

# Nutrition and Mental Health

*Is there a relationship?*

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What is known about nutrition and mental health

Recognise the importance of diet and dietary behaviours in mental health

Understand the importance of good nutrition, improved mood and wellbeing

Increase awareness on addictive eating behaviours and recent developments in new interventions being trialled

Increase familiarity with the Medicare Eating disorder health plan

# Learning goals



# Outline

1. Why talk nutrition?
2. Food to think better & feel better
3. Tools to help eat better
4. Take home messages





# Outline

1. **Why talk nutrition?**
2. Food to think better & feel better
3. Tools to help eat better
4. Take home messages





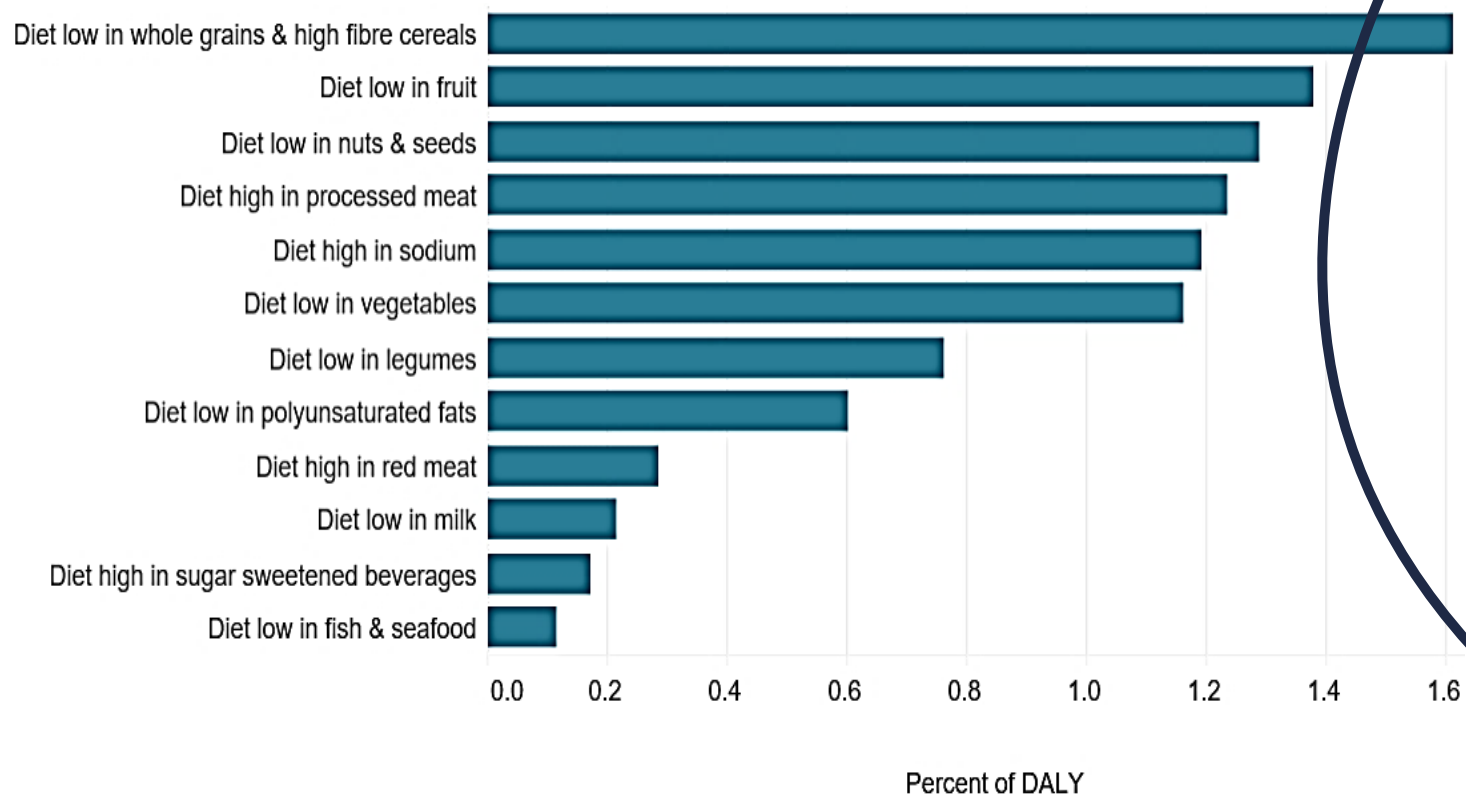
Poor diet  
impacts  
Australia's  
burden of  
disease

## PERCENTAGE TOTAL BURDEN OF DISEASE (DALYs) ATTRIBUTED TO RISK FACTORS 2018



<https://www.aihw.gov.au/reports/burden-of-disease/burden-of-disease-study-2018-key-findings/contents/about>

# Which food groups add most burden?

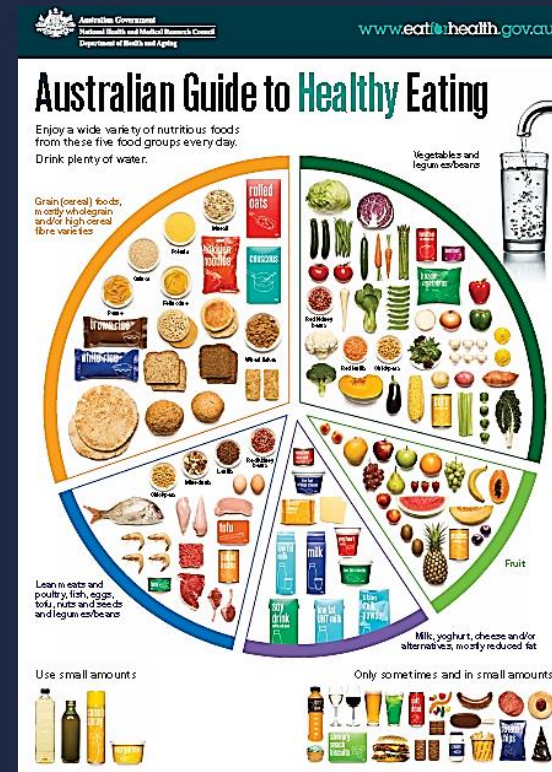
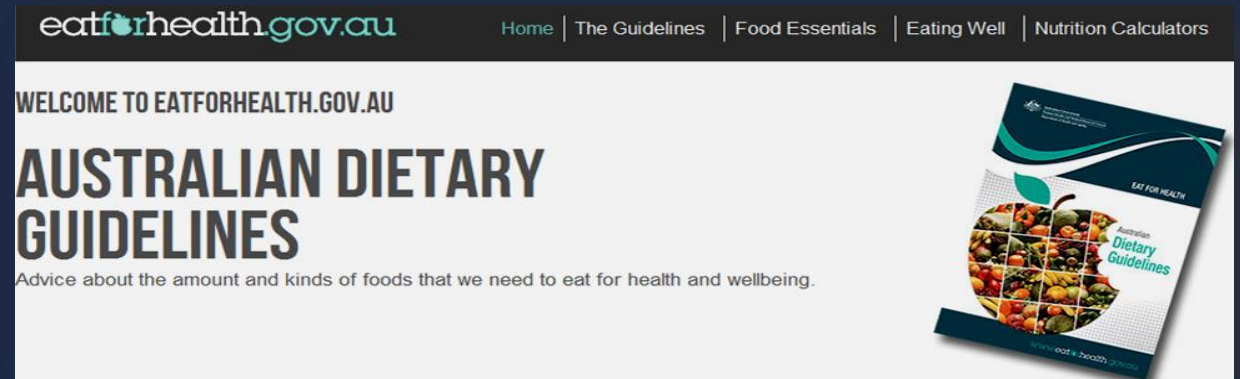


