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Health benefits of the CSIRO Total Wellbeing Diet

Insights from a member survey

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1 Introduction

1.1 Obesity as a public health issue

Obesity remains a critical public health issue in Australia, associated with significant health, social and economic costs. Current estimates suggest that two in three Australian adults are living with overweight or obesity, placing them at increased risk of a range of chronic health conditions including cardiovascular disease, type 2 diabetes, sleep apnoea, and certain cancers. Obesity is not only an independent risk factor for these conditions, but also exacerbates existing comorbidities, reduces quality of life, and increases the risk of premature mortality.

Substantial evidence has demonstrated that even modest weight loss – for example 5% or more of starting body weight – can yield meaningful improvements in clinical risk factors such as blood pressure, lipid profiles, and blood sugar control. In addition to physiological benefits, weight loss has been associated with improvements in mental health, sleep quality, physical function, and overall wellbeing. These findings highlight the importance of evidence-based weight management programs that support individuals to achieve and sustain clinically significant weight loss.

The CSIRO Total Wellbeing Diet (TWD) is a scientifically formulated weight loss program that has evolved over years of research and translation. Validated in clinical trials and then launched as a series of book publications in 2005, the program gained widespread public adoption, with an estimated 10% of Australian households engaging with the diet in some form. In 2015, CSIRO partnered with Digital Wellness to deliver TWD as an interactive, online platform, further extending its reach. Since then, over 200,000 Australians have joined the program online.

Analysis of participant outcomes has shown that members of TWD achieve an average weight loss of approximately 6% of their starting body weight, and one in four members who begin the program with obesity transition to a lower weight status category. These outcomes are consistent with the amount of weight loss needed to support meaningful improvements in health. In 2019, CSIRO conducted a member survey to better understand the self-reported health and wellbeing outcomes experienced by individuals following participation in TWD. These findings provided valuable insights into the perceived physical, mental, and behavioural changes associated with weight loss through the program. As the obesity landscape, digital health environment, and user base have evolved in recent years, there is a need to update this knowledge base with more current data.

1.2 Aims and objectives

The aim of this project is to assess the self-reported health and wellbeing impacts experienced by members of the CSIRO Total Wellbeing Diet (TWD) following participation in the program. This updated analysis will contribute to the broader evidence base on the benefits of weight loss, inform future program development, and support alignment with national strategies aimed at improving population health through effective obesity prevention and management.

Specifically, the project aims to investigate the self-reported health, wellbeing, and behavioural outcomes among individuals on the program. The research will address the following key questions:

- What are the social, emotional, physical, and economic impacts that members associate with completing TWD?
- What self-reported changes have occurred in weight-related health conditions, including type 2 diabetes, high blood pressure, high cholesterol, cardiovascular disease, arthritis, mental health conditions, infertility, chronic pain, menopause symptoms, and obstructive sleep apnoea?
- Have participants reported any changes in medication use, including the use of prescription medications for chronic health conditions?
- Have participants reported any changes in spending, including on prescription medications, groceries, lifestyle and social activities?

2 Methods

2.1 Study design and recruitment

This study was approved by the CSIRO Health and Medical Human Research Ethics Committee (2025_025_LR). A descriptive cross-sectional survey was conducted to explore self-reported health outcomes among members (≥ 18 years) of the CSIRO Total Wellbeing Diet (TWD) program. The study targeted current or past members. Participation in the study was voluntary. Eligible members were invited to complete an online survey via a direct email invitation with a link to the survey. One reminder email was sent to members following the initial invitation.

The email was sent to 83,715 members (31,719 active and 51,996 past members) in the database on 2 July 2025, with 1303 completing the survey within two weeks. The resulting sample was likely to be subject to self-selection bias, with respondents potentially more motivated, health-conscious, and educated than the broader TWD membership. These limitations were considered in interpretation and reporting of findings.

2.2 Data collection and management

A purpose-designed online survey was developed to capture self-reported physical health, emotional, social and economic impacts of weight loss. These were informed by previous literature, past studies of TWD members and qualitative feedback from members. The survey included both closed- and open-ended questions and was estimated to take 10-15 minutes to complete.

De-identified data were transferred to the CSIRO research team in a password-protected file for analysis. No identifying information was accessible to CSIRO staff, and all analyses were conducted at the group level. Descriptive statistics (frequencies, means, and percentages) were used to summarise key variables and assess the prevalence of self-reported health-related outcomes. Between-group differences (e.g., by baseline weight status or weight loss) were examined.

To ensure data quality and reduce entry errors, the survey incorporated validation rules with predefined limits for some variables. For example, self-reported data was restricted to a plausible range for height (105–300 cm), weight (30–250 kg) and year of birth (1925–2007). Body Mass Index (BMI) was calculated from self-reported weight and height, and BMI values below 13 kg/m^2 or above 97 kg/m^2 were classified as invalid ($n=1$). BMI was used to categorise participants into weight status groups as follows: Underweight (<18.5), Normal weight (18.5–24.9), Overweight (25–29.9), and Obese (≥ 30).

In this analysis, a more recent definition of clinical obesity was applied, which considers BMI along with the presence of obesity-related functional impairments and signs or symptoms of functional alterations of organs and tissues. Specifically, clinical obesity was defined as having either: a BMI ≥ 30 AND reporting any functional limitations in the past four weeks due to body weight or size which included cutting down time spent on work or other activities; accomplishing less than desired; being limited in the kind of activities performed; or experiencing difficulty performing usual activities (e.g., requiring extra effort), OR having a BMI ≥ 30 AND reporting conditions that were considered a sign or symptom of alterations to organ function which included Type 2 diabetes, high blood pressure, high cholesterol, sleep

apnoea, chronic pain, or asthma. A BMI ≥ 30 without the presence of any limitations was classified as *preclinical obesity*.

Changes in expenditure were reported in predefined categories: \$0–\$50, \$51–\$100, \$101–\$200, \$201–\$300, \$301–\$500, and over \$500. To calculate mean spending/savings, the midpoint of each category was used (e.g., \$0–\$50 was recoded as \$25). Over \$500 was conservatively recoded as \$550. This approach allowed spending values to be summed and averaged for analysis.

3 Results

3.1 Characteristics of members who completed the survey

The online survey was completed by 1303 CSIRO Total Wellbeing Diet (TWD) members. Most survey respondents were female (85%), aged between 51-70 (63%), and the average age was 62.8 (SD±10.04) years.

Among this sample of members, 39% were classified as overweight and 47% were classified as obese; most of which were classified as clinically obese meaning their BMI was greater than 30 and they reported that their weight was impacting their daily activities and / or they were managing diabetes, high blood pressure, high cholesterol, sleep apnoea, chronic pain or asthma (Table 1).

Table 1. Characteristics of members who completed the online survey

		N	%
		1303	100
Gender	Female	1111	85.3
	Male	190	14.6
	Prefer to self-describe or not answer	2	0.2
Age group (years)	18–30	3	0.2
	31–50	147	11.3
	51–70	825	63.3
	71+	328	25.2
Weight status	Underweight	4	0.3
	Normal weight	176	13.5
	Overweight	513	39.4
	Obese	609	46.7
	Pre-clinically obese	93	7.1
	Clinically obese	516	39.6
	Missing or invalid	1	0.1

Underweight: BMI<18.5; Normal weight: BMI 18.5-<25; Overweight: BMI 25-<30; Obese: BMI ≥30.

Preclinical obesity: Self-reported BMI ≥30kg/m² ; Clinical obesity: Self-reported BMI ≥30kg/m² and selected yes to any of the questions relating to weight and life impact and/or managing any of the following chronic health conditions - Type 2 diabetes, High blood pressure, High cholesterol, Sleep apnoea, Chronic pain, Asthma.

