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CSIRO Diet Types

An exploration of the personality traits of over 90,000 Australians

September 2017

CITATION

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Introduction



Personality influences how we eat

Most weight loss plans emphasise nutrition and exercise with little focus on lifestyle factors and the personality traits that strongly influence how we eat. A greater focus on personality could make it easier for Australians to lose weight and eat healthily.



Largest-ever survey of Australian Diet Types

Over 90,000 Australian adults took part in the CSIRO Diet Types survey in 2017 to discover their diet personality, referred to as their "Diet Type". The survey also provided an opportunity to gather insights on the weight loss habits of Australian adults.



Weight loss worriers

Of the 5 possible personalities defined by behavioural scientists at CSIRO, the most common Diet Type was the Thinker. Although this Type has a tendency to overthink situations and worry about making mistakes, their overall diet quality was on par with a larger sample of Australians with a score of 59 out of a possible 100, as measured by the CSIRO Healthy Diet Score.



Cravers need extra support

The second most common Diet Type, the Craver, represents the largest group of dieters in need extra help. Not only are they most likely to be obese or to have dieted over 25 times, their overall diet quality is below average and they eat more discretionary foods than other Types.



Dieters need personalised weight loss solutions

Adherence to diets is generally poor with competing lifestyle demands and waning motivation just some of the barriers to maintaining a healthy diet. With almost two-thirds of the nation overweight or obese, Australians need more personalised solutions to help motivate them to adhere to a healthy diet and better manage their weight.

Executive summary

Highlights from Australia's largest-ever survey of Diet Types

FAST FACTS

Personality impacts how adults eat and diet

CSIRO has identified 5 main Diet Types

The Thinker is the most common Diet Type

Diet quality and dieting behaviour varies amongst the Diet Types

About the CSIRO Diet Types

The CSIRO Diet Types survey looks at a person's personality traits and responses to eating, and aims to provide a holistic approach to weight management and healthy living. The survey was developed by behavioural scientists at CSIRO. Rigorous beta testing, the use of statistical data reduction and modelling techniques on responses in a sample of over 3,000 people resulted in the current 22item format which was made available free to Australians in January 2017 on the website **www.diettypes.com.au**.

Personality traits of the 5 Diet Types

There are 5 main Diet Types which are based on responses to questions aimed at eliciting the attitudes, barriers and triggers that relate to an individual's food choices and weight loss attempts.

- **The Thinker**: Defined by overthinking which may lead to stress and mood swings which may impair healthy eating choices.
- **The Craver**: Defined by heightened experience of food cravings which may predispose to overeating in a variety of food related settings.
- **The Foodie**: Defined by predominant thought patterns related to food and associated with strong positive drives to preparing, eating and experiencing food.
- **The Socialiser**: Defined by the prioritised need for flexibility around food occasions and avoidance of strict food restrictions which may stifle social occasions.
- **The Freewheeler**: Defined by a spontaneous and impulsive nature, and associated with making snap decisions which may lead to consuming takeaway or convenience food.

Each individual who completed the survey received personalised feedback in the form of a report detailing which Diet Type they scored highest in, as well as information about where they scored high relative to other people. The report also included strategies to better manage eating habits tailored to the individual's dominant Diet Type.

This CSIRO Diet Types report is based on survey responses collected in the period between the lifting of the media embargo on 4 January, 2017 to the data being downloaded on 17 August, 2017. In that time, 90,902 individuals, mostly female (83%), with an average age of 46 years (SD = 14) had completed the survey.

Top 5 diet personalities





- Overthinks situations
- Worries about making mistakes
- Stress and anxiety could derail their diet



THE CRAVER

- Craves delicious food
- Prone to overeating
- Finds it hard to stop

Gender differences



CSIRO

MEN ARE MORE LIKELY TO BE FREEWHEELERS OR FOODIES WOMEN ARE MOST LIKELY TO BE THINKERS



THE SOCIALISER

- Connects with friends over food and drinks
- Needs flexibility

Age differences

18-30 YOUNGER ADULTS ARE YEARS MORE LIKELY TO BE CRAVERS

50-70 OLDER ADULTS ARE MORE **YEARS** LIKELY TO BE **SOCIALISERS**



THE FOODIE

- Thinks about food a lot
- Loves the food experience
- May love cooking

s Weig



20%

Weight differences



OBESE ADULTS ARE MORE LIKELY TO BE CRAVERS

WHO DIETS THE MOST

Percentage of adults who have made 25 or more diet attempts, by Diet Type

Diet history

93%

Have made a serious attempt to lose weight in their lifetime

Top 5 diet methods

Traditional diet methods remain popular while obesity rates stay the same



Number of lifetime serious diet attempts







Craver Thinker Freewheeler Socialiser Foodie



10%

What's your Diet Type?

www.diettypes.com.au







THE FREEWHEELER

- Impulsive
 - Struggles to plan
 - Eats on the go e.g. fast food

Profile of the Diet Types

37% of the sample were classified as Thinkers, 26% Cravers,17% Socialisers, 16% Foodies and 4% Freewheelers.

- The most common Types for women were Thinkers (39%) and Cravers (26%).
- The highest proportion of males were found in the Freewheeler (26%) and Foodie (23%) Types.
- Older Australians were more likely to be classified as Socialisers and Foodies, whereas younger Australians were more likely to be Cravers, Freewheeler or Thinkers.
- The proportion of Cravers within each generation decreases with age, while the proportion of Foodies and Socialisers increases.
- Over half of Freewheelers (55%) and Cravers (58%) were obese.