<https://www.aihw.gov.au/reports/burden-of-disease/interactive-data-risk-factor-burden/contents/dietary-risk-factors>





# Australian Dietary Guidelines *and* Australian Guide to Healthy Eating



## GUIDELINE 1

**TO ACHIEVE AND MAINTAIN A HEALTHY WEIGHT, BE PHYSICALLY ACTIVE AND CHOOSE AMOUNTS OF NUTRITIOUS FOOD AND DRINKS TO MEET YOUR ENERGY NEEDS**

- Children and adolescents should eat sufficient nutritious foods to grow and develop normally. They should be physically active every day and their growth should be checked regularly.
- Older people should eat nutritious foods and keep physically active to help maintain muscle strength and a healthy weight.

## GUIDELINE 2

**ENJOY A WIDE VARIETY OF NUTRITIOUS FOODS FROM THESE FIVE GROUPS EVERY DAY:**

- Plenty of vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of 2 years)

And drink plenty of water.

## GUIDELINE 3

**LIMIT INTAKE OF FOODS CONTAINING SATURATED FAT, ADDED SALT, ADDED SUGARS AND ALCOHOL**

- Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.
  - Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocados.
  - Low fat diets are not suitable for children under the age of 2 years.
- Limit intake of foods and drinks containing added salt.
  - Read labels to choose lower sodium options among similar foods.
  - Do not add salt to foods in cooking or at the table.
- Limit intake of foods and drinks containing added sugars such as confectionery, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.
- If you choose to drink alcohol, limit intake. For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

## GUIDELINE 4

**ENCOURAGE, SUPPORT AND PROMOTE BREASTFEEDING**

## GUIDELINE 5

**CARE FOR YOUR FOOD; PREPARE AND STORE IT SAFELY**

# Disease burden would drop by...

- 51% for Heart disease
- 26.3% for Bowel Cancer
- 26.0% for Type 2 diabetes
- 25.8% for Stroke
- 22.8% for Oesophageal cancer
- 7.4% for Hypertensive heart disease

<https://www.aihw.gov.au/reports/burden-of-disease/abds-2018-interactive-data-risk-factors/contents/dietary-risk-factors#change>



From shutterstock.com

Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015 report. Canberra: AIHW; 2019.



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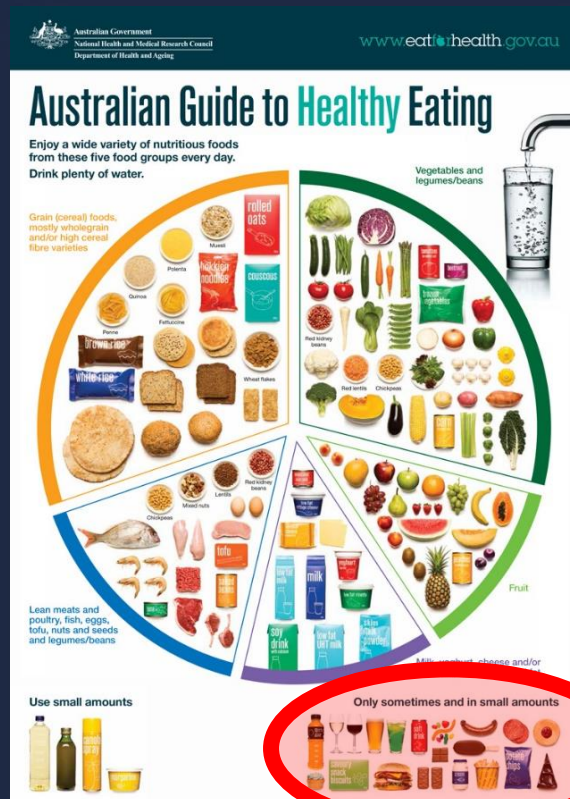


From shutterstock.com

Australian Institute of Health and Welfare. Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015 report. Canberra: AIHW; 2019.

'No we don't!'

Australian Guide to Healthy Eating says:



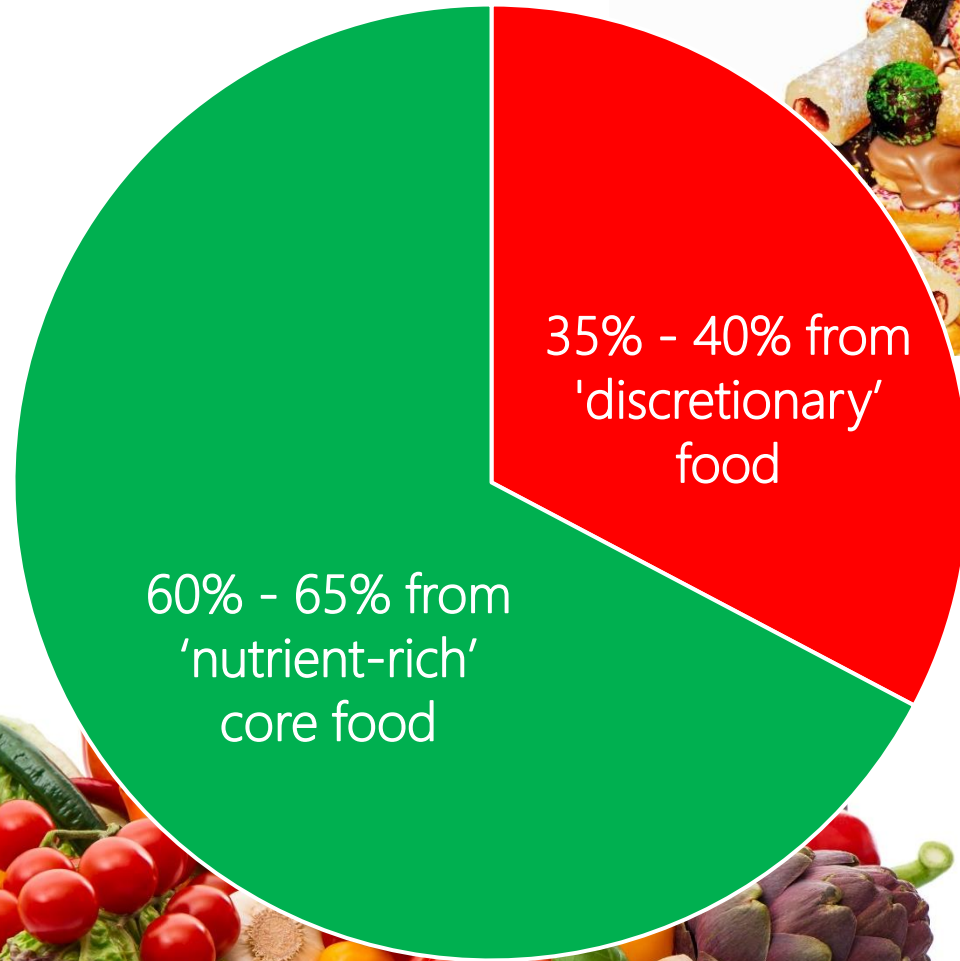
- Limit 'discretionary' foods to 10-15% total daily kilojoules'
- '... only sometimes and in small amounts'