Among this sample, 75% were current members and 25% were past members. The majority of members were using the app most (25%) or all (41%) of the time. Very few were not using the website or app (<10%).

About two in three members were following the principles of TWD most (45%) or all (19%) of the time; and 28% had followed the diet for 3-6 months and 30% had followed the diet for more than 12 months (Table 2).

About one in three members lost less than 5kg, and about two in three lost more than 5kg on TWD. One in three members lost 5-10kg and a similar proportion lost more than 10kg. Longer membership length was generally associated with greater weight loss (Table 3).

Table 2. Membership characteristics of those who completed the online survey

		N	%
		1303	100
Are you currently a paying member of TWD?	Yes	980	75.2
	No	323	24.8
If yes, are you currently using the TWD website or app?	Yes, using it all of the time	401	40.9
	Yes, using it most of the time	244	24.9
	Yes, using it some of the time	243	24.8
	No, not really using the website or app	92	9.4
Are you currently following the nutrition principles of TWD?	Yes, following all of the time	247	19.0
	Yes, following most of the time	585	44.9
	Yes, following some of the time	309	23.7
	No, not really following the diet	162	12.4
Roughly how long have you followed (or did you follow) TWD?	Less than 12 weeks	320	24.6
	3–6 months	371	28.5
	6–12 months	216	16.6
	More than 12 months	396	30.4
How much weight have you lost in total on the TWD program?	I haven't lost weight	58	4.5
	Less than 5 kg	434	33.3
	5kg or more	811	62.3
	5–10 kg	456	35.0
	11–15 kg	199	15.3
	16–20 kg	102	7.8
	21–30 kg	40	3.1
	More than 30 kg	14	1.1

Table 3. Proportion (%) of members within each category of weight loss by period of time following the diet program

	Less than 12 weeks	3–6 months	6–12 months	More than 12 months
I haven't lost weight	6.3	3.2	3.2	4.8
Less than 5 kg	65.0	28.8	20.4	18.9
5kg or more	28.8	68.0	76.5	76.2
5–10 kg	25.6	42.3	37.5	34.3
11–15 kg	1.9	18.6	21.8	19.4
More than 15kg	1.3	7.1	17.2	22.5

3.2 Perceptions on current health

The survey asked members, on a scale from 0-10, how satisfied they were with life as a whole these days? The mean satisfaction score was 7.5 out of 10. Satisfaction with life was similar for males and females (Table 4); however, it was lower than average in those with higher weight status (Table 4 and Figure 1); and higher than average in those who had lost 5kg more (Table 4 and Figure 2).

Table 4. Mean life satisfaction scores by gender, weight status and weight lost on the CSIRO Total Wellbeing Diet

		Mean	SD
Gender	Female	7.53	1.74
	Male	7.54	1.86
Weight status	Normal weight	8.11	1.28
	Overweight	7.88	1.48
	Obese	7.06	1.97
	Pre-clinically obese	7.72	1.78
	Clinically obese	6.94	1.98
Total weight lost on TWD?	I haven't lost weight	6.45	1.87
	Less than 5 kg	7.11	1.93
	5kg or more	7.83	1.57
	5–10 kg	7.76	1.48
	11–15 kg	7.80	1.83
	More than 15kg	8.08	1.45
	Total	7.53	1.76

Normal weight: BMI 18.5-<25; Overweight: BMI 25-<30; Obese: BMI ≥30.

Preclinical obesity: Self-reported BMI ≥30kg/m² ; Clinical obesity: Self-reported BMI ≥30kg/m² and selected yes to any of the questions relating to weight and life impact and/or managing any of the following chronic health conditions - Type 2 diabetes, High blood pressure, High cholesterol, Sleep apnoea, Chronic pain, Asthma.

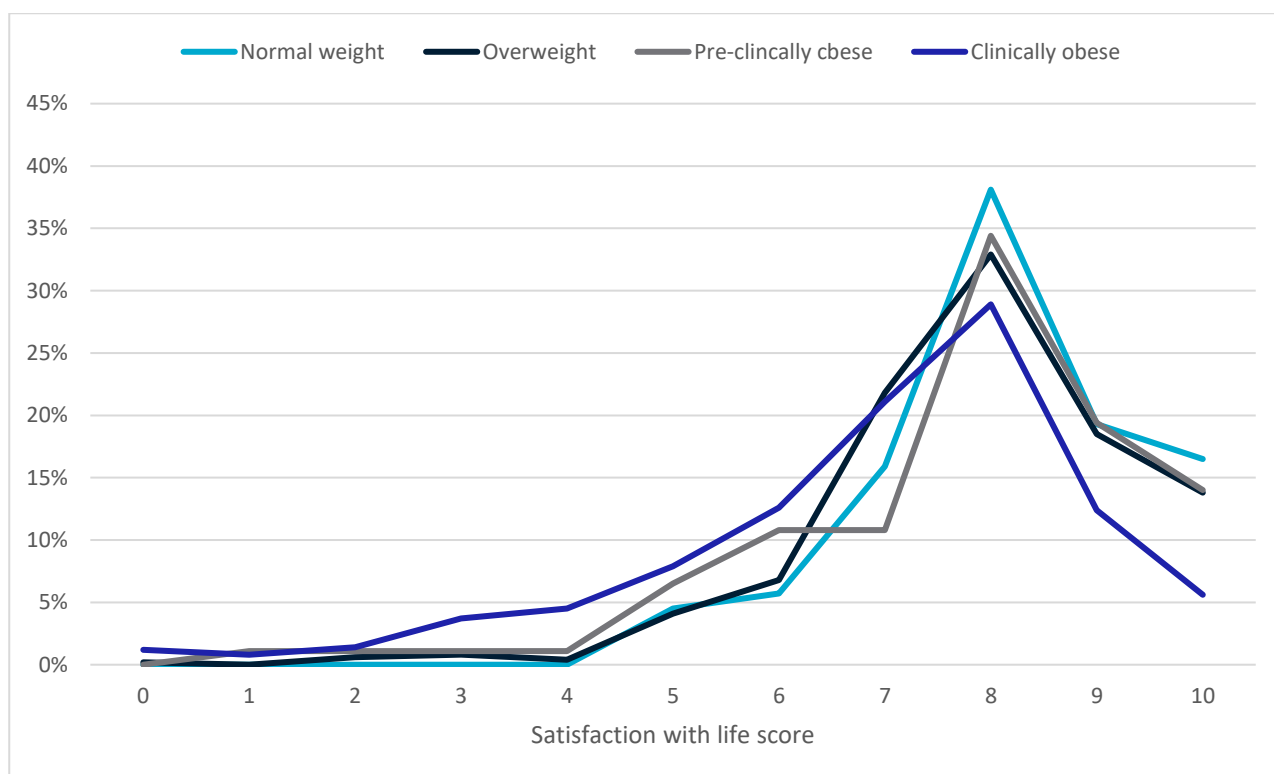


Figure 1: Proportion of members (%) within each rating of life satisfaction (0-10) split by weight status categories