Weight loss behaviours of the Diet Types

- Counting kilojoules was the most common weight loss method across all Diet Types.
- The top weight loss method for men was doing lots of exercise, whereas women chose to count kilojoules.
- Cravers were more likely to have tried more weight loss methods than other Types.
- 1 in 5 Cravers had attempted weight loss more than 25 times, whereas, Foodies and Freewheelers were most likely never to have dieted.

Most popular weight loss methods of men and women



Diet quality by Diet Types

Foodies tended to have relatively higher diet quality (measured by the CSIRO Healthy Diet Score), and Freewheelers the lowest. There was a 5-point difference in Diet Score out of a possible 100 points between Foodies and Freewheelers suggesting a small but significant difference.

- Foodies were most likely to meet the Australian Dietary Guidelines for fruit and vegetables;
- Cravers were most likely to meet the Guideline for carbohydrate foods;
- Socialisers were most likely to meet the Guideline for meat and alternatives; and
- Freewheelers were most likely to meet the Guideline for dairy foods.

Foodies were also more likely to report a high variety of vegetables in their diet compared to other Diet Types.

Diet Types most likely to meet the Australian Dietary Guidelines for various food groups



FOODIES FRUIT AND VEGETABLES GUIDELINES CRAVERS CARBOHYDRATE GUIDELINE

SOCIALISERS MEAT AND ALTERNATIVES GUIDELINE FREEWHEELERS DAIRY GUIDELINE

Discretionary food preferences of the Diet Types

All Diet Types over consumed discretionary foods, but the profile of these foods of each Diet Type is slightly different.

Foodies and Socialisers had a preference for alcohol – about one-third of their discretionary food and beverage consumption was alcohol (33-36% of total discretionary food intake).

FOODIES, SOCIALISERS

CHOOSE ALCOHOL

Cravers had a preference for sweeter discretionary foods like chocolate and confectionary accounting for 24% of total discretionary food intake. Other foods like alcohol, cakes and biscuits and savoury snacks each contributed more than 10% of their total discretionary food intake.

CRAVERS

CHOOSE CONFECTIONARY

Background and data characteristics

FAST FACTS

Australia's largest-ever survey of eating habits and personality types

Over 90,000 surveys completed between January to August 2017

Respondents receive recommendations tailored to their Diet Type

About the Diet Types survey

Most diets for weight management focus on restricting some food categories and introducing exercise as effective tools for weight loss. However, a more personalised approach to achieving weight loss goals through addressing individual behavioural and lifestyle factors may assist in greater engagement and retention. This approach has led CSIRO to research the concept of Diet Types which looks at a person's personality traits and responses to eating, and has the capacity to provide a more personally tailored approach to managing weight and an overall healthy lifestyle.

As an assessment tool the CSIRO Diet Types survey is grounded in personality and behaviour change theory. Its purpose is to measure individuals' responses on factors relevant to maintaining a diet such as eating behaviours, how they manage emotion and their specific personality traits.

Over 3,000 people were involved in testing the original survey, which had over 200 items. Factor analyses revealed that responses to these survey items grouped together in predictable ways leading to the discovery of 5 main Diet Types characterised by the distinct grouping of characteristics that were subsequently labelled: Thinker, Socialiser, Craver, Foodie and Freewheeler. The strongest of the survey items describing each Type was chosen to make a short version of the survey, which was made accessible free to the public at **www.diettypes.com.au** in January 2017. To date, over 100,000 Australian adults have voluntarily completed the survey and consented to take part in the research around Diet Types.

On completion of the survey, a percentage agreement for each of the 5 Types is calculated. Individuals are allocated to a dominant Type based on two overarching rules:

- 1. If any scores for one of the domains is 10% greater than the others, this will be the person's dominant Type;
- 2. Where any score is within 10% of the highest score, people are allocated co-dominant Types and asked to select the Type that suits them based on a brief preview description of each of the Types.

The survey was officially launched at approximately 9:20pm (AEST) on 3 January, 2017 and a media embargo was lifted at 6:00am (AEST), on 4 January, 2017. Data presented are those collected after the embargo was lifted until the data were downloaded on 17 August, 2017.



Diet Types survey



Personalised Diet Types report

Data characteristics

Data preparation

Of 106,238 completed surveys, 1,754 cases were identified as duplicates – that is individuals who had completed the survey on multiple occasions. In each case the first submission recorded was retained and subsequent submissions removed. Those who had not completed the Diet Type assessment (n=8,191), had no Diet Type assigned (n=127) or had completed the assessment prior to the embargo being lifted (n=4,735) were removed leaving a total of 92,211 valid cases. Of the remaining cases, 1,309 individuals were removed from analyses due to Body Mass Index values, reported height, weight or age values deemed implausible.

The final sample consisted of n=90,902 valid cases. However, the majority of analyses reported here are based on a smaller sample of n=73,114, which are those respondents who have a Diet Type assigned. A significant proportion of the sample n=17,788 (19.6%) were individuals who completed the Diet Types survey, were subsequently presented with multiple dominant Types and did not select one. These individuals were classified as 'unknown' and removed from analyses involving comparisons between the Diet Types.

Characteristics of the data sample

The majority of the sample who completed the survey were female (83%). A large proportion of the respondents were aged between 31-50 (44%) and 51-70 (37%). Using self-reported height and weight, it is estimated that three quarters of the sample were overweight or obese (76%), and 23% were in the normal weight category. The survey is completed online, and therefore has attracted a national sample of respondents. Almost 30% of the respondents live in New South Wales, 26% in Victoria, and 21% in Queensland. The other states were represented in the sample but to a lesser degree. Note that the sample is not representative of the Australian population.