Eat for Health

<https://www.eatforhealth.gov.au/>



## % Total Daily Energy Intake



Over 1/3 of daily kilojoules come from discretionary energy-dense nutrient-poor 'junk' foods



## The main culprits contributing to high discretionary intakes

1. Alcohol	4.8%	5. Sweet/savoury biscuits	2.5%
2. Cakes, muffins, scones, desserts	3.4%	6. Sugar sweetened drinks	1.9%
3. Lollies, muesli/nut/fruit bars	2.8%	7. Potato fries	1.7%
4. Pastries	2.6%	8. Snack foods	1.5%

**Only sometimes and in small amounts**






*Apples  
aren't on that list!*





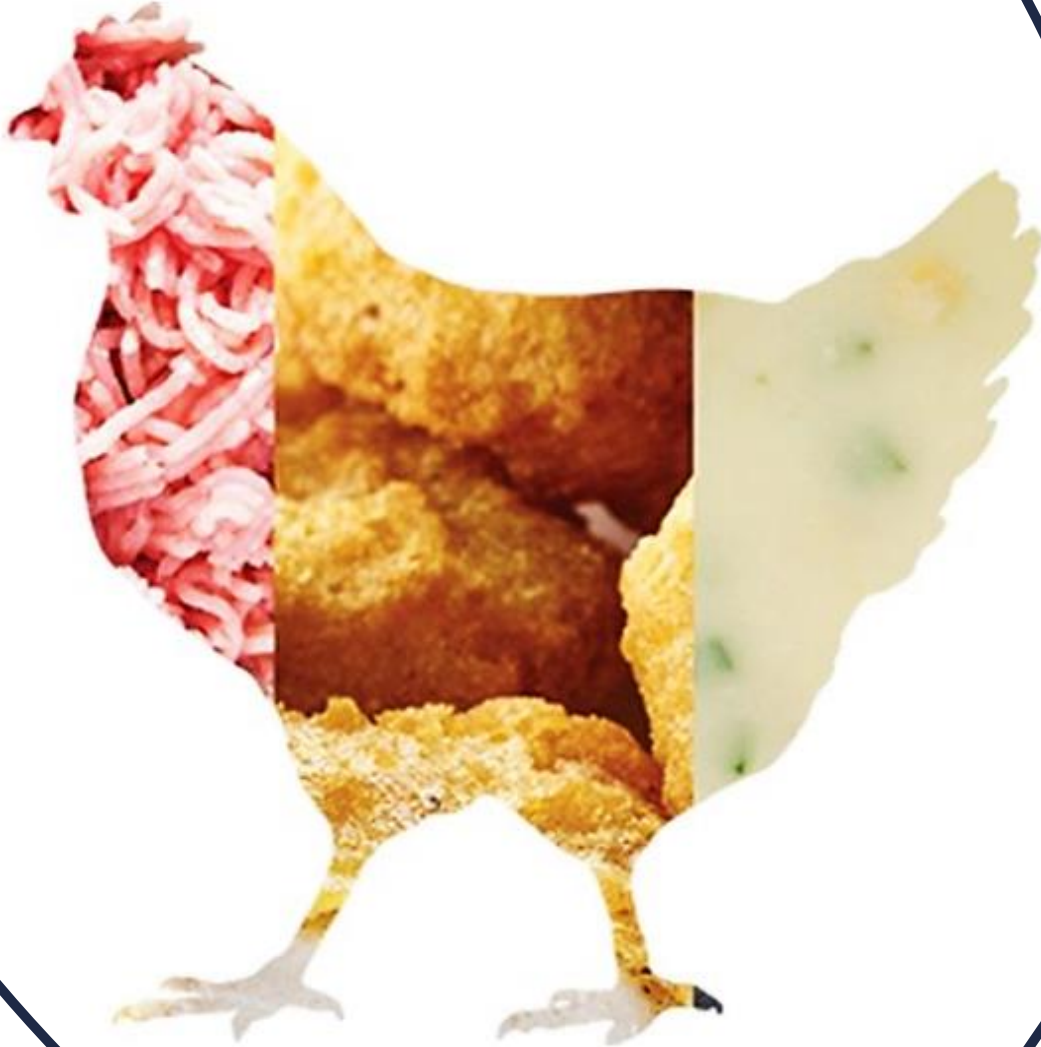
# ULTRAPROCESSED *Foods Are*





*What do all those  
foods have in  
common?*





# Who you calling chicken?

## 1. Fresh chicken meat

Water used in washing/chilling. Water absorbed by carcass; < 5% or must be declared

## 2. Chicken mince

Minced muscle-meat trimmings. 100% meat, no other ingredients. Illegal to add preservatives

## 3. Chicken nuggets

Frozen nuggets from machine-formed chicken [breast/white meat  $\pm$  skin  $\pm$  marinade for flavour + dusted with flour + battered/ crumbed + oil + salt  $\pm$  other ingredients (*maize starch, colours, soya protein isolate, thickener, hydrolysed vegetable protein, vegetable gums, acidity regulators, flavours, mineral salts, sugar*)]

<https://www.choice.com.au/food-and-drink/nutrition/nutrition-advice/articles/ultra-processed-food>



# Addictive Foods

## Adults

- Foods high in fat /sugar. Higher % energy from energy-dense, nutrient-poor foods
- Confectionery (candy/sweets/lollies/chocolate)
- Baked sweet foods (cookies, biscuits, cake, muffins, donuts)
- Savoury snacks (potato chips/crisps, crackers, popcorn, pretzels)
- Take away/out, Fast food (burgers, chips/fries, pizza)

## Children


- Chocolate (70%), soft (fizzy) drinks, ice cream, Fries, white bread, rice, candy, chips, pasta (43%).

*(Pursey et al Nutrients 2022, 14(1), 164)*



# What's gone wrong?



A close-up profile of a woman with dark hair and red lipstick, eating a large burger. She is holding the burger with both hands. A large red thought bubble is positioned to the left of her head, containing the text "I think I usually eat really healthy!". Three small red circles lead from the bubble to her head. The background is plain white.

"I think I usually  
eat really healthy!"

... part of the problem is  
we don't know what  
we *usually* eat and drink



Too much choice means  
too easy to choose wrong



... who is telling us what  
to eat ? ... And drink?



# Sell more = Eat more!

In 2006, American Institute of Medicine estimated >\$10 billion per year spent on food /beverage marketing to children and youth

In 2009, in Australia \$12.6 billion spent on advertising; \$402 million on food & \$149 million on non-alcoholic beverages

[Marketing obesity? Junk food, advertising and kids – Parliament of Australia \(aph.gov.au\)](http://aph.gov.au)





## Health Check: six tips for losing weight without fad diets

February 15, 2016 2:15pm AEDT

Don't limit yourself to grapefruit – increasing the amount and variety of fruit and vegetables can help you lose weight. Dan Zen/Flickr, CC BY

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143

1k

Monday – start diet. Tuesday – break diet! Wednesday – plan to start again next Monday.