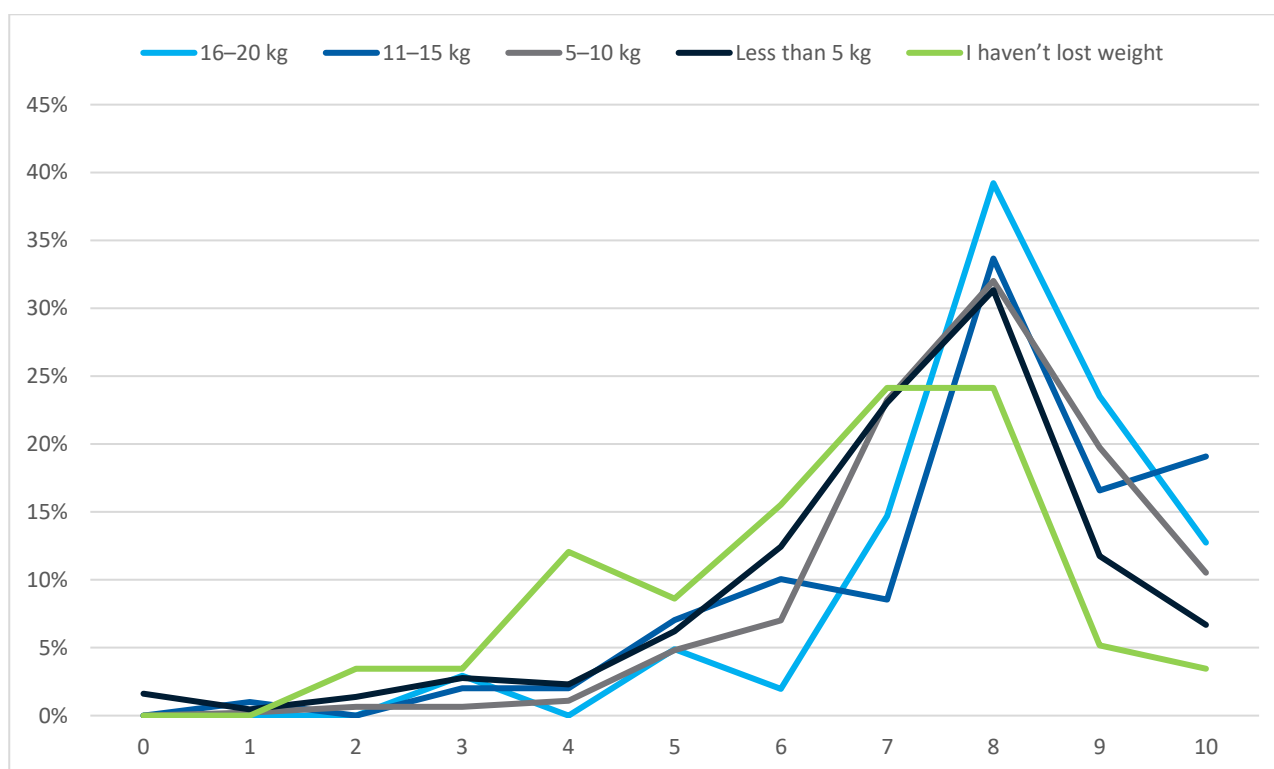


Figure 2. Proportion of members (%) within each rating of life satisfaction (0-10) split by categories of weight loss

The survey also asked members how their satisfaction with life, health, body weight, diet and physical activity levels were now compared to before they started TWD. The table below shows the percentage of members who reported these aspects had improved since starting TWD (selected 4 or 5 out of 5).

The proportion of members reporting improvements in satisfaction with life, health, weight, diet and physical activity increased noticeably with weight loss success. Among those who lost 5kg or more, 72% of members reported improvements in their satisfaction with life and health, 77% reported improvements in their body weight and 83% improvements in their diet.

Among those who lost more weight, e.g. 11-15kg, 75% of members reported improvements in their satisfaction with life and health, and 80% report improvements in body weight and diet; and among those who lost more than 15kg, 80% of members reported improvements in their satisfaction with life, 85% or more reported improvements in their health, body weight and diet (Table 5).

Table 5. Proportion (%) of respondents reporting improvement in life satisfaction, health, body weight, diet and activity levels compared to before commencing the CSIRO Total Wellbeing Diet by weight loss

	Compared to before I started the Total Wellbeing Diet, my current...				
	Life satisfaction...	Health...	Body weight...	Diet...	Activity level...
	is better than before TWD				
I haven't lost weight	17.2	12.1	1.7	29.3	22.4
Less than 5 kg	39.9	39.4	36.6	61.1	31.6
5kg or more	71.9	72.3	76.6	83.4	55.7
5–10 kg	68.2	66.2	70.2	80.9	51.3
11–15 kg	74.4	75.9	80.9	80.4	57.8
More than 15kg	79.5	85.3	89.7	94.2	66.0
Total	58.8	58.6	59.9	73.5	46.2

The proportion of members reporting improvements in life satisfaction, health, diet and activity levels also increased with length of time on the program, with the biggest increases observed after 3 months of following the diet (Table 6). The proportion of people reporting their satisfaction with life was better than before TWD, increased from 44% for new members (<12 weeks following the diet program) to 61% for members who had been following the program for 3-6 months, and about 65% for those who had been following the diet program for 6 months or more.

After 3 months of following the diet program, about 60% of members reported their health and body weight was better than before starting TWD, and 72% reported their diet was better than before they started TWD (Table 6).

Table 6. Proportion (%) of respondents reporting improvement in life satisfaction, health, body weight, diet and activity levels compared to before commencing the CSIRO Total Wellbeing Diet by length of time following the diet program

	Compared to before I started the Total Wellbeing Diet, my current...				
	Life satisfaction...	Health...	Body weight...	Diet...	Activity level...
	is better than before TWD				
Less than 12 weeks	44.4	42.2	50.0	68.1	31.3
3–6 months	61.2	59.8	63.6	72.2	46.4
6–12 months	65.7	63.9	66.7	75.9	49.5
More than 12 months	64.4	67.9	60.9	77.8	56.3
Total	58.8	58.6	59.9	73.5	46.2

3.3 Motivations to start the CSIRO Total Wellbeing Diet

The most common motivations to start the CSIRO Total Wellbeing Diet were:

- I wanted to manage my weight (78%)
- Concerns for my health (64%)
- To feel good about myself (55%)

While the order for the motivations for starting TWD were similar across weight status groups, the proportions of people reporting various motivation differed. For example, with a higher weight status category there is a stepwise increase in the proportion of respondents reporting concerns of health (59% of overweight and 74% of obese members reported this as motivation); to have more energy (40% of overweight and 52% of obese members); to improve mobility and physical movement (21% of overweight and 40% of obese members); to reduce symptoms from other conditions (14% of overweight and 20% of obese members); and to relieve pain (9% of overweight and 20% of obese members) (Table 7).

Table 7. Motivations to start the CSIRO Total Wellbeing Diet by weight status (proportion (%) of members sorted from highest to lowest)

What motivated you to start the Total Wellbeing Diet?	Normal weight	Over-weight	Obese	Total
I wanted to manage my weight	76.1	78.6	78.5	78.2
Concerns for my health	43.8	59.3	73.9	63.9
To feel good about myself	52.3	55.8	55.8	55.3
To improve appearance	43.8	51.1	48.6	49.0
To have more energy	35.2	39.8	51.9	44.7
To develop my skills to manage my weight	34.7	42.5	39.4	39.9
To improve my mobility and physical movement	14.2	21.2	40.2	29.1
I felt it was good for me	31.8	28.1	22.2	25.8
To feel more in control	27.3	21.8	22.3	22.7
To reduce symptoms from other conditions	5.7	14.0	20.2	15.7
To relieve pain	8.5	9.0	20.4	14.2
Family member or friend recommended it	10.2	6.6	7.9	7.7
Health scare or significant life event	4.0	5.5	9.2	7.0
Inspired by the success of someone else	5.7	5.3	7.4	6.4
Doctor recommended it	2.3	3.9	5.7	4.5
Fertility goals	0.0	0.6	0.8	0.6

3.4 Weight loss on the CSIRO Total Wellbeing Diet

Overall, about one in three members (33%) reported a weight loss of less than 5kg on TWD, and about one in three (35%) reported a weight loss of 5-10kg and about one in three (27%) reported a weight loss of more than 10kg. 61% of members classified as obese lost 5kg or more.