TABLE 1. CHARACTERISTICS OF THE CSIRO DIET TYPES SAMPLE (N=90,902)

Gender Male Female 18-30 years Age group 31-50 years		15,928 74,974 14,485	17.5% 82.5% 15.9%	48.8% 51.2%
Age group 18-30 years		14,485		51.2%
		·	15.9%	
31-50 years				22.8%
		39,901	43.9%	35.1%
51-70 years		33,714	37.1%	29.5%
71+ years		2,802	3.1%	12.6%
Weight status Underweight		901	1.0%	1.7%
Normal weight		20,801	22.9%	35.5%
Overweight		29,357	32.3%	35.3%
Obese		39,843	43.8%	27.5%
State New South Wal	es	26,393	29.0%	32.0%
Queensland		18,995	20.9%	20.1%
Australian Capit	al Territory	3,593	4.0%	1.7%
Northern Territ	ory	1,066	1.2%	1.0%
Tasmania		1,896	2.1%	2.2%
Victoria		23,711	26.1%	25.3%
Western Austra	lia	8,152	9.0%	10.6%
South Australia		7,096	7.8%	7.2%

*Population estimates of the Australian population were taken from the 2016 Census data, and population weight status data from the 2011/12 Australian National Health survey, available from the Australian Bureau of Statistics.

The 5 Diet Types and how they eat

With expanded demographic information

FAST FACTS

The Thinker is the most common Diet Type

Freewheelers and Cravers have the most weight to lose

Cravers have dieted more than most other Types

Counting kilojoules, lots of exercise and cutting carbs are the top 3 diet methods

The 5 Diet Types

Consistent with earlier analysis of the distribution of Diet Types conducted in February 2017 (n=28,422), the Thinker at 37% of the sample remains the dominant type, followed by the Craver at 26%. Small changes were seen in the occurrence of the Foodie and the Socialiser, with this larger sample showing the Socialiser marginally overtaking the Foodie as the third most common Diet Type. The Freewheeler remains stable as the least common Diet Type.

Gender

18% of those who completed the Diet Type survey were male (n=15,928), 83% (n=74,974) were female. Most respondents were aged 31-50 years (n=39,901; 44%), or classified as Generation X based on birth year (n=37,285; 41%).

Generation

Proportionally, older respondents were more likely to be classified as Socialisers or Foodies, while younger respondents were more likely to be Cravers, Freewheelers or Thinkers.

State

Most Australians who have completed the Diet Types survey to date were from New South Wales. The proportions of each type were similar across the states and territories.

Location

Using provided postcodes, respondents were classified as living in urban or rural parts of Australia. The majority of respondents resided in major urban centres (74%), with only 3% classified as living in towns or regions with populations of less than 1,000 people. Compared to the whole sample, Socialisers were more likely to be found in major urban areas (74% vs 78% respectively), while Freewheelers were less likely (69% vs 74%).



THE FOODIE

FREQUENT THOUGHTS OF EATING ALONG WITH A STRONG DRIVE TO PREPARE, EAT AND EXPERIENCE FOOD.

MORE COMMON AMONG MEN.



THE FREEWHEELER

HAS A SPONTANEOUS AND IMPULSIVE NATURE WITH A TENDENCY TO MAKE SNAP DECISIONS IN THE HERE AND NOW.

THE LEAST COMMON DIET TYPE.



THE THINKER

OVERTHINKING MAY LEAD TO STRESS AND MOOD SWINGS WHICH CAN DERAIL HEALTHY EATING.

THE MOST COMMON DIET TYPE AMONG MEN AND WOMEN.

Distribution of Diet Types



THE SOCIALISER

HAS A STRONG NEED FOR FLEXIBILITY AND AN AVERSION TO STRICT FOOD RESTRICTIONS THAT MAY STIFLE SOCIAL SITUATIONS.

MORE COMMON IN THE OLDER GENERATIONS.



THE CRAVER

A HEIGHTENED EXPERIENCE OF FOOD CRAVINGS CAN LEAD TO OVEREATING IN SITUATIONS WHERE DELICIOUS FOOD IS AVAILABLE AND ACCESSIBLE.

MORE COMMON AMONG WOMEN.

TABLE 2. GENDER, AGE DISTRIBUTION, STATE AND LOCATION (N (%)) WITHIN EACH OF THE DIET TYPES (N=73,114)

