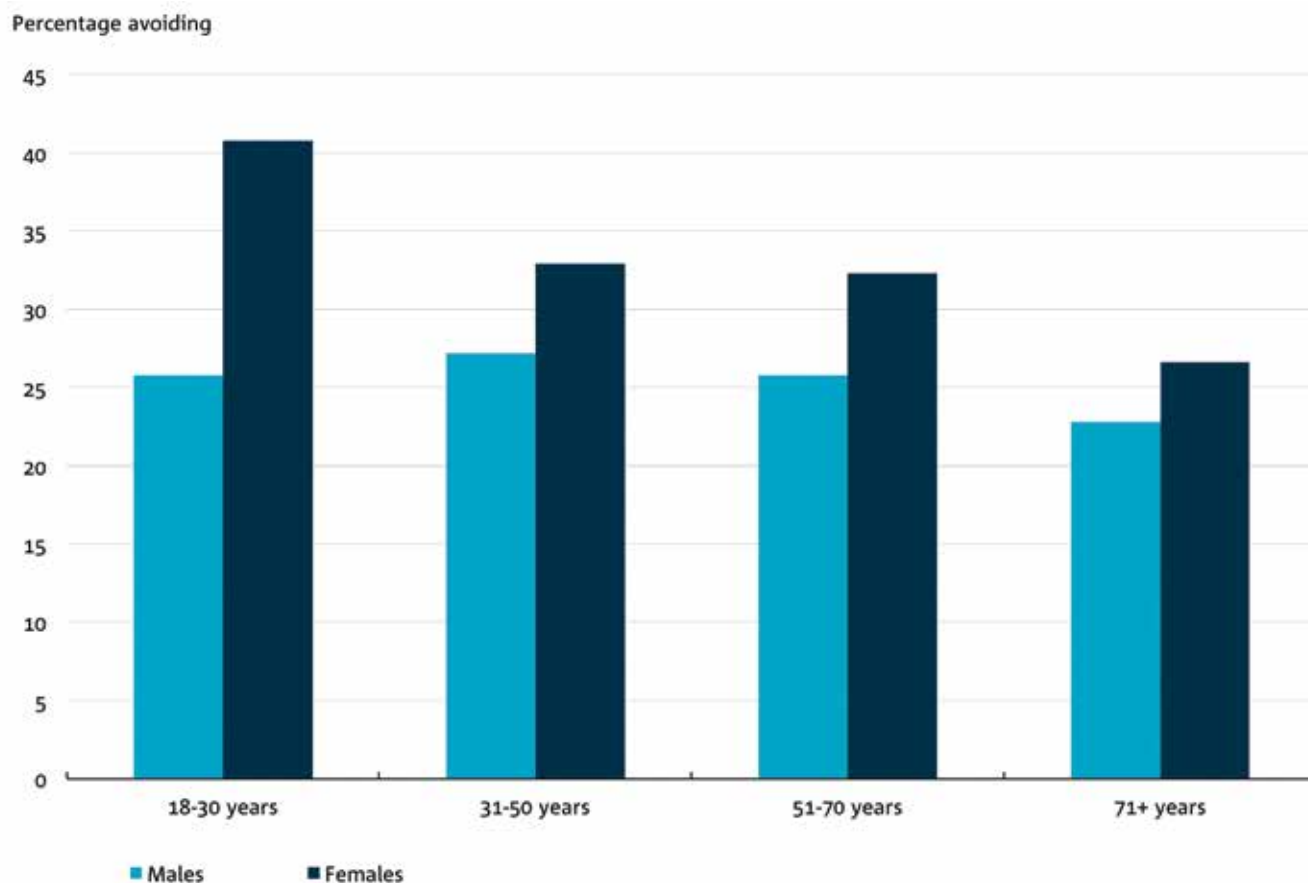
How prevalent is food avoidance in Australia?

Questions on the avoidance of specific foods or dietary components were added to the CSIRO Healthy Diet Score in April 2016. These questions aimed to discover the types of foods avoided, the popularity of avoidance in terms of dietary behaviour and the impact of avoiding some foods on a healthy, balanced diet. These analyses are based on responses from 11,048 Australians.

Who is avoiding?

- Approximately 1 in 3 Australians (32.2%) reported avoiding one or more foods or food components.
- The majority were avoiding one food only (19.8%). However, a significant number were multiple or 'poly-avoiders' (12.4% of the sample) who were avoiding more than one food or food category.
- Avoiders were predominantly female (80.6%) and aged, on average, 45 years.
- When split by age group women aged 18-30 had the highest rates of avoidance (40.8%).

FIGURE 4: PERCENTAGE OF FOOD AVOIDANCE BY GENDER AND AGE GROUP (N=11,048)



A close-up photograph of a person's hand held up in a 'stop' gesture, palm facing forward. The hand is positioned over a white plate that contains two slices of toast. A silver fork and knife are also on the plate. The background is a blurred red fabric, likely a shirt. The text '1 in 3 Australians are avoiding foods such as gluten, dairy or meat' is overlaid in white on the right side of the image.