One in four (26%) members achieved their weight loss goal or got close to it, and of these 82% had maintained their weight loss or stayed within a few kilograms. About half (55%) the members didn't achieve their goal but they got part of the way (Table 8).

Overweight members were more likely to achieve their weight loss goal than those classified as obese (30% of overweight members vs 11% of obese members), which makes sense given obese members have more weight to lose and achieving their goal would take longer. 68% of obese members who achieved their goal were able to maintain their weight loss or stayed within a few kilograms, compared to 80% for overweight and 92% for normal weight members. The difficulty in maintaining weight loss was most evident in the clinically obese category, with 62% reporting to have maintained their weight loss, compared to 100% for those classified with pre-clinical obesity (albeit a smaller sample). The level of weight loss maintenance overall is a good result for the program but highlights that weight loss maintenance is difficult, particularly when starting from a higher starting point with additional comorbidities, however it remains an important stage of longer-term weight management (Table 8).

Table 8. Weight loss success, by weight status (Proportion, %, of members)

		Normal weight	Over-weight	Obese	Pre-clinically obese	Clinically obese	Total
How much weight have you lost in total on the TWD program?	I haven't lost weight	2.3	4.1	5.4	3.2	5.8	4.5
	Less than 5 kg	35.8	31.8	34.2	37.6	33.5	33.3
	5kg or more	61.9	64.1	60.4	59.1	60.7	62.2
	5–10 kg	37.5	37.8	31.7	23.7	33.1	35.0
	11–15 kg	15.3	14.8	15.8	16.1	15.7	15.3
	More than 15kg	9.1	11.5	12.9	19.4	11.8	12.0
Did you achieve your weight loss goals?	Yes, I achieved my goal or close to it**	68.2	30.0	10.8	11.8	10.7	26.4
	No, but I got part of the way to achieving it	28.4	57.3	61.4	61.3	61.4	55.2
	No, I didn't achieve my goal	3.4	12.7	27.8	26.9	27.9	18.4
**If yes, have you been able to maintain your weight loss goals?	Yes, I have maintained my weight loss or within a few kilos of it	91.7	79.9	68.2	100	61.8	82.0

3.5 Other changes in health and wellbeing on the CSIRO Total Wellbeing Diet

Aside from weight loss, more than half the members reported improvements in their general wellbeing (60%), general health (60%), energy levels (60%), body image (57%), fitness levels (54%), physical activity levels (53%), and mobility and movement (52%). Self-confidence (50%), vitality (49%) and mood (47%) also improved in close to half the members. Around one in three members reported improvements in mental health (38%), sleep (36%), and joint pain (39%) (Figure 3).

The proportion of members reporting improvements in health and wellbeing increased with the amount of weight lost on the program (Table 9 and Figure 4). Among members who lost 5kg or more, around 75% reported improvements in their general health and wellbeing, body image and energy levels.

Among those who lost over 15kg, around 80% of members or more reported improvements in self-confidence, energy levels, fitness and physical activity levels, mobility and movement, body image, vitality, and general health and wellbeing (Table 9).

Interestingly, about 18% of members who reported no weight loss on the program still felt their general health and wellbeing had improvements since following the TWD program.

Improvements in health and wellbeing also increased with the length of time members had followed the diet program, which in turn also related to weight loss. The improvements appeared to increase substantially between 3 and 6 months of following the diet program, and then stabilise, or increase slightly, with even longer following the diet program. For example, those reporting improvements in their general health and energy levels increased from 41% of new members to 63% of members who had followed the diet program for 3-6 months, and then a smaller increase up to 68-70% for those who had been members for more than 12 months. Following the diet program for more than 3 months also seemed to be associated with substantial improvements in fitness and physical activity levels, and vitality. 31% of new members reported improvements in their vitality, which increased to 50% of members who had been following the diet program for 3-6 months, and increased further to 53% and 60% of those who had been following the program for 6-12 months and more than 12 months respectively. About seven out of ten members who had followed the diet program for more than 12 months reported improvements in their general health and wellbeing (68%), and energy levels (70%) (Table 10).

Although less common overall, the proportion of longer-term members (i.e. those who had followed the diet program for 12 months or more) who reported improvements in their social life, sex life and relationships with family and friends was twice that of newer members (i.e. less than 12 weeks following the diet) (Table 10).

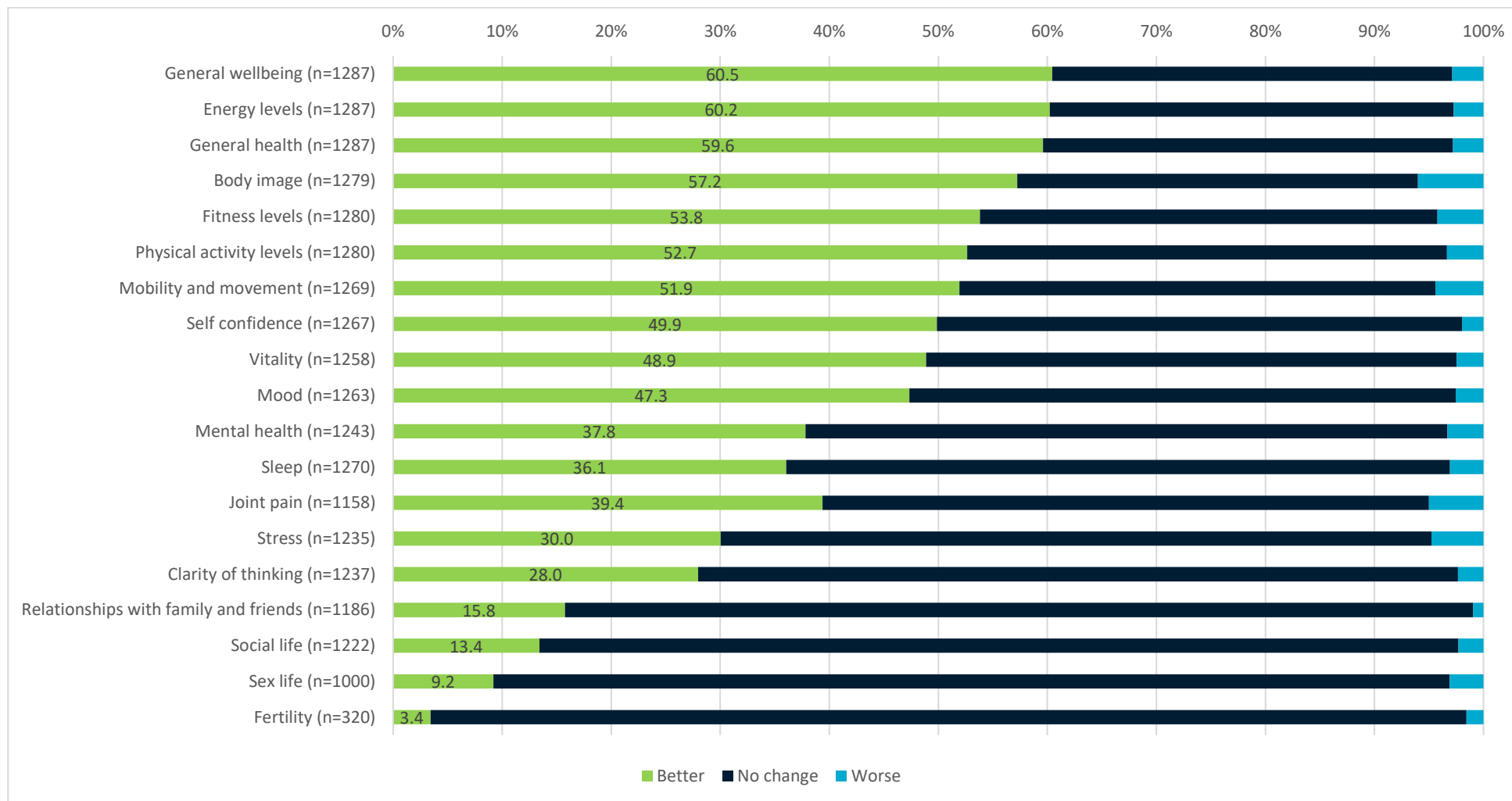


Figure 3. Proportion of members experiencing changes in health and wellbeing since following the CSIRO Total Wellbeing Diet* (better, no change or worse)