	THINKER (N=27,181)	CRAVER (N=18,866)	SOCIALISER (N=12,116)	FOODIE (N=11,636)	FREEWHEELER (N=3,315)	UNKNOWN (N=17,788)	WHOLE SAMPLE (N=90,902)
Gender							
Male	3,846 (14.1)	2,886 (15.3)	2,397 (19.8)	2,669 (22.9)	876 (26.4)	3,254 (18.3)	15,928 (17.5)
Female	23,335 (85.9)	15,980 (84.7)	9,719 (80.2)	8,967 (77.1)	2,439 (73.6)	14,534 (81.7)	74,974 (82.5)
Age group							
18-30 years	4,005 (14.7)	2,872 (15.2)	1,648 (13.6)	1,472 (12.7)	435 (13.1)	4,053 (22.8)	14,485 (15.9)
31-50 years	12,211 (44.9)	8,787 (46.6)	4,806 (39.7)	4,881 (41.9)	1,486 (44.8)	7,730 (43.5)	39,901 (43.9)
51-70 years	10,208 (37.6)	6,731 (35.7)	5,089 (42.0)	4,816 (41.4)	1,270 (38.3)	5,600 (31.5)	33,714 (37.1)
71+ years	757 (2.8)	476 (2.5)	573 (4.7)	467 (4.0)	124 (3.7)	405 (2.3)	2,802 (3.1)
Generation							
Generation Y	5,965 (21.9)	4,480 (23.7)	2,510 (20.7)	2,328 (20.0)	692 (20.9)	5,612 (31.5)	21,587 (23.7)
Generation X	11,584 (42.6)	8,115 (43.0)	4,555 (37.6)	4,646 (39.9)	1,385 (41.8)	7,000 (39.4)	37,285 (41.0)
Baby Boomers	9,034 (33.2)	5,907 (31.3)	4,584 (37.8)	4,281 (36.8)	1,147 (34.6)	4,854 (27.3)	29,807 (32.8)
Silent Generation	598 (2.2)	364 (1.9)	467 (3.9)	381 (3.3)	91 (2.7)	322 (1.8)	2,223 (2.4)
State							
NSW	7,720 (28.4)	5,519 (29.3)	3,593 (29.7)	3,445 (29.6)	967 (29.2)	5,149 (28.9)	26,393 (29.0)
QLD	5,922 (21.8)	3,918 (20.8)	2,504 (20.7)	2,473 (21.3)	764 (23.0)	3,414 (19.2)	18,995 (20.9)
ACT	1,055 (3.9)	705 (3.7)	490 (4.0)	450 (3.9)	125 (3.8)	768 (4.3)	3,593 (4.0)
NT	317 (1.2)	211 (1.1)	114 (0.9)	148 (1.3)	52 (1.6)	224 (1.3)	1,066 (1.2)
TAS	603 (2.2)	410 (2.2)	203 (1.7)	239 (2.1)	63 (1.9)	378 (2.1)	1,896 (2.1)
VIC	6,987 (25.7)	4,876 (25.8)	3,263 (26.9)	3,024 (26.0)	785 (23.7)	4,776 (26.8)	23,711 (26.1)
WA	2,487 (9.1)	1,690 (9.0)	948 (7.8)	945 (8.1)	324 (9.8)	1,758 (9.9)	8,152 (9.0)
SA	2,090 (7.7)	1,537 (8.1)	1,001 (8.3)	912 (7.8)	235 (7.1)	1,321 (7.4)	7,096 (7.8)
Location							
Major urban	19,792 (72.8)	13,684 (72.5)	9,416 (77.7)	8,566 (73.6)	2,287 (69.0)	13,471 (75.7)	67,216 (73.9)
Other urban	5,589 (20.6)	3,938 (20.9)	2,039 (16.8)	2,279 (19.6)	784 (23.7)	2,923 (16.4)	17,552 (19.3)
Bounded locality	560 (2.1)	426 (2.3)	194 (1.6)	247 (2.1)	86 (2.6)	323 (1.8)	1,836 (2.0)
Rural balance	366 (1.3)	261 (1.4)	148 (1.2)	127 (1.1)	41 (1.2)	212 (1.2)	1,155 (1.3)

*Note that Generation Y are those born between 1983 and 1999; Generation X those born between 1965 and 1982; Baby Boomers those born between 1946 and 1964 and the Silent Generation are those born before 1946.

Diet Types and weight status

Over half of Freewheelers and Cravers had a Body Mass Index (BMI) putting them in the obese category. Whereas approximately only 1 in 8 were normal weight. Foodies were most likely to be normal weight, although like the Australian population the majority of respondents were overweight or obese for all Diet Types.

TABLE 3. WEIGHT STATUS DISTRIBUTION (N (%)) WITHIN EACH DIET TYPE (N=73,114)

	THINKER (N=27,181)	CRAVER (N=18,866)	SOCIALISER (N=12,116)	FOODIE (N=11,636)	FREEWHEELER (N=3,315)	UNKNOWN (N=17,788)	WHOLE SAMPLE (N=90,902)
Underweight	309 (1.1)	73 (0.4)	109 (0.9)	96 (0.8)	22 (0.7)	292 (1.6)	901 (1.0)
Normal weight	6,639 (24.4)	2,382 (12.6)	2,874 (23.7)	3,038 (26.1)	458 (13.8)	5,410 (30.4)	20,801 (22.9)
Overweight	8,938 (32.9)	5,534 (29.3)	4,377 (36.1)	4,037 (34.7)	1,020 (30.8)	5,451 (30.6)	29,357 (32.3)
Obese	11,295 (41.6)	10,877 (57.7)	4,756 (39.3)	4,465 (38.4)	1,815 (54.8)	6,635 (37.3)	39,843 (43.8)

65 58% 60 55% 55 50 Percentage 45 9% 40 35 30 25 FOODIE SOCIALISER THINKER FREEWHEELER CRAVER

FIGURE 1: RATES OF OBESITY BY DIET TYPE

Average obesity rate for Australian adults

Most popular weight loss methods

To understand their past dieting attempts, respondents of the Diet Types survey were asked to indicate from a list provided which diet methods they had tried in the past. The top 5 methods overall and across each Diet Type are reported. More traditional methods like counting kilojoules, cutting carbs and exercise remain the most common methods, with fitness trackers and meal replacement shakes rounding off the top 5 in most Diet Type categories. Diet books made the top 5, but only amongst Foodies, while higher proportions of Cravers have tried each of the methods than any other Diet Type.