If this is you, it's probably time to get off the diet roller coaster and make some bigger changes to the way you eat, drink and think about food.

Here are six tips to help you get started.

### 1. Improve your diet quality score

When trying to lose weight, it might be tempting to quit carbs, dairy or another food group altogether.

#### Author



**Clare Collins**  
Professor in Nutrition and Dietetics, University of Newcastle

#### Disclosure statement

Clare Collins is affiliated with the Priority Research Centre in Physical Activity and Nutrition, the University of Newcastle, NSW. She created the online Healthy Eating Quiz and Australian Eating Survey. She has received funding from a range of research grants including NHMRC, ARC, Hunter Medical Research Institute, Meat and Livestock Australia. She has consulted to SHINE Australia and Novo Nordisk. Clare Collins is a spokesperson for the Dietitians Association of Australia on specific nutrition issues.





# Food cue temptation!

## Exposure therapy

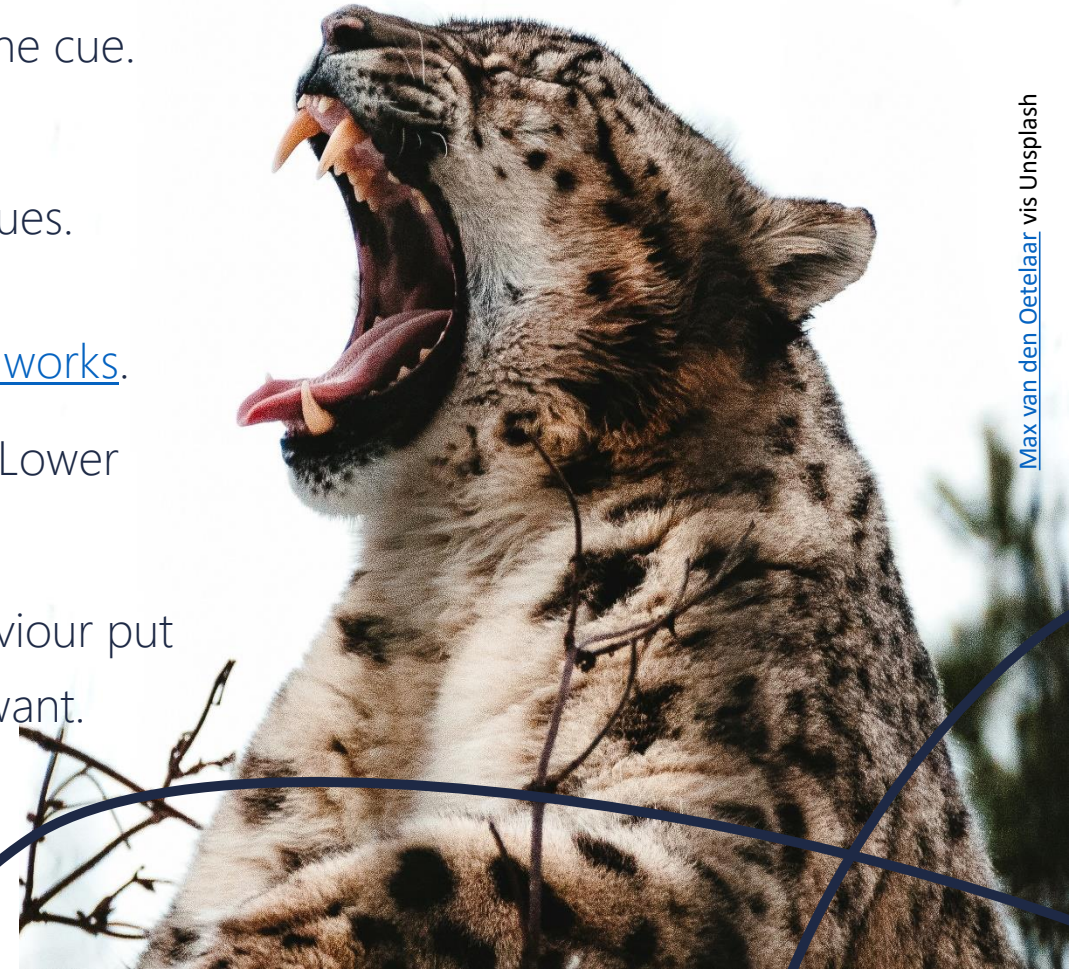
- Use psychologist help to expose yourself to **sight/smell** of favourite foods in **locations that trigger** overeating, but only **taste without eating**
- With persistence & time, cravings reduce, even when cued by ads or others eating
- Draw on brain's own self-management areas
- Takes conscious practice to train your brain to resist temptation on autopilot

<https://theconversation.com/health-check-six-tips-for-losing-weight-without-fad-diets-52496>

# *Feel pulled by food cues? RROARRR back!*

- **R**emind yourself that YOU are boss of you, not a food cue.
- **R**esist tempting food or drink *initially* by turning your back on the cue.  
(Gives you time to think about next steps.)
- Use a pre- **O**rganised **A**lternative behaviour against the food cues.  
Grab a drink of water, walk around the block, check your phone messages, read, take a walk in the opposite direction. [Diversion works.](#)
- **R**ecall your big-picture goal. Feel better? Reduce medications? Lower blood pressure? Improve diabetes control? Manage weight?
- **R**eward. Each time you complete an *organised alternative* behaviour put \$1 in a jar. When it builds up, spend it on something you really want.  
[Financial incentives can help](#)

<https://theconversation.com/health-check-six-tips-for-losing-weight-without-fad-diets-52496>





# Outline

1. Why talk nutrition?
- 2. Food to think better & feel better**
3. Tools to help eat better
4. Take home messages





# What's fuelling YOUR brain?



*or*



# Nutrition and mental health observational studies



Important associations between healthy eating and better mood and mental well-being

Higher fresh fruit & veg intakes strongly correlated with greater happiness, better mental health and higher well-being

## Meta-analysis

- 8 cohorts: lower depression risk with Mediterranean diet
- 9 cross-sectional: lower depression risk for 'healthy diet'
- 4 cohorts: no relationship between depression risk and Mediterranean diet

## Systematic review

- 20 cohorts + 21 cross-sectional: lower depression risk for Mediterranean diet
- 8 cohorts: lower depression risk for a Mediterranean diet



# Nutrition and mental health intervention studies

- 16 trials (15 non-clinical depression)
- Diet interventions significantly reduced depressive symptoms
- **No effect for anxiety**
- Greater benefits for symptoms of depression and anxiety in females<sup>1</sup>

- 46 reviews (67% severe mental illness, 20% depression/anxiety, 7% eating disorders, 7% substance use disorders)
- Most found positive effects of dietary intervention on weight-related and/or mental health outcomes<sup>2</sup>

- Accredited Practising Dietitian counselling (7x1hr face-to-face) in adults with major depression vs. social support control found total health sector costs were \$856 lower and societal costs \$2590 lower, even when cost of food included, plus improved QALYs<sup>3</sup>

## Conclusion

Dietary interventions are low cost, safe and effective interventions for improving nutrition-related health and wellbeing and some aspects of mental health



1. Firth, et al. The Effects of Dietary Improvement on Symptoms of Depression and Anxiety: A Meta-Analysis of RCTs. *J. Psychosom Med.* 2019;81(3):265-80.  
2. Burrows, et al. Effectiveness of dietary interventions in mental health treatment: A rapid review of reviews. *Nutr Diet.* 2022 Jul;79(3):279-290  
3. Chatterton, et al. Economic evaluation of a dietary intervention for adults with major depression (the "SMILES" trial). *BMC Public Health.* 2018; 18: 599.