**1 in 3 Australians
are avoiding foods
such as gluten,
dairy or meat**

What foods are being avoided?

Gluten (8.8%), followed closely by wheat (8.4%) and lactose (8.4%) were the most frequently reported dietary components currently being avoided by Australians and are now more common than weight reduction as a motivating dietary strategy.

These figures are lower than expected based on previous research by the CSIRO. In that sample, 10.7% of Australians were found to be avoiding wheat and 16.6% were avoiding dairy. However, these figures may reflect an overlap in avoidance of wheat and/or gluten and dairy and/or lactose.

Given the nature of the types of foods targeted for avoidance the reasons are likely to be quite diverse with ethical concerns, weight management, symptom relief, illness management and lifestyle choices likely amongst the key drivers.

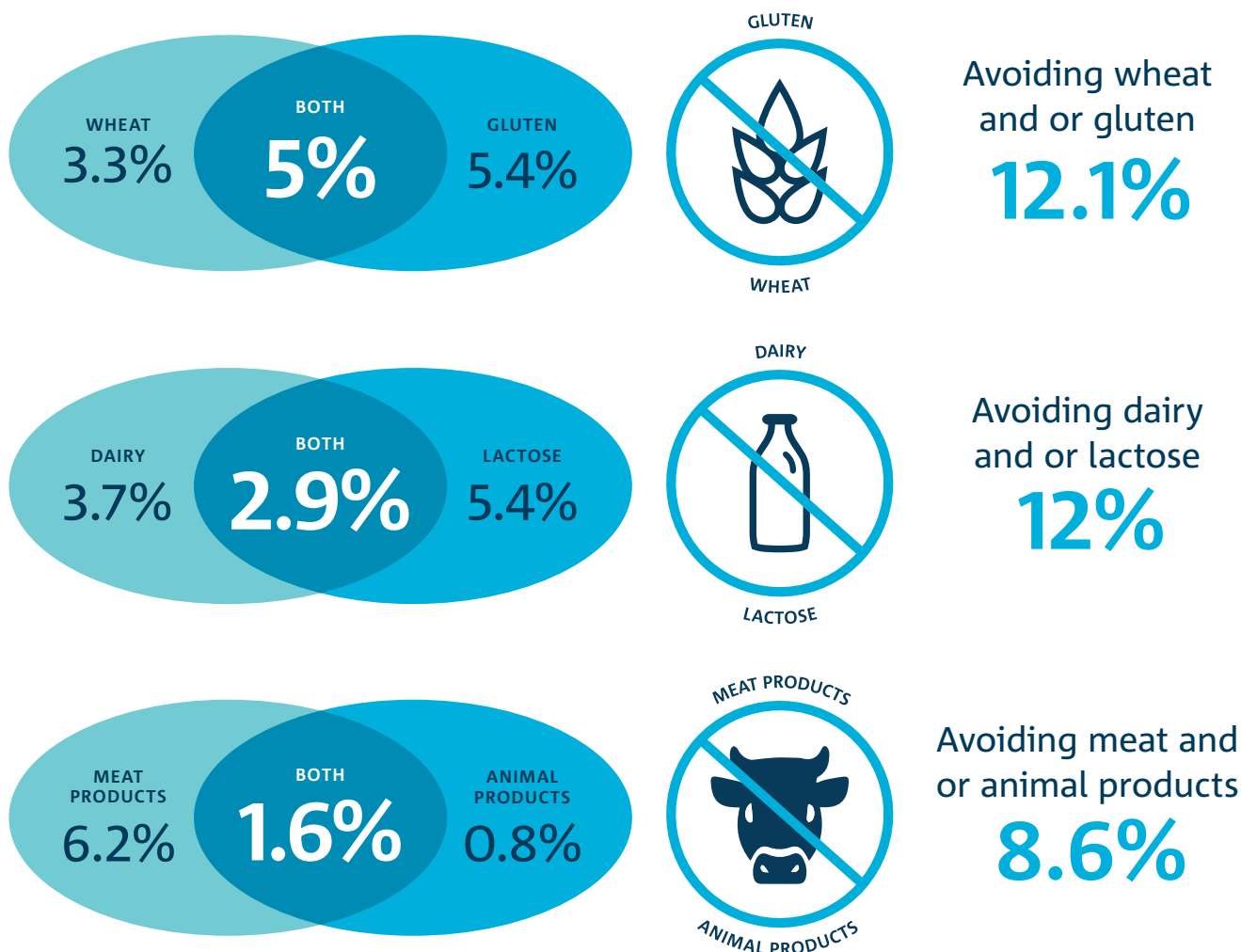


Figure 5: Percentage of ‘Poly-Avoiders’

How do male and female avoiders compare?

There were notable differences between women and men in the reported avoidance of each food component particularly in the avoidance of gluten (9.9% vs. 5.1%), wheat (9.2% vs. 5.6%) and meat products (8.5% vs. 5.3%).