TABLE 4. DIET TYPES AND THEIR TOP 5 PREFERRED DIETING METHODS (%)

	THINKER	CRAVER	SOCIALISER	FOODIE	FREEWHEELER	UNKNOWN	WHOLE SAMPLE
	(N=27,181)	(N=18,866)	(N=12,116)	(N=11,636)	(N=3,315)	(N=17,788)	(N=90,902)
1	Counting	Counting	Counting	Counting	Counting	Counting	Counting
	kilojoules	kilojoules	kilojoules	kilojoules	kilojoules	kilojoules	kilojoules
	(57.3)	(67.6)	(52.3)	(49.4)	(52.1)	(53.8)	(56.9)
2	Lots of	Cutting	Lots of	Cutting	Cutting	Lots of	Lots of
	exercise	carbs	exercise	carbs	carbs	exercise	exercise
	(44.9)	(51.3)	(44.6)	(42.1)	(42.5)	(47.8)	(45.4)
3	Cutting	Lots of	Cutting	Lots of	Lots of	Cutting	Cutting
	carbs	exercise	carbs	exercise	exercise	carbs	carbs
	(44.2)	(47.2)	(43.1)	(41.9)	(41.9)	(42.9)	(44.9)
4	Fitness	Meal	Fitness	Fitness	Meal	Fitness	Fitness
	trackers	replacement	trackers	trackers	replacement	trackers	trackers
	(38.4)	shakes (46.9)	(34.7)	(33.0)	shakes (41.7)	(38.1)	(38.5)
5	Meal	Fitness	Meal	Diet	Fitness	Meal	Meal
	replacement	trackers	replacement	books	trackers	replacement	replacement
	shakes (36.7)	(44.8)	shakes (32.0)	(29.2)	(38.4)	shakes (32.6)	shakes (36.4)

Top 5 weight loss methods



Previous weight loss attempts

Each individual who completed the Diet Type survey was also asked to indicate how many serious dieting attempts they had made over their lifetime. Six response options were provided, ranging from 'never' to 'more than 25 times'. Foodies and Freewheelers at 10% and 9% respectively reported the highest proportions who had never dieted, whereas 1 in 5 Cravers indicated that they had dieted more than 25 times. Most Types had highest proportions in the 1-5 times category.

TABLE 5. DISTRIBUTION OF NUMBER OF LIFETIME DIET ATTEMPTS (N (%)) WITHIN EACH DIET TYPE

NUMBER OF LIFETIME DIET ATTEMPTS	THINKER (N=27,181)	CRAVER (N=18,866)	SOCIALISER (N=12,116)	FOODIE (N=11,636)	FREEWHEELER (N=3,315)	UNKNOWN (N=17,788)	WHOLE SAMPLE (N=90,902)
Never	1,898 (7.0)	609 (3.2)	1,045 (8.6)	1,215 (10.4)	300 (9.0)	1,588 (8.9)	6,655 (7.3)
1-5 times	11,623 (42.8)	6,471 (34.3)	5,456 (45.0)	5,600 (48.1)	1,392 (42.0)	7,692 (43.2)	38,234 (42.1)
6-10 times	5,866 (21.6)	4,412 (23.4)	2,530 (20.9)	2,302 (19.8)	685 (20.7)	3,586 (20.2)	19,381 (21.3)
11-15 times	2,394 (8.8)	2,138 (11.3)	1,064 (8.8)	825 (7.1)	275 (8.3)	1,529 (8.6)	8,225 (9.0)
16-25 times	1,572 (5.8)	1,409 (7.5)	597 (4.9)	513 (4.4)	218 (6.6)	966 (5.4)	5,275 (5.8)
More than 25 times	3,749 (13.8)	3,778 (20.0)	1,385 (11.4)	1,141 (9.8)	440 (13.3)	2,358 (13.3)	12,851 (14.1)





Gender and generation gaps

A comparison of men and women, and generations

FAST FACTS

Men are more likely to be Foodies and Freewheelers

His #1 weight loss strategy is lots of exercise

Her #1 weight loss strategy is counting kilojoules

Younger generations are more likely to be Cravers

How men and women compare

Of all males who completed the Diet Type survey and were assigned a Diet Type, the greatest proportion (as is the case for females) were classified as Thinkers. 1 in 5 males were categorised as Foodies compared to 1 in 7 females. Females were more represented in the Thinker or Craver categories compared to males.

The highest proportion of males were found in the Freewheeler and Foodie categories at 26% and 23% respectively, while 86% of Thinkers and 85% of Cravers were females.

His and her weight status

While males were underrepresented in this sample, those that participated and completed the Diet Types survey were more likely to be overweight or obese compared to female respondents. Based on Body Mass Index (BMI) calculations 77% of female respondents were overweight or obese compared to 85% of males. There were proportionally more females in the normal weight range compared to males (23% vs 14%). FIGURE 3. WEIGHT STATUS OF MALES (OUTER RING) VS FEMALES (INNER RIGHT)



Underweight 📕 Normal weight 📕 Overweight 📕 Obese



FIGURE 4. DISTRIBUTION OF THE DIET TYPES (%) BY MALES AND FEMALES

SHE'S MORE LIKELY TO BE A THINKER OR A **CRAVER**



HE'S MORE LIKELY TO BE A FOODIE OR A FREEWHEELER

His and her weight loss methods

There were some differences in the types of weight loss methods used in the past by male and females. While both reported using traditional methods of counting kilojoules, cutting carbs and exercising, quitting sugar and avoiding alcohol rounded out the top 5 methods in men with fitness trackers and meal replacement shakes featuring for women.