**cell counts differ as not applicable responses removed*

Table 9. Proportion (%) of members reporting health and wellbeing was better since following the CSIRO Total Wellbeing Diet by weight loss categories

	N	I haven't lost weight	Less than 5 kg	5kg or more	5–10 kg	11–15 kg	More than 15kg	Total
General wellbeing	1287	18.5	39.6	74.4	68.3	78.2	87.2	60.5
Energy levels	1287	9.4	40.0	74.4	66.5	79.7	90.4	60.2
General health	1287	18.5	38.8	73.5	66.3	76.5	90.4	59.6
Body image	1279	7.4	35.1	72.4	66.1	77.9	84.2	57.2
Fitness levels	1280	13.0	32.4	68.0	58.9	75.4	85.2	53.8
Physical activity levels	1280	16.7	33.8	65.1	57.9	69.4	81.0	52.7
Mobility and movement	1269	15.4	31.8	65.1	54.6	72.2	85.7	51.9
Self confidence	1267	11.5	31.4	62.2	55.0	63.6	81.6	49.9
Vitality	1258	11.5	31.4	60.7	52.0	65.6	79.5	48.9
Mood	1263	11.8	32.8	57.5	54.5	54.9	69.5	47.3
Joint pain	1158	5.9	26.1	48.8	40.7	52.2	67.4	39.4
Mental health	1243	11.1	27.2	45.3	43.0	47.4	49.7	37.8
Sleep	1270	9.4	27.5	42.4	39.9	42.9	49.0	36.1
Stress	1235	7.7	21.0	36.4	31.7	39.2	46.6	30.0
Clarity of thinking	1237	7.5	22.1	32.6	31.4	31.7	36.9	28.0
Relationships with family /friends	1186	3.8	9.8	19.7	18.5	15.6	28.5	15.8
Social life	1222	7.7	7.2	17.1	14.4	16.5	25.7	13.4
Sex life	1000	4.3	3.9	12.5	11.0	9.3	20.3	9.2
Fertility	320	0.0	2.6	4.4	4.3	2.3	9.1	3.4

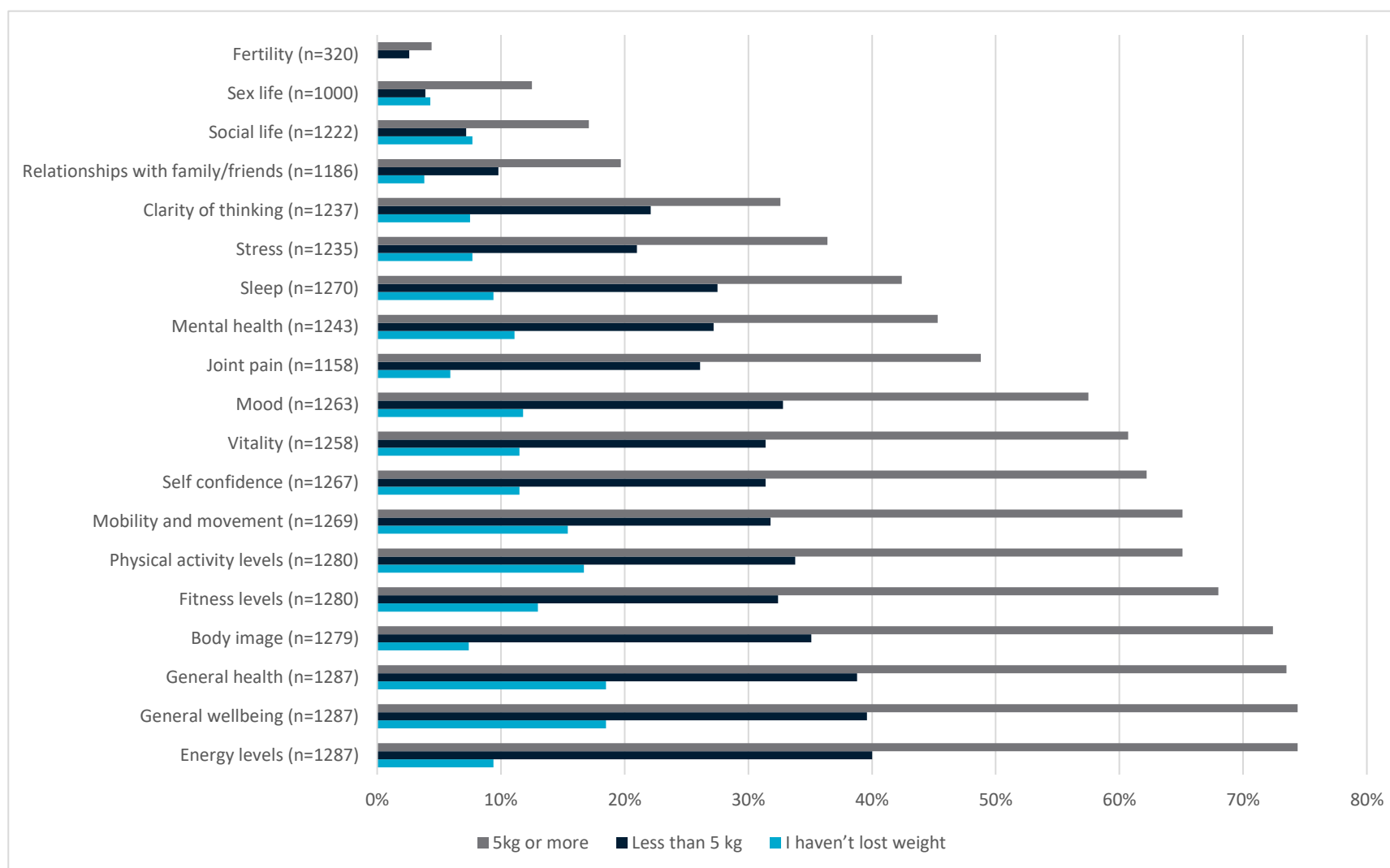


Figure 4: Percentage of members experiencing an improvement in health and wellbeing since following the CSIRO Total Wellbeing Diet by weight loss categories

Table 10. Proportion (%) of members reporting health and wellbeing was better since following the CSIRO Total Wellbeing Diet by length of time following the diet program

	N	Less than 12 weeks	3–6 months	6–12 months	More than 12 months	Total
General wellbeing	1287	43.6	61.9	67.9	68.4	60.5
Energy levels	1287	41.9	63.5	64.4	69.5	60.2
General health	1287	41.0	62.9	66.8	67.5	59.6
Body image	1279	43.6	59.8	62.9	62.7	57.2
Fitness levels	1280	31.7	56.5	65.1	62.8	53.8
Physical activity levels	1280	34.1	51.2	61.4	63.9	52.7
Mobility and movement	1269	34.1	51.9	61.5	60.7	51.9
Self confidence	1267	37.1	50.0	53.8	57.9	49.9
Vitality	1258	31.0	49.7	52.9	60.1	48.9
Mood	1263	35.5	49.7	46.9	54.8	47.3
Joint pain	1158	27.6	37.7	46.8	46.4	39.4
Mental health	1243	28.0	40.0	41.6	41.6	37.8
Sleep	1270	28.2	35.6	38.4	41.5	36.1
Stress	1235	21.4	29.3	32.2	36.7	30.0
Clarity of thinking	1237	21.3	29.1	29.2	31.6	28.0
Relationships with family /friends	1186	10.4	14.9	18.3	19.4	15.8
Social life	1222	6.8	11.8	13.1	20.4	13.4
Sex life	1000	5.1	10.4	8.1	12.2	9.2
Fertility	320	2.2	2.2	6.5	4.5	3.4

3.6 Changes in chronic health conditions while on the CSIRO Total Wellbeing Diet

The survey asked members which health conditions they were managing prior to starting TWD. Overall, 83% of members reported managing at least one health condition. On average, members were managing two health conditions before starting the program. Those with a higher weight status reported to be managing more conditions, with those classified as clinically obese reporting to be managing 2-3 (average 2.7) health conditions compared to 1-2 (average 1.8) among those classified as overweight. Almost 30% of members classified as clinically obese were managing 4 or more health conditions, compared to 11% of those who were classified as overweight (Table 11).