TABLE 15: NUMBER AND PERCENTAGE OF FOOD AVOIDANCE BY GENDER

	MALE N(%)	FEMALE N(%)	TOTAL N(%)
Gluten	134 (5.1)	834 (9.9)	968 (8.8)
Wheat	149 (5.6)	774 (9.2)	923 (8.4)
Lactose	159 (6.0)	764 (9.1)	923 (8.4)
Dairy	129 (4.9)	604 (7.2)	733 (6.6)
Meat products	139 (5.3)	715 (8.5)	854 (7.7)
Animal products	68 (2.6)	198 (2.4)	266 (2.4)
Weight reduction	112 (4.2)	471 (5.6)	583 (5.3)
Other	190 (7.2)	526 (6.3)	716 (6.5)

How do avoiders compare to non-avoiders?

When split by avoidance status, avoiders and non-avoiders were found to have similar BMI values (26.1 vs. 26.6) but fewer avoiders were classified as either overweight or obese compared to non-avoiders (48.6% vs. 54.4%).

Avoiders were slightly younger than non-avoiders (45 years vs. 47 years) but there were no marked differences between avoiders and non-avoiders on other demographic descriptors such as occupation or place of residence.

Avoiders have higher Diet Scores and eat fewer discretionary foods

Avoiders (those avoiding one or more foods) had a higher Diet Score than non-avoiders (62 vs. 60). Overall Diet Score for single avoiders (avoiding only one food) was 62 and was similar to 'poly-avoiders' (those avoiding more than one food).

Those avoiding meat or animal products (vegetarians or vegans) had the highest Diet Score (66 out of 100).

The greatest difference in food group component scores between avoiders and non-avoiders was for discretionary food consumption, with avoiders scoring 13 points higher than non-avoiders (44.1 vs. 31.0, out of 100). This was followed by dairy and alternatives (10 points higher for non-avoiders) and breads and cereals (9 points higher for non-avoiders).

Amongst avoiders, discretionary component scores were highest for those restricting consumption of gluten or wheat and lowest amongst those restricting intake for weight control (49.7 vs. 42.4).

Not surprisingly, those avoiding dairy or lactose scored lowest in the dairy and alternative group (30.8); those avoiding wheat and gluten lowest in the breads and cereals food category (40.7) and those avoiding meat and animal products in the meat and alternatives category (66.2).

TABLE 16: DIET QUALITY BY AVOIDANCE STATUS AND AVOIDANCE TYPE

	AVOIDERS	NON-AVOIDERS	GLUTEN/WHEAT	DAIRY/LACTOSE	ANIMAL / MEAT PRODUCTS	WEIGHT REDUCTION	OTHER
Overall Diet Score	62	60	62	62	66	63	62
Component score (expressed out of 100)							
Vegetables	77.3	70.1	79.2	77.4	82.4	75.7	76.2
Fruit	71.7	69.4	68.9	71.8	78.2	70.2	69.7
Breads and cereals	55.4	64.7	40.7	52.8	64.8	56.3	55.5
Meat and alternatives	73.7	70.9	79.2	73.3	66.2	76.8	76.0
Dairy and alternatives	40.4	50.7	36.7	30.8	38.4	47.3	42.0
Fluids	95.3	93.7	96.4	95.0	95.7	95.5	94.9
Discretionary foods	44.1	31.0	49.7	46.3	48.1	42.4	44.1
Healthy fats	57.7	52.2	53.5	59.2	70.1	55.7	52.7
Variety	64.6	66.9	63.3	62.0	64.3	65.8	66.1

Chapter 6: Improving our Diet Score

Recommendations to help Australians eat more healthily

FAST FACTS

A Diet Score of at least 70 is a good target to aim for

Only 20% of adults score 70 or more

Most adults could boost their score to 70 by “halving the bad and doubling the good”

A Diet Score of 70 is a good target

Raising our average Diet Score to 70/100 could help Australia mitigate against growing rates of obesity and lifestyle diseases, such as heart disease, type 2 diabetes and a third of all cancers, which can be prevented through a healthy lifestyle.

Only 20% of Australians who completed the survey scored 70 or more. These people are doing much better on fruit, vegetables, discretionary foods and healthy fats.

Halve the bad, double the good

The average Australian could reach a score of 70 by:

- Halving their discretionary food intake
- Doubling their vegetable intake

Further increases in the average score could be achieved by:

- Choosing low fat cuts of meat and trimming the fat off meat products
- Choosing unsaturated spreads and oils



CASE STUDY

“I increased my score from 60 to 80”

Leah completed the CSIRO Healthy Diet Score survey in 2015. She scored 60, just above the Australian average, and was shocked that her “generally healthy diet” was ranked so low. On her doctor’s advice, she joined the CSIRO Total Wellbeing Diet. She lost 22kg by following the diet online and boosted her Diet Score from 60 to 80/100 when she took the survey for a second time in 2016.

To boost your Diet Score

**Halve
the bad**



Double the good



We need more Australians to discover their Diet Score

Diet Score highlights a popular misconception in everyday Australia: most of us think we generally eat healthily but in reality, we have lots of room to improve.

We need leaders in government, industry, media and healthcare to encourage all Australians to complete the CSIRO Healthy Diet Score and see how their eating habits measure up.



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