Previous diet attempts

Individuals were asked to indicate how many serious attempts they had made to actively manage their weight over their lifetime from 6 choice categories. While previous data shows that men are more likely to have problems with their weight 14% of men reported that they had never dieted (although these could be men in the normal weight range) compared to 6% of women, while approximately 16% of women have dieted 25+ times compared to 7% of men. FIGURE 6. NEVER DIETED (%) BY MALES (INNER RING) AND FEMALES (OUTER RING)



Never dieted 📕 Dieted at least once 📕 Dieted >25 times



Top 5 diet methods for women and men



How generations compare

The proportion of generation categories were similar across Diet Types. Older respondents were proportionally more likely to be categorised as Socialisers or Foodies, while Cravers were more likely to be members of one of the younger generations.

Note that Generation Y are those individuals born between 1983 and 1999; Generation X are those born between 1965 and 1982; Baby Boomers are those born between 1946 and 1964 and the Silent Generation are those born before 1946.



FIGURE 7. BIRTH GENERATION DISTRIBUTION AMONGST THE DIET TYPES

While all generations have the biggest proportion of individuals in the Thinker category, the Socialiser comes second in the Silent Generation, but it's the Craver for Baby Boomers, Generation X and Generation Y. The proportion of Cravers within each generation decreases with age, while the proportion of Foodies and Socialisers increases.







GENERATION Y MORE LIKELY TO BE CRAVERS

50% HAVE DIETED 1-5 TIMES 1 IN 10 HAVE NEVER DIETED

GENERATION X MORE LIKELY TO BE CRAVERS

ALMOST 50% ARE **OBESE** 1 IN 3 HAVE DIETED MORE THAN 10 TIMES





BABY BOOMERS AND THE SILENT GENERATION MORE LIKELY TO BE SOCIALISERS OR FOODIES

MORE LIKELY BE **OBESE MOST** HAVE DIETED MORE THAN 5 TIMES

Weight status by generation

One-third of Generation Ys were considered obese compared to nearly half of Baby Boomers, Generation Xs and the Silent Generation. Generation Ys were also more likely to be classified as normal weight compared to the other generations.

Lifetime weight loss attempts by generation

The proportion of each generation who have dieted not surprisingly increases with age. Half of Generation Ys report having dieted between 1-5 times in their lives, with 1 in 10 indicating they had never dieted. Most Baby Boomers have dieted more than 5 times in their lifetime, with 1 in 5 reporting greater than 25 dieting attempts.

Preferred weight loss methods by generation

Individuals were also asked to indicate from a list provided what other diets or weight loss methods they had tried in the past. Exercise as a method of weight loss is preferred by younger generations, while diet books and group support meetings have been tried by a greater proportion of Baby Boomers or the Silent Generation. Tech-based weight loss support such as fitness trackers and diet apps were more popular amongst Generation Xs and Generation Ys.

	SILENT GENERATION	BABY BOOMERS	GENERATION X	GENERATION Y
1	Counting kilojoules (50.6)	Counting kilojoules (59.0)	Counting kilojoules (58.9)	Lots of exercise (55.4)
2	Cutting carbs (41.3)	Cutting carbs (46.6)	Lots of exercise (48.9)	Counting kilojoules (53.8)
3	Diet books (38.3)	Diet books (42.0)	Cutting carbs (47.3)	Fitness tracker (48.5)
4	Group support (36.5)	Group support (39.3)	Fitness tracker (42.7)	Cutting carbs (40.6)
5	Quitting sugar (33.4)	Meal replacement (35.4)	Meal replacement (41.3)	Diet apps (35.3)
6	Meal replacement (26.8)	Lots of exercise (34.7)	Diet books (35.3)	Meal replacement (33.8)
7	Lots of exercise (23.1)	Quitting sugar (32.4)	Quitting sugar (32.0)	Quitting sugar (31.5)
8	Seeing a dietitian (21.7)	Fitness tracker (29.2)	Diet apps (28.9)	Avoiding alcohol (28.1)
9	Avoiding alcohol (19.2)	Avoiding alcohol (24.6)	Avoiding alcohol (27.3)	Personal trainer (26.4)
10	Prescribed weight loss programs (15.2)	Seeing a dietitian (20.9)	Group support (26.7)	Diet books (20.3)
11	Fitness tracker (12.5%)	Home delivered meal service (18.6)	Personal trainer (24.6)	Online diet programs (19.9)

TABLE 6. MOST POPULAR DIETING OR WEIGHT LOSS METHODS (%) WITHIN EACH GENERATION

Personality bites

Cross-analysis of Diet Types with the CSIRO Healthy Diet Score

FAST FACTS

All Diet Types consume too much discretionary food and alcohol

Cravers and Freewheelers prefer confectionary

Socialisers and Foodies prefer alcohol

Foodies have the best overall diet quality

Characteristics of the Diet Score subsample

A sample of 14,623 adults have completed both the CSIRO Diet Type survey and the CSIRO Healthy Diet Score survey, and by combining these data we were able to examine how the dietary patterns differ by Diet Types. The adults who have completed both surveys have a similar demographic profile to the large Diet Type sample (n=90,902) in that the majority were female and aged between 31-70 years. However, this subsample of adults were more likely to be female and of a normal weight compared to the Diet Type sample as a whole (42% vs 23%).