Table 11: Proportion (%) of members managing health conditions before starting the CSIRO Total Wellbeing Diet by BMI status

	Normal weight	Over-weight	Obese	Pre-clinically obese	Clinically obese	Total
No health conditions	23.9%	19.7%	12.8%	51.6%	5.8%	17.0%
1 health condition	32.4%	30.4%	21.5%	35.5%	19.0%	26.6%
2 health conditions	20.5%	24.0%	22.7%	11.8%	24.6%	22.9%
3 health conditions	15.9%	14.8%	18.6%	1.1%	21.7%	16.7%
4+ health conditions	7.4%	11.2%	24.5%	0.0%	29.0%	16.9%
Mean no. health conditions	1.5	1.8	2.4	0.6	2.7	2.0

Normal weight: BMI 18.5-<25; Overweight: BMI 25-<30; Obese: BMI ≥30.

Preclinical obesity: Self-reported BMI ≥30kg/m² ; Clinical obesity: Self-reported BMI ≥30kg/m² and selected yes to any of the questions relating to weight and life impact and/or managing any of the following chronic health conditions - Type 2 diabetes, High blood pressure, High cholesterol, Sleep apnoea, Chronic pain, Asthma.

The most common conditions members were managing included high blood pressure, high cholesterol and arthritis. Menopause and sleep apnoea were also among the most common conditions members were managing.

The presence of a chronic health condition was more common among obese members, particularly those who were clinically obese. For example, 30% of overweight members reported managing high blood pressure, where as 44% of obese and 52% of clinically obese were managing high blood pressure; 24% of overweight members reported managing arthritis compared to 32% of obese members; 12% of overweight compared to 23% of obese members were managing sleep apnoea; and 10% of overweight members compared to 19% of obese members were managing chronic pain (Table 12).

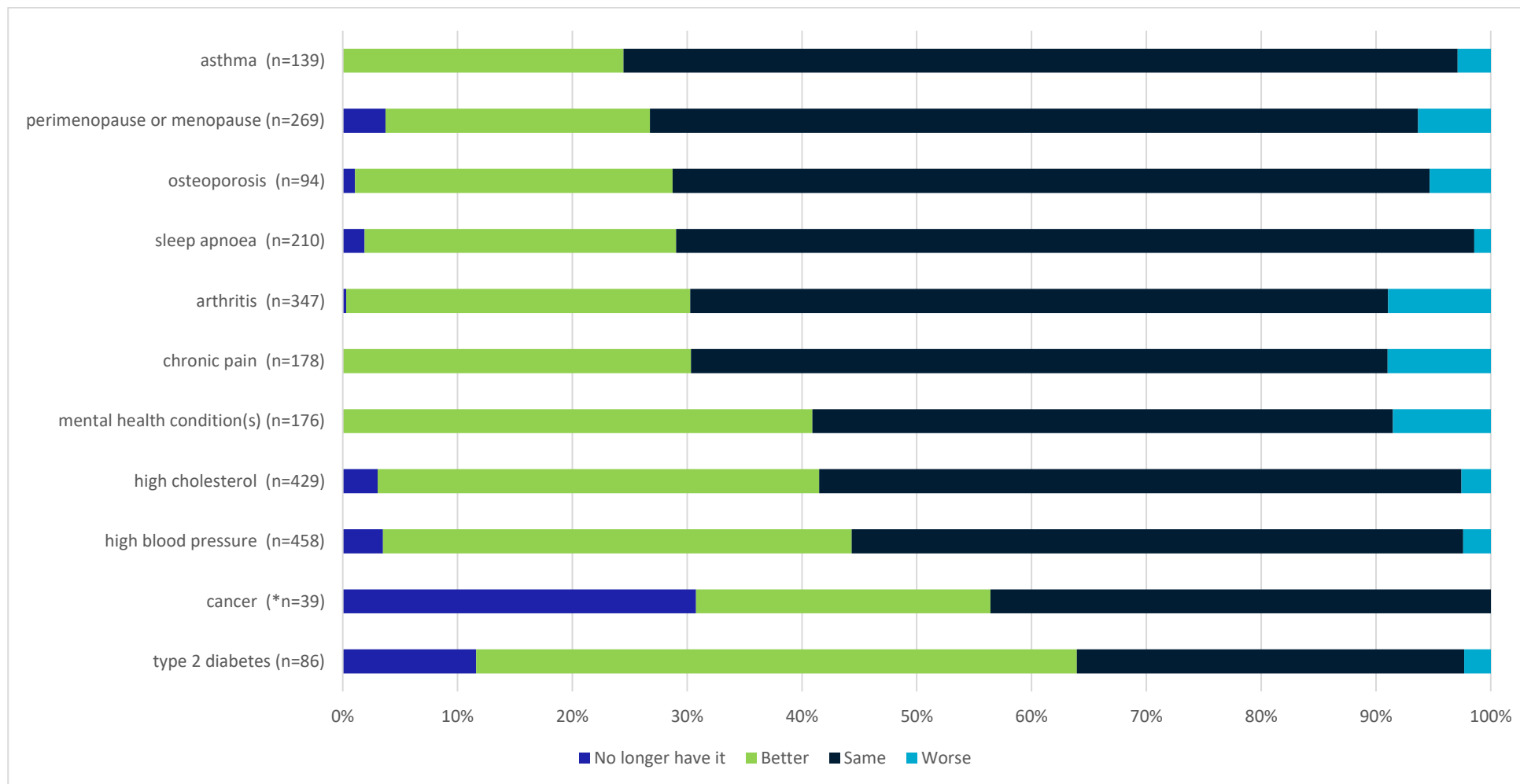
Table 12. Proportion (%) of members with chronic health conditions, by weight status

	Normal weight	Over-weight	Obese	Pre-clinically obese	Clinically obese	Total
High blood pressure	18.2	30.4	44.3	0.0	52.3	35.3
High cholesterol	28.4	31.4	35.5	0.0	41.9	32.9
Arthritis	14.2	24.4	32.2	22.6	33.9	26.6
Perimenopause or menopause	30.7	18.1	19.7	18.3	20.0	20.6
Sleep apnoea	4.5	11.7	23.3	0.0	27.5	16.1
Chronic pain	8.0	9.9	18.6	0.0	21.9	13.7
Mental health condition(s)	10.2	11.3	16.4	11.8	17.2	13.5
Asthma	5.7	8.4	13.8	0.0	16.3	10.7
Osteoporosis	11.9	6.6	6.4	0.0	7.6	7.2
Type 2 diabetes	1.7	6.0	8.5	0.0	10.1	6.6
Cancer	3.4	1.8	3.9	0.0	4.7	3.0
Infertility	0.0	0.4	0.2	0.0	0.2	0.2
Other	15.9	14.8	15.3	9.7	16.3	15.2

Normal weight: BMI 18.5-<25; Overweight: BMI 25-<30; Obese: BMI ≥30.