# Many substances cross the blood-brain barrier

- Water
- Caffeine
- Gut Microbiome metabolites
- Ketones bodies from fat metabolism
- Other nutrients with +/- results
- Lead, mercury
- Alcohol





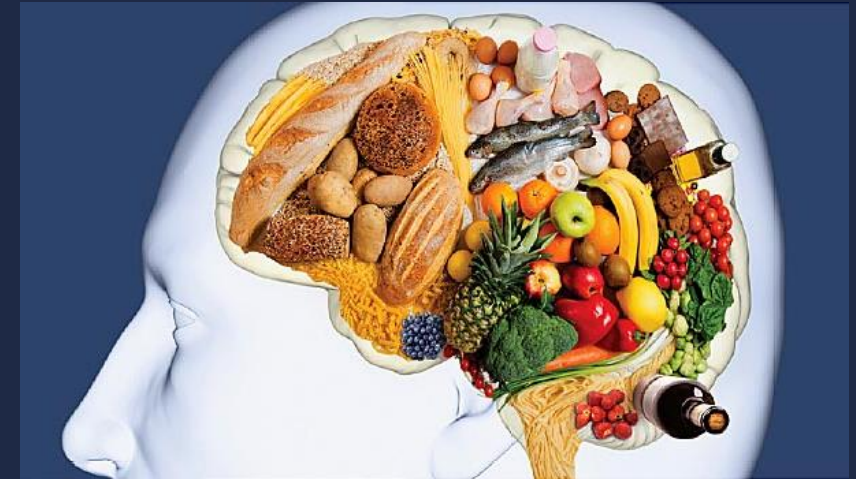
Photo by [Yustinus Tiliwanda](#) on [Unsplash](#)

*What you eat affects exam  
and physical performance*

... nutrition is a missing  
piece in wellbeing

# Nutrients needed by the Brain

- ✓ **Fat:** omega-3 fatty acids, to make neurotransmitters (endocannabinoids) (Fatty fish)
- ✓ **Carbohydrate:** glucose is brain's main energy source (bread, cereals, fruit, starch vegetables, milk/yoghurt)
- ✓ **Protein:** Total protein & specific amino acids (taurine, tryptophan, L-theanine,) to make neurotransmitters (meat, chicken, fish, legumes, dairy, eggs, nuts)
- ✓ **Vitamins:** B-group; thiamine (B1), pyridoxine (B6), folate (B9), cobalamin (B12) needed to myelinate nerves and make neurotransmitters (grains, leafy green vegetables, wholegrains, yeast spreads, seeds, eggs)
- ✓ **Minerals:** Iron, zinc, iodine need to make enzymes and neurotransmitters (meat, chicken, seafood, legumes, nuts)





# Optimising Brain Function with Water

- Dehydration to 2.7% body weight (1.6kg for a 60kg adult) significantly **decreases alertness, concentration, short-term memory, tracking performance** and **increases tiredness and headaches** in healthy young people



Photo by Sebastian Pena Lambarri on [Unsplash](#)

# Brain Food Snacks

- sandwiches
- omega-3 egg & toast
- can of salmon
- baked beans on toast
- can of spaghetti with cheese
- jaffles
- milo milk
- bowl of cereal



- rolled oats
- cheese on toast
- dried fruit
- Petite miams
- yoghurts
- custard
- ice cream & fruit
- tubs of fruit
- fresh fruit
- stewed fruit
- fruit smoothie
- milkshake
- milk coffee
- cuppa soup
- cuppa tea
- vegetable soup & toast



# Australian Household Expenditure Survey

In the 12 months to June 2016 households spent:

**\$269 (237 + 32) per week on all food and alcohol**

✓ **\$26.70 per week on all fruit & vegetables** **9.5%**

\$15.30 per week on fresh vegetables 4.6%

(\$1.15) per week on frozen vegetables 0.6%

\$11.40 per week on fresh fruit 4.1%

( \$0.75) per week on canned, frozen fruit 0.3%

× **\$121 per week on discretionary foods** **47.8%**

\$80.40 per week on meals out and fast foods 26.7%

\$32 per week on alcohol 13.6%

\$20 .10 per week on lollies, chocolate, savoury  
snacks, potato crisps 3.9%

\$10.0 per week on cakes, biscuits, puddings 3.6%

Australian  
Household  
Expenditure  
Survey



# Apples are cheap!

*What Australians spend on food*

- **\$285 on food per week**
- **\$135 groceries**
- **\$150 on *other* items**
- \$31 alcohol
- \$52 eating out
- \$22 takeaways
- \$12 UberEats / Deliveroo / Menulog
- \$13 Coffee and tea
- \$12 supplements
- \$11 health foods

*Data from :Suncorp Cost of Food report 2019 survey n=1500*



# What is better for money?

Home delivered – 1 week  
Medium fruit n veg box \$53



Home delivered – 1 meal  
3 pizzas for \$30



# Are unhealthy items REALLY worth it?

## CALORIES TO BURN

1 x Iced sprinkle doughnut = 316 Calories (1321 kJ)  
= 88 minutes walking  
= 48 minutes cycling

1 x Glazed doughnut = 195 Calories (815 kJ)  
= 54 minutes walking  
= 22 minutes jogging



Photo by Christina Hui on Unsplash



# Cooking Habits

- People who cook more have healthier eating patterns and spend less on 'junk' foods (Wolfson et al, 2014 PHN)
- Survey (437 adults) - Those who cooked at home more spent less per month on take aways (\$65/person) and less on food overall (\$273/person)
- Both frequent and infrequent home cooks spent same on food prepared at-home (\$193 vs \$196) (Tiwari et al, 2017, AJPM)

1. Wolfson & Bleich. Is cooking at home associated with better diet quality or weight-loss intention? 2014 PHN: 18(8), 1397–1406.
2. Tiwari, et al. Cooking at Home: A Strategy to Comply With US Dietary Guidelines at no extra cost. Am J Prev Med. 2017 May;52(5):616-624.
3. Lam & Adams. Association between home food preparation skills and behaviour, and consumption of ultra-processed foods: Cross-sectional analysis of the UK National Diet and nutrition survey (2008-2009). IJBNPA 2017 May 23;14(1):68.



# Outline

1. Why talk nutrition?
2. Food to think better & feel better
- 3. Tools to help eat better**
4. Take home messages





# Where can you get decent reliable information about nutrition?





Healthy, Easy Recipes

Everyday Superfoods

Hacks, Myths & FAQs

About



Track your progress

HOW HEALTHY IS YOUR DIET?

🕒 Takes less than 10 minutes!

# HEALTHY EATING WITH NO MONEY & NO TIME

Looking to improve your diet? Have no money for fancy ingredients and no time to cook? We've got you covered. Take our Healthy Eating Quiz to see where you can improve your diet and then find personalised free recipes and diet facts from leading experts in Nutrition and Dietetics from the University of Newcastle, Australia.