Diet Types distribution in the subsample

In the sample of those that received a Diet Type, 40% of adults were classified as Thinker, 21% as Cravers and 20% as Foodies. Compared to the Diet Type sample, the proportion of people who were classified as Cravers was lower, but Foodies and Thinker were higher.

FIGURE 9. DISTRIBUTION OF DIET TYPES WITHIN THE SAMPLE OF PEOPLE WHO HAVE DIET SCORE DATA





TABLE 7. CHARACTERISTICS OF THE CSIRO DIET TYPE/DIET SCORE SAMPLE (N=14,623)

SAMPLE CHARACTERI	STICS	COUNT (N=14,623)	PERCENTAGE OF SAMPLE
Diet Type	Craver	2,369	16.2%
	Foodie	2,200	15.0%
	Freewheeler	376	2.6%
	Socialiser	1,866	12.8%
	Thinker	4,494	30.7%
	Unknown	3,318	22.7%
Gender	Male	1,748	12.0%
	Female	12,875	88.0%
Age group	18-30 years	2,262	15.5%
	31-50 years	5,366	36.7%
	51-70 years	6,338	43.3%
	71 years+	657	4.5%
Generation	Silent Generation	521	3.6%
	Baby Boomers	5,827	39.8%
	Generation X	5,010	34.3%
	Generation Y	3,265	22.3%
Weight status	Underweight	197	1.4%
status	Normal weight	5,983	42.3%
	Overweight	3,884	27.5%
	Obese	4,071	28.8%
State	New South Wales	4,005	27.8%
	Queensland	2,688	18.6%
	Australian Capital Territory	656	4.5%
	Northern Territory	148	1.0%
	Tasmania	325	2.3%
	Victoria	3,890	27.0%
	Western Australia	1,369	9.5%
	South Australia	1,346	9.3%

Which Diet Type has the healthier diet?

The Australian Dietary Guidelines provide Australians with specific advice on the quantities of core and discretionary foods to consume on a daily basis, based on their age and gender. The CSIRO Healthy Diet Score survey allows for compliance with Dietary Guidelines to be assessed and is reflected in an overall diet quality score out of 100. As reported in *CSIRO Healthy Diet Score 2016*, the average Diet Score of the Australian population is 59 out of 100. There are 9 different components that comprise the CSIRO Healthy Diet Score, including: Fruit, Vegetables, Meat and alternatives, Breads and cereals, Dairy foods and alternatives, Fluids, Healthy fats and oils, Variety, and Discretionary foods.

The average Diet Score was highest for Foodies at 61 out of 100 and lowest for Freewheelers at 56 out of 100, a 5-point difference.



FIGURE 10. AVERAGE CSIRO HEALTHY DIET SCORE BY DIET TYPE



Diet Types and food groups

There were components of diet quality that all Diet Types scored well and some that all Diet Types could improve.

- The highest scoring components across all Diet Types were Fluids, Meat and alternatives, and Vegetables.
- The lowest scoring component across all Types was Discretionary foods.
- Foodies had the highest average Diet Score and scored highest for a number of food groups including Vegetables, Meat and alternatives, and Fluids, but scored lowest of all Types for Dairy foods.
- Freewheelers had the highest average score for Dairy foods, but the lowest for Vegetables, Fruit, and Fluids, among other food groups.
- Socialisers had the highest average score for Breads and cereals, and Cravers the lowest.
- Thinkers had the highest average score for Healthy fats, and Freewheelers the lowest.

TABLE 8. CSIRO HEALTHY DIET SCORE COMPONENT SCORES BY DIET TYPE

COMPONENT SCORES (OUT OF 100)	THINKER (N=4,494)	CRAVER (N=2,369)	SOCIALISER (N=1,866)	FOODIE (N=2,200)	FREEWHEELER (N=376)
	Mean	Mean	Mean	Mean	Mean
Diet Score	59.2	56.7	59.9	60.9	56.0
Vegetables	71.3	68.2	73.1	76.4	65.1
Fruit	65.5	61.2	68.8	70.4	57.1
Breads and cereals	61.8	61.0	63.5	63.1	63.4
Meat and alternatives	73.7	73.6	76.3	76.6	74.4
Dairy and alternatives	51.4	51.2	50.4	48.8	51.8
Discretionary foods	28.7	23.5	27.3	30.2	23.5
Fluids	93.5	92.3	94.8	95.1	90.8
Variety	64.2	62.2	66.0	68.1	61.6
Healthy fats	52.3	50.5	50.8	49.9	47.8

Highest and lowest component scores within each food group



Which Diet Types are most likely to meet Dietary Guidelines?

Compliance with the *Australian Dietary Guidelines* was generally poor, with 50% or less of the sample meeting any one Guideline. While this might seem low, these findings are similar to those of the Australian population generally. Different Diet Types did well in different areas in terms of meeting the Dietary Guidelines.

- Foodies were most likely to meet the Guidelines for fruit and vegetables.
- Cravers were most likely to meet the Guideline for breads and cereal.
- Socialisers were most likely to meet the Guideline for meat and alternatives.
- **Freewheelers** were most likely to meet the Guideline for dairy foods.