Preclinical obesity: Self-reported BMI ≥30kg/m² ; Clinical obesity: Self-reported BMI ≥30kg/m² and selected yes to any of the questions relating to weight and life impact and/or managing any of the following chronic health conditions - Type 2 diabetes, High blood pressure, High cholesterol, Sleep apnoea, Chronic pain, Asthma.

Members who reported managing specific conditions, were asked if they felt any improvements in their chronic health conditions since following TWD. Two in three members (64%) with Type 2 diabetes reported their condition had improved since following TWD, of which 52% said their condition had improved and 12% reported they no longer had diabetes. About 40% of members managing mental health conditions, high blood pressure and high cholesterol reported their condition had improved since following TWD; and 30% managing chronic pain, arthritis, sleep apnoea and osteoporosis reported their condition had improved (Figure 5).



*low cell count (<50). Infertility removed a n=3

Figure 5. Changes in chronic health conditions since following the CSIRO Total Wellbeing Diet

3.7 Changes in medication requirements as a result of the CSIRO Total Wellbeing Diet

Members who reported managing specific conditions were also asked whether their need for prescription medication changed because of following the TWD program, and if so, to estimate their monthly savings. Approximately one in three members (32%) reported a decrease in their medication requirements. Among these, 21% experienced a reduced dosage, 9% no longer required medication, and 2% reported both outcomes (Table 13). On average, these members estimated monthly savings of around \$40 (\$41.08).

Table 13. Changes in medication regime following the CSIRO Total Wellbeing Diet for members managing a chronic health condition with medication

	N	%
No change to medication regime	401	68.4
Change to medication regime	185	31.5
Reduction in medication	122	20.8
Cessation of medication requirement	51	8.7
Both reduction and cessation of medication	12	2.0
Total	586	100

When examining members managing each chronic health condition, the greatest change to medication was for type 2 diabetes. While 76% of members taking medication for diabetes reported no change in medication, 24% reported a decreased need for medication (14.1% reported a reduced dose and 9.9% ceased medication), however the total number of members with diabetes was lower than other conditions.

The more common conditions were high blood pressure, high cholesterol and arthritis. While most members (84.5%) using medication for high blood pressure reported no change in medication, 10.5% reported reduced medication and 4.9% reported to have ceased medication. For high cholesterol, the proportion of members taking medication was lower, but 4.5% reduced their dose and 5.2% ceased medication. For arthritis, 81.2% reported no change in medication, 15.2% reduced their dose and 3.6% ceased medication.

A reduction in medication was relatively high for chronic pain (25.2% reported a reduced dose), and asthma (12.8% reported a reduced dose and 1.5% ceased medication), although these conditions were less common overall among members. It was most common for members to report an estimated cost savings on medication for these chronic health conditions between \$0 and \$50 per month (Table 14).

Table 14. Changes in medication regime and spending following the CSIRO Total Wellbeing Diet by chronic health condition managed

	Number managing condition	Change in medication*				For yes, how much saved				Mean saving (\$)
		NA – did not require meds	No change	Yes, reduced dose	Yes, stopped meds	\$0–\$50	\$51–\$100	\$101–\$200	**Over \$500	
		n	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Type 2 diabetes	86	15	54 (76.1)	10 (14.1)	7 (9.9)	14 (82.4)	1 (5.9)	2 (11.8)		42.65
High blood pressure	458	31	361 (84.5)	45 (10.5)	21 (4.9)	64 (97)	2 (3)			26.52
High cholesterol	429	119	280 (90.3)	14 (4.5)	16 (5.2)	26 (86.7)	3 (10)	1 (3.3)		34.17
Sleep apnoea	210	155	47 (85.5)	5 (9.1)	3 (5.5)	7 (87.5)			1 (12.5)	90.63
Mental health condition	176	51	114 (91.2)	5 (4)	6 (4.8)	10 (90.9)	1 (9.1)			29.55
Arthritis	347	182	134 (81.2)	25 (15.2)	6 (3.6)	30 (96.8)	1 (3.2)			26.61
Chronic pain	178	47	98 (74.8)	33 (25.2)	(0)	31 (93.9)	2 (6.1)			28.03
Perimenopause or menopause	269	167	97 (95.1)	2 (2)	3 (2.9)	3 (60)	2 (40)			45.00
Asthma	139	6	114 (85.7)	17 (12.8)	2 (1.5)	14 (73.7)	5 (26.3)			38.16
Cancer	39	15	19 (79.2)	1 (4.2)	4 (16.7)	4 (80)		1 (20)		50.00
Osteoporosis	94	28	62 (93.9)	4 (6.1)	0 (0)	4 (100)		\$101–\$200		25.00

*Percentages calculated as a proportion of those taking medication

**no cost savings between \$200 and \$500 selected

3.8 Other changes in spending as a result of the CSIRO Total Wellbeing Diet

The survey also asked members about changes in general spending since following TWD. It was most common for members to report a change in their spending on groceries (54% reported a change), fruit and vegetables (52%), convenience snacks (49%) and takeaway meals (43%). The changes reported were most commonly an increase in spending on groceries and fruit and vegetables, with 61% reporting to spend more or much more on their groceries and 93% spending more or much more on fruit and vegetables.

Conversely, 94% reported spending less or much less on convenience snacks and 93% reported spending less or much less on takeaway meals. While a change in spending was less common for other things, the direction was towards spending less on alcohol, dining out and takeaway beverages; and spending more on gym memberships and clothes.

An interesting observation was a shift in expenditure away from less healthy choices – convenience snacks, takeaway, dining out and alcohol (-\$315/month) and towards more healthy choices such as groceries and physical exercise (+\$325/month).

More specifically, the estimated increase in groceries was around \$200 more per month (\$50 per week) which an increase on fruit and vegetables of approximately \$120 more per month (or \$30 per week). A reduction in spending on convenience snacking was estimated at around \$40 per month, reduction in takeaway meals around \$75 per month, reduction in dining out around \$100 per month, and a reduction in alcohol around \$60 per month (Table 15).

Table 15. Changes in lifestyle spending following the CSIRO Total Wellbeing Diet – direction and rough cost estimate savings per month

	Change in spending N (%)	Direction of spending N (%)			Estimated change in monthly expenses (\$)	
		Less	Neutral	More	Less	More
Groceries*	708 (54.3)	95 (13.4)	178 (25.1)	435 (61.5)	158.59	205.34
Fruit and vegetables	679 (52.1)	5 (0.7)	41 (6)	633 (93.2)	55.00	117.97
Convenience snacks**	645 (49.5)	608 (94.3)	25 (3.9)	12 (1.9)	42.45	89.58
Takeaway meals	564 (43.3)	527 (93.3)	30 (5.3)	8 (1.4)	74.71	90.63
Alcohol	414 (31.8)	373 (90.1)	31 (7.5)	10 (2.4)	58.91	150.00
Dining out	328 (25.2)	262 (79.8)	57 (17.4)	9 (2.7)	104.48	125.00
Takeaway beverages†	272 (20.9)	216 (79.4)	48 (17.6)	8 (3.0)	34.72	46.88
Clothes	258 (19.8)	33 (12.8)	95 (36.8)	130 (50.4)	99.24	145.58
Physical activity‡	170 (13)	13 (7.7)	37 (21.8)	120 (68.6)	92.31	121.25
Medical appointments	56 (4.3)	20 (35.7)	20 (35.7)	16 (28.6)	116.25	195.31

*because of a change in meal planning

**treats like chips, confectionery, icecream, cakes, cookies

† store bought coffees, smoothies, soft drinks

‡Gym or sports membership or equipment

4 Summary of key findings

A survey to assess the self-reported health and wellbeing outcomes of the CSIRO Total Wellbeing Diet (TWD) was conducted in July 2025 and gathered responses from 1303 members. Most respondents were women over 50 years old, and the majority were classified as overweight or obese at the start of the program. The survey explored a wide range of outcomes, including physical and mental health, weight loss success, management of chronic health conditions, changes in medication use and lifestyle spending.