FIND OUT HOW HEALTHY YOUR DIET IS!

Feedback



**nib** foundation

<https://nomoneynotime.com.au/>



THE UNIVERSITY OF  
NEWCASTLE  
AUSTRALIA





**nib** foundation



## How to eat for \$60\* a week!

HACK

Eating healthy doesn't have to be expensive! We've created 7 breakfasts, lunches and dinners averaging \$60\* for your weekly shop using ingredients that are affordable, shelf stable and nutritious!

FAVOURITE 

SHARE      



<https://nomoneynotime.com.au/hacks-myths-faqs/take-our-nmnt-2-week-food-budget-challenge-and-eat-for-55-a-week>

# How much do you spend each week on food and drinks?



**MEAL PLAN & GROCERY BUDGET**

Dinner Plans	Groceries to Buy
Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

- 65% households say they have a food budget
- 25% say they fail to adhere to it
- 33% don't have a food budget
  
- Plan - to save \$
- Plan – to improve nutrition

Data from :Suncorp Cost of Food report 2019 survey n=1500



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# HEALTHY, EASY RECIPES

If it's not tasty, fast, cheap and packed with good stuff, you won't find it here. Our recipes are constantly updated, so come back soon for more!

## My Filters

[Reset filters](#)

## I've got:

[Microwave](#)[Oven](#)[Frying Pan](#)[Pot](#)[Blender](#)[Sandwich Press](#)[BBQ](#)[Slow Cooker](#)

## I want:

[Sharper Thinking ✓](#)[Better Sports Performance](#)[Healthier Skin](#)[Be Healthier](#)

## Recipes for Sharper Thinking (24)

[< Previous page](#)[1](#)[2](#)[3](#)[Next page >](#)

Blueberry and Kiwi Cooler

[Show 4 ingredients](#)

Beetroot, Red Onion and Balsamic Salad

[Show 6 ingredients](#)

Beetroot, Goats Cheese and Walnut Salad

[Show 7 ingredients](#)



Healthy, Easy Recipes   Everyday Superfoods   Hacks, Myths & FAQs   About    Track your progress

**HOW HEALTHY IS YOUR DIET?**  
⌚ Takes less than 10 minutes!

# HACKS, MYTHS & FAQs

How do you cook asparagus? Does it make your wee smell? Is it an aphrodisiac? You've got questions, we've got answers. And this is where to find them.

**nib** foundation



Eating the rainbow - why it's important to have a colourful diet!

3 minute read



Want to eat better for yourself and for the planet?

3 minute read



Easy ingredient swaps to limit your supermarket trips during lockdown

3 minute read



<https://nomoneynotime.com.au/hacks-myths-faq/5-important-nutrients-for-feeling-fab>



# Healthy Eating Quiz™

Measuring how diet quality aligns with  
Australian Dietary Guidelines and giving personalized feedback

[www.healthyeatingquiz.com.au](http://www.healthyeatingquiz.com.au)



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Healthy Eating Quiz

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HOW HEALTHY IS YOUR DIET?


## How healthy is your diet? Find out in under 10 minutes.

TAKE THE HEALTHY EATING QUIZ

Feedback

**nib** foundation

# Healthy Eating Quiz

 Track your progress

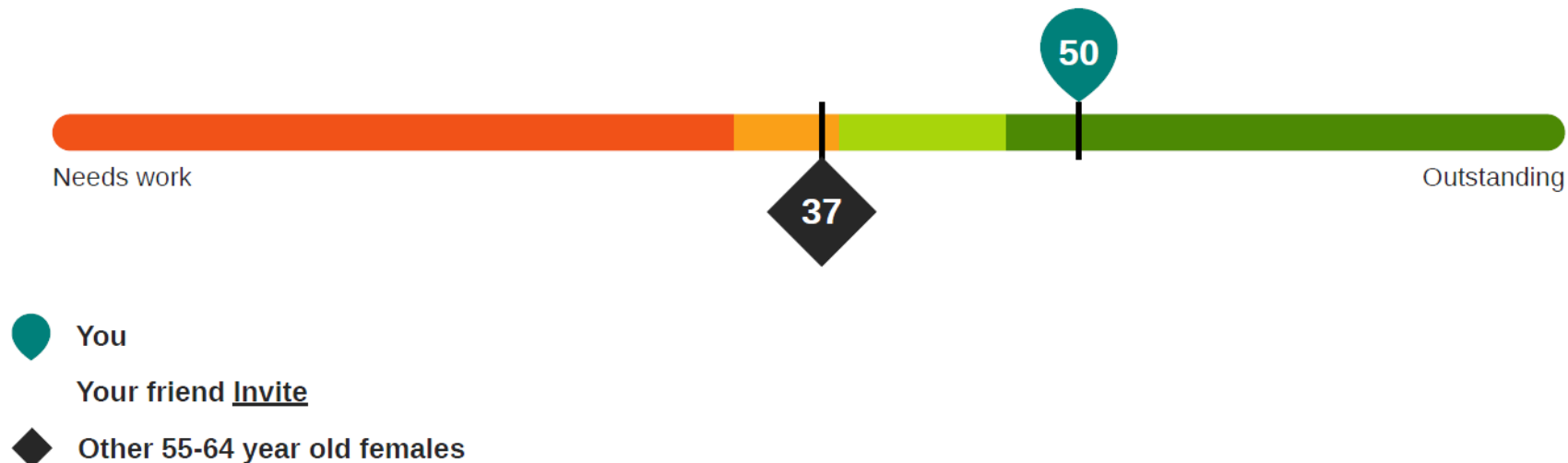
HOW HEALTHY IS YOUR DIET?

## Overall score

Your total Australian Recommended Food Score shows you are eating a good variety of foods. Good work!

**50 / 73**  
**Outstanding**

<33 Needs work  
33-38 Getting there  
39-46 Excellent  
47+ Outstanding



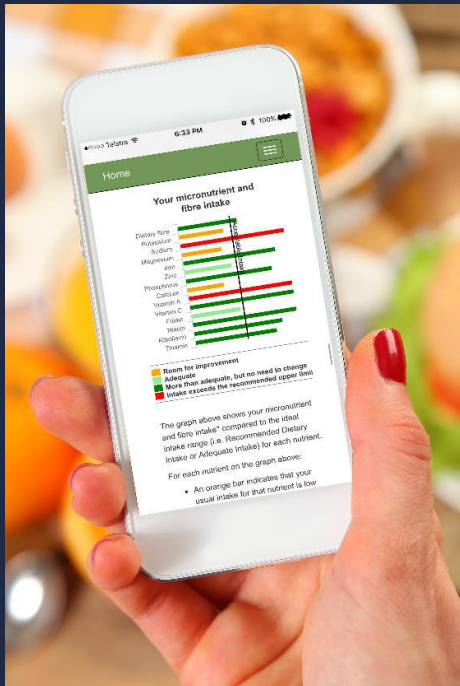


# Telehealth consult with an Accredited Practising Dietitian to personalise individual dietary intervention

Australian  
Eating Survey✓



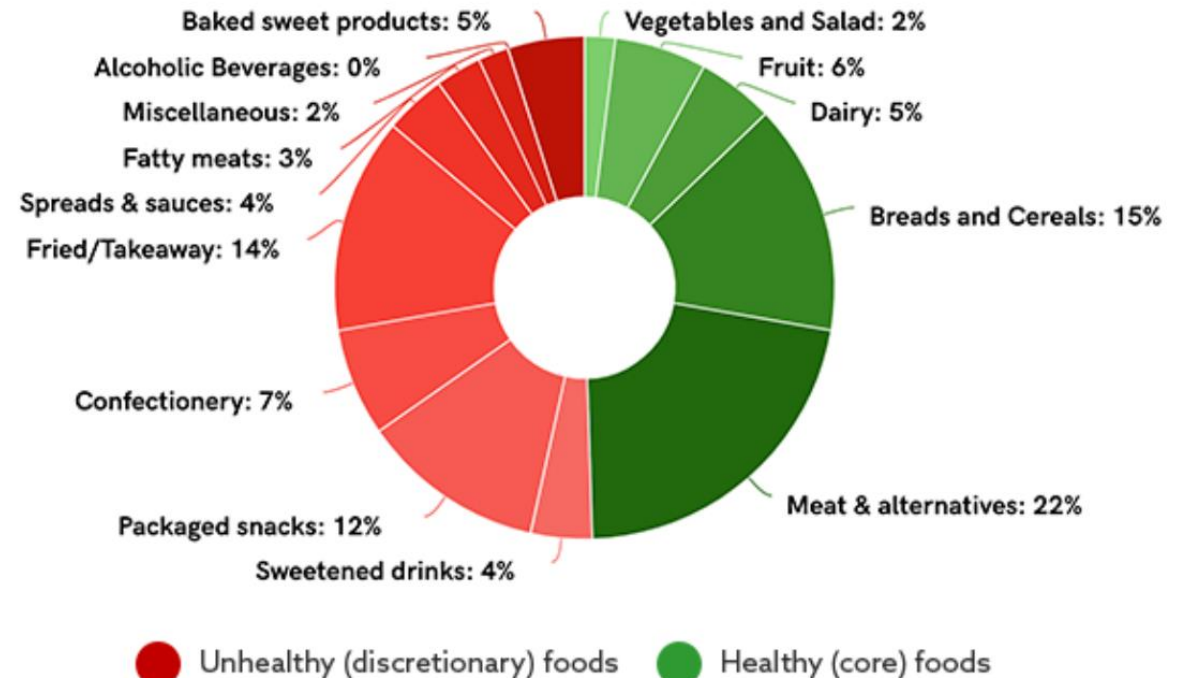
# Australian Eating Survey



## Online Australian Eating Survey

<http://australianeatingsurvey.com.au/>

Foods in your diet contributing to your energy intake



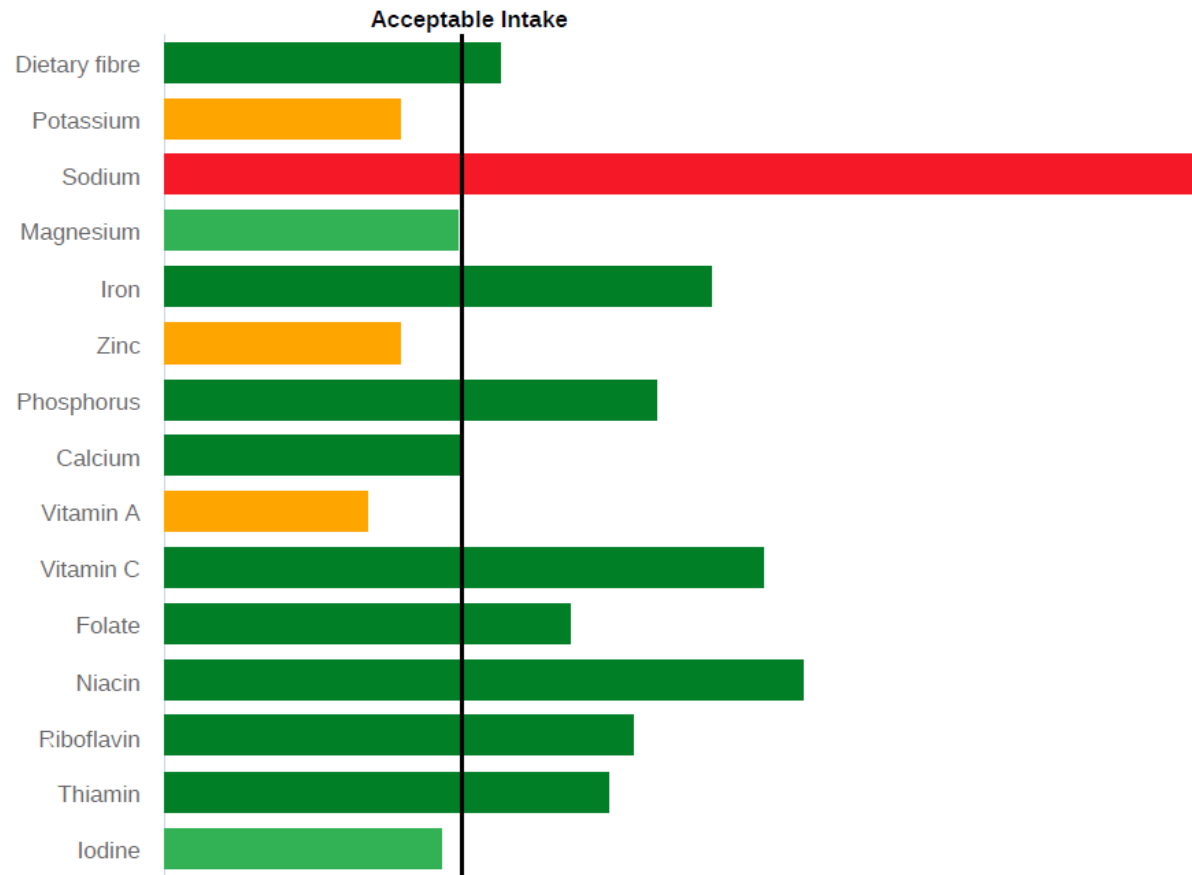
Note: The Australian Eating Survey is not a free tool



# Australian Eating Survey®

## nutrient intake results

Fig.4 Micronutrient and fibre intake



Light green = EAR (50%)  
 Dark green = RDI/AI (98%)  
 Yellow = <EAR  
 Red = UL

● Room for improvement  
● More than adequate, but no need to change  
● Adequate  
● Intake exceeds the recommended upper limit

Article

## Impact on Dietary Intake of Two Levels of Technology-Assisted Personalized Nutrition: A Randomized Trial

Megan E. Rollo <sup>1,2,\*</sup>, Rebecca L. Haslam <sup>1,2</sup> and Clare E. Collins <sup>1,2,\*</sup>

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<sup>2</sup> School of Health Sciences, Faculty of Health and Medicine, The University of Newcastle, Callaghan, NSW 2308, Australia

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**Abstract:** Advances in web and mobile technologies have created efficiencies relating to collection, analysis and interpretation of dietary intake data. This study compared the impact of two levels of nutrition support: (1) low personalization, comprising a web-based personalized nutrition feedback report generated using the Australian Eating Survey® (AES) food frequency questionnaire data; and (2) high personalization, involving structured video calls with a dietitian using the AES report plus dietary self-monitoring with text message feedback. Intake was measured at baseline and 12 weeks using the AES and diet quality using the Australian Recommended Food Score (ARFS). Fifty participants (aged 39.2 ± 12.5 years; Body Mass Index 26.4 ± 6.0 kg/m<sup>2</sup>; 86.0% female) completed baseline measures. Significant ( $p < 0.05$ ) between-group differences in dietary changes favored the high personalization group for total ARFS (5.6 points (95% CI 1.3 to 10.0)) and ARFS sub-scales of meat (0.9 points (0.4 to 1.6)), vegetarian alternatives (0.8 points (0.1 to 1.4)), and dairy (1.3 points (0.3 to 2.3)). Additional significant changes in favor of the high personalization group occurred for proportion of energy intake derived from energy-dense, nutrient-poor foods (−7.2% (−13.8% to −0.5%)) and takeaway foods sub-group (−3.4% (−6.5% to 0.3%)). Significant within-group changes were observed for 12 dietary variables in the high personalization group vs one variable for low personalization. A higher level of personalized support combining the AES report with one-on-one dietitian video calls and dietary self-monitoring resulted in greater dietary change compared to the AES report alone. These findings suggest nutrition-related web and mobile technologies in combination with personalized dietitian delivered advice have a greater impact compared to when used alone.

Nutrients 2021, 12, 3334; doi:10.3390/nu12113334

- Dietitian counselling + personalised nutrition report achieved a 7% greater reduction in %energy from energy-dense, nutrient-poor (red) foods vs. personalised report alone (11% vs 4.5%)





Provided by the University of Newcastle, Australia.

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Australian  
Eating Survey

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The Australian Eating Survey® is a validated and reliable tool to measure usual food and nutrient intake over the past 3-6 months.

The tool has been evaluated in Australian populations from the ages of two years and is based on 15 years of research.

Note: The Australian Eating Survey is not a free tool

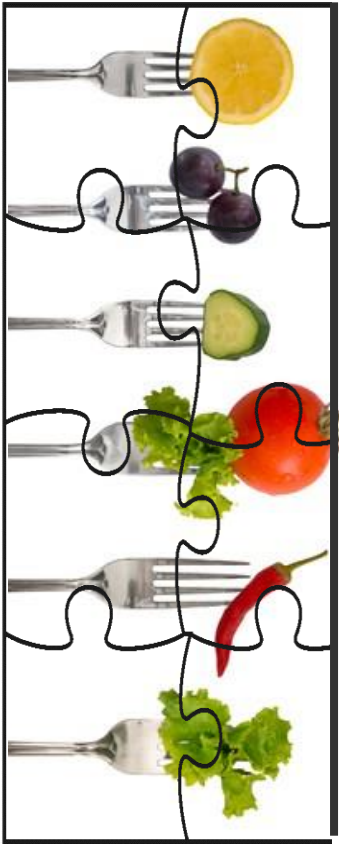
# Outline

1. Why talk nutrition?
2. Food to think better & feel better
3. Tools to help eat better
- 4. Take home messages**





# Take Home Messages



1. Current eating habits in Australia are not optimal
2. Eating better helps improve brain function, physical performance, mental health and wellbeing
3. Use our trustworthy nutrition resources
4. Prioritise strategies to help people (& you) improve nutrition

 **@ProfCCollins**



# Eating behaviours and Mental Health

Professor Tracy  
Burrows

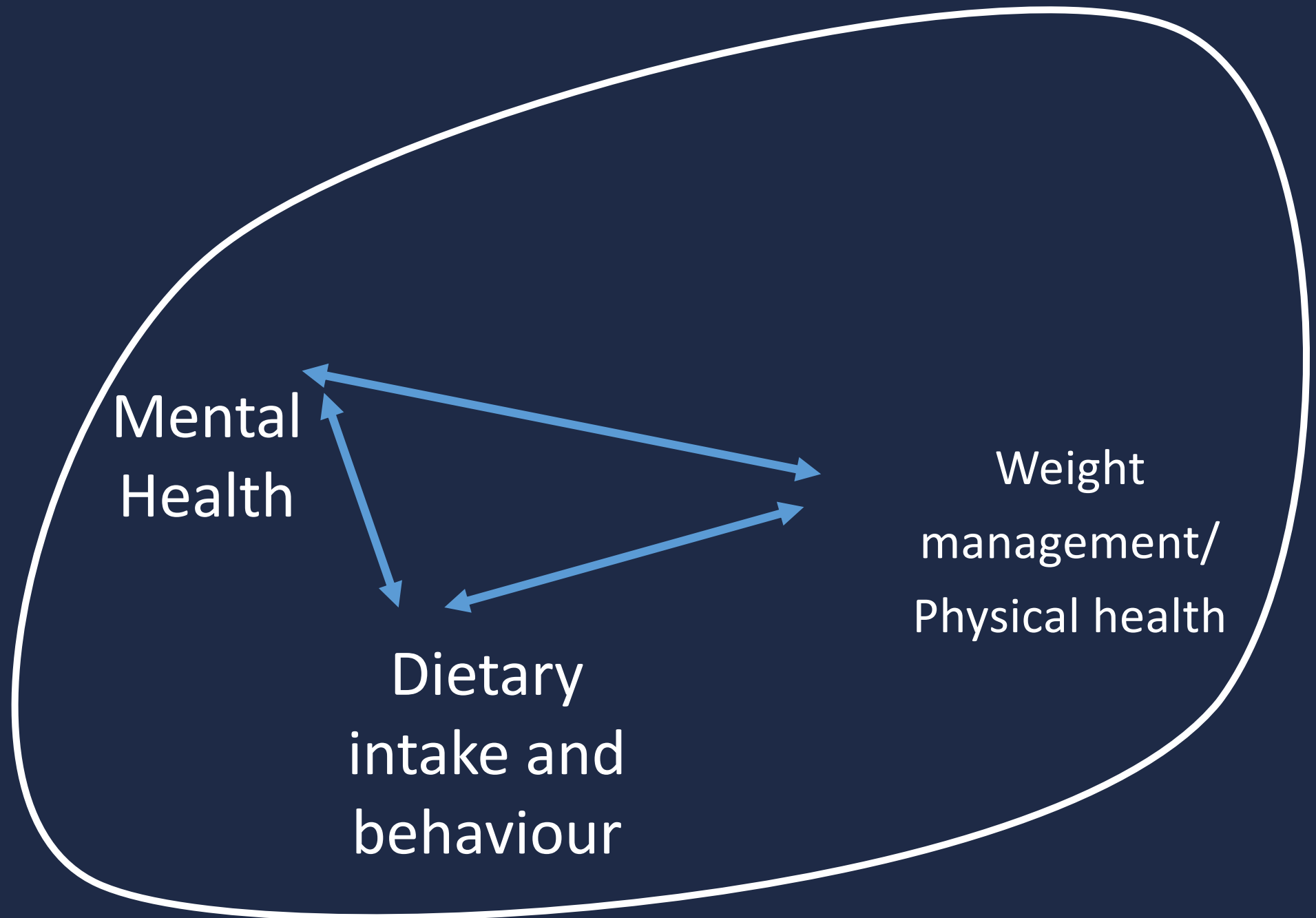



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