TABLE 9. PERCENTAGE MEETING THE DIETARY GUIDELINES BY DIET TYPE

	THINKER (N=4,494)	CRAVER (N=2,369)	SOCIALISER (N=1,866)	FOODIE (N=2,200)	FREEWHEELER (N=376)	UNKNOWN (N=3,318)
Fruit	45.9%	41.9%	50.1%	50.4%	38.3%	47.0%
Vegetables	35.3%	31.9%	38.4%	40.0%	29.3%	35.3%
Breads and Cereals	12.6%	14.7%	12.5%	9.3%	12.8%	11.7%
Meat and Alternatives	31.3%	31.4%	34.5%	33.1%	32.2%	30.6%
Dairy and Alternatives	27.1%	27.6%	24.5%	23.9%	29.5%	25.1%



FOODIES FRUIT AND VEGETABLES GUIDELINES CRAVERS CARBOHYDRATE GUIDELINE SOCIALISERS MEAT AND ALTERNATIVES GUIDELINE FREEWHEELERS DAIRY GUIDELINE

Fruit, vegetables and Diet Types

Foodies appear to be most compliant with the *Australian Dietary Guidelines* for fruit and vegetables which recommend 2 servings of fruit and 5-6 servings of vegetables a day.

- 50% of Foodies met the Guideline for fruit.
- 40% of Foodies met the Guideline for vegetables.
- 24% met the Guidelines for fruit and vegetables.

The Dietary Guidelines also recommend that Australians consume a variety of vegetables of different types and colours to provide a range of nutrients that may help to reduce the risk of obesity. Diets which are high in a variety of vegetables are especially important in helping to maintain a healthy weight.

- Foodies were most likely to report a high variety of vegetables in their diet, with 68% reporting to have 5 or more different types of vegetables in the last 2 days.
- 87% of Foodies reported having 4-5 different types of vegetables in the last 2 days, compared to 68% of Freewheelers.



TABLE 10. PERCENTAGE OF SAMPLE MEETING FRUIT AND VEGETABLE GUIDELINES BY DIET TYPE

	THINKER (N=4,494)	CRAVER (N=2,369)	SOCIALISER (N=1,866)	FOODIE (N=2,200)	FREEWHEELER (N=376)	UNKNOWN (N=3,318)
Fruit	45.9%	41.9%	50.1%	50.4%	38.3%	47.0%
Vegetables	35.3%	31.9%	38.4%	40.0%	29.3%	35.3%
Fruit and vegetables (both)	20.2%	17.0%	23.0%	23.5%	15.2%	20.6%

FIGURE 11. NUMBER OF TYPES OF VEGETABLES CONSUMED BY DIET TYPE

Discretionary foods and Diet Types

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 kilojoules 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 large portions of these foods and beverages may be associated with an increased risk of obesity and chronic disease.

Almost all Australians consume too much discretionary foods. On average 35% of daily kilojoule intake comes from discretionary foods, which displaces healthy, core foods.

- Foodies, Socialisers and Thinkers had the lowest reported discretionary food intake among the different Diet Types.
- Freewheelers and Cravers had the highest reported intake of discretionary foods.

• The 3 most commonly consumed discretionary foods across all types were alcohol, chocolate and confectionary, and cakes and biscuits.

Discretionary food preferences

There were interesting differences in the choice of discretionary foods between the Diet Types. Some Types were more likely to favour a glass of beer or wine, while other Types preferred something sweet such as chocolate.

Foodies and Socialisers had a preference for alcohol – about one-third of their discretionary food and beverage consumption was alcohol.

Cravers had a preference for sweeter discretionary foods such as chocolate and confectionary (contributing 24% of total intake. Alcohol, cakes and biscuits and savoury snacks also contributed more than 10% of their total discretionary food intake.

DISCRETIONARY FOODS	THINKER (N=4,494)	CRAVER (N=2,369)	SOCIALISER (N=1,866)	FOODIE (N=2,200)	FREEWHEELER (N=376)	UNKNOWN (N=3,318)
Alcohol	21.4%	14.9%	32.5%	35.5%	18.5%	23.8%
Chocolate and confectionary	19.2%	24.2%	16.5%	14.7%	18.5%	19.8%
Cakes and biscuits	12.9%	14.3%	10.5%	11.4%	12.0%	11.3%
Savoury snacks	10.4%	11.1%	9.0%	8.7%	8.7%	9.6%
Processed meat	7.8%	7.0%	7.5%	7.6%	9.2%	7.5%
Sugar sweetened beverages	8.6%	9.4%	5.9%	5.0%	9.8%	8.3%
lcecream	5.1%	4.9%	4.4%	4.6%	5.4%	5.3%
Muesli and snack bars	4.5%	3.8%	4.2%	3.8%	5.1%	4.5%
Fried potato products	4.3%	4.4%	4.2%	3.7%	5.6%	4.3%
Takeaway foods	4.0%	4.2%	3.6%	3.0%	4.8%	3.9%
Savoury pies and pastries	1.8%	1.8%	1.8%	1.9%	2.4%	1.8%

TABLE 11. CONSUMPTION OF DISCRETIONARY FOODS AS A PERCENTAGE OF TOTAL DISCRETIONARY FOOD INTAKE



What's your Diet Type?

The CSIRO Diet Types report highlights the need for Australians to consider the role that personality plays in weight management. By knowing their Diet Type, Australians may have a better chance of losing weight and adhering to a healthy eating plan.

The interesting generational insights in this report suggest that a person's Diet Type might change over time or with changing life circumstances.

We encourage all Australians to discover their Diet Type at **www.diettypes.com.au** and revisit the survey at different stages throughout their lifetime for updated recommendations.



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