Findings indicate that participation in TWD was associated with significant health improvements. Two-thirds of members lost at least 5 kg, and one in four lost over 10 kg. Greater weight loss was linked with higher life satisfaction, better physical and emotional wellbeing, and more positive lifestyle changes. Improvements were reported across areas such as increased energy, improved mood, mobility and movement (including fitness and physical activity levels), body image, sleep, and joint pain.

The survey also found 83% of TWD members were managing a chronic health condition, and that individuals with higher weight status were more likely to be managing multiple health conditions. The most common conditions people were managing included high blood pressure, high cholesterol and arthritis, although menopause and sleep apnoea were also common conditions.

After following the TWD program members reported improvements in several chronic health conditions. Notably, 52% of those managing type 2 diabetes reported that their condition had improved, and 12% no longer had it. Around 40% of members managing mental health conditions, high blood pressure, or high cholesterol also reported improvements in these following the program. One in three members managing a chronic health condition reported a reduced requirement for medication after following the program. Of these, 21% reduced their medication dosage, 9% no longer required medication, and 2% experienced both outcomes. These changes were most common among members managing type 2 diabetes, high blood pressure, arthritis, and chronic pain. The estimated savings of prescription medications was around \$40 per month.

Analysis of spending behaviours revealed a shift in expenditure away from less healthy choices – convenience snacks, takeaway, dining out and alcohol (-\$315/month) and towards more healthy choices such as groceries and physical exercise (+\$325/month).

Overall, members have reported a wide range of health, psychological, and wellbeing benefits associated with weight loss and participation in the CSIRO Total Wellbeing Diet.

Summary statistics

Demographics & program engagement

- Majority of survey participants were women (85%) aged 51–70 years.
- 66% followed the program most or all of the time, and about 75% had followed the diet program for more than 3 months.

Weight loss outcomes from the CSIRO Total Wellbeing Diet

- 62% of members lost more than 5 kg; 27% lost over 10 kg.
- 26% achieved or came close to their weight loss goals, with 82% of these maintaining their weight loss.
- Greater weight loss, and length of time on the diet program, was linked with higher life satisfaction and improvements in health.

Self-reported improvements in health & wellbeing

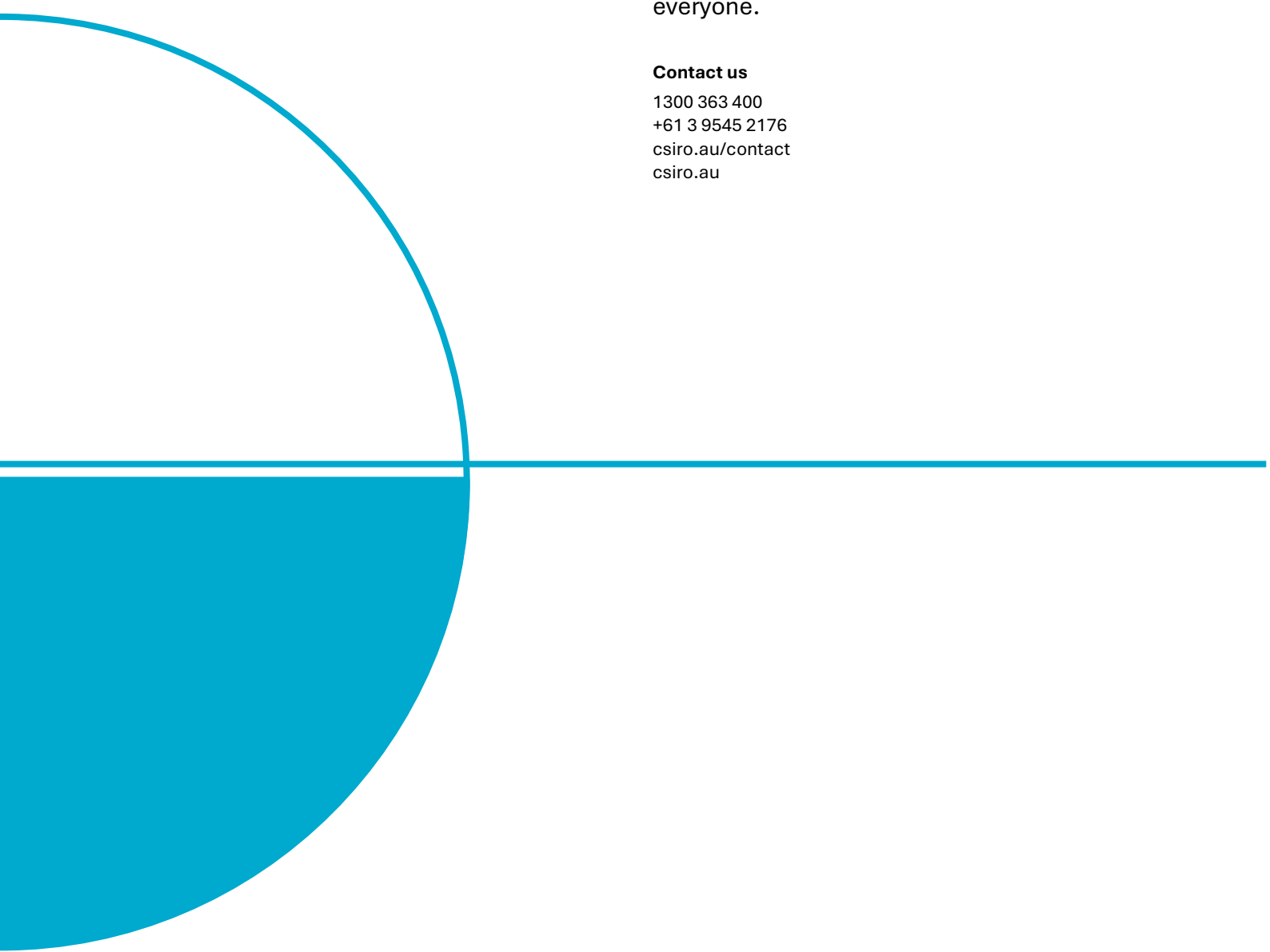
- On average, members rated their life satisfaction as 7.5 out of 10. Ratings were lower among those with higher weight status and higher among those who lost more weight.
- Most members reported improved satisfaction with their life, health, body weight, and diet since starting the program, with the likelihood of improvement increasing with weight loss and length of time following the diet program.
- Around 60% reported improvements in general health and wellbeing, energy levels, and body image, and approximately 50% reported improvements in physical activity and movement, self-confidence, vitality, and mood.

Management of chronic health conditions

- 83% of members were managing at least one health condition, with clinically obese members more likely to be managing 2-3 conditions.
- The most common conditions included high blood pressure (35%), high cholesterol (33%), and arthritis (27%).
- Two in three members (64%) managing Type 2 diabetes saw an improvement in their condition after following TWD, with 52% reporting their condition had improved and 12% reporting they no longer had it. Around 40% of members also reported improvements in mental health, blood pressure and cholesterol; and one in three reported improvements in chronic pain and arthritis.
- 32% of members managing a chronic health condition reported a reduced requirement for medication following TWD program.

Changes in spending

- There was a reported shift in expenditure away from convenience snacks, takeaway, dining out and alcohol (-\$315/month) towards more healthy choices such as groceries and physical exercise (+\$325/month).
- 60-93% of members reported spending more on groceries, fruit and vegetables and physical activity; and 83-93% of members reported spending less on convenience snacks, takeaway meals, dining out, and alcohol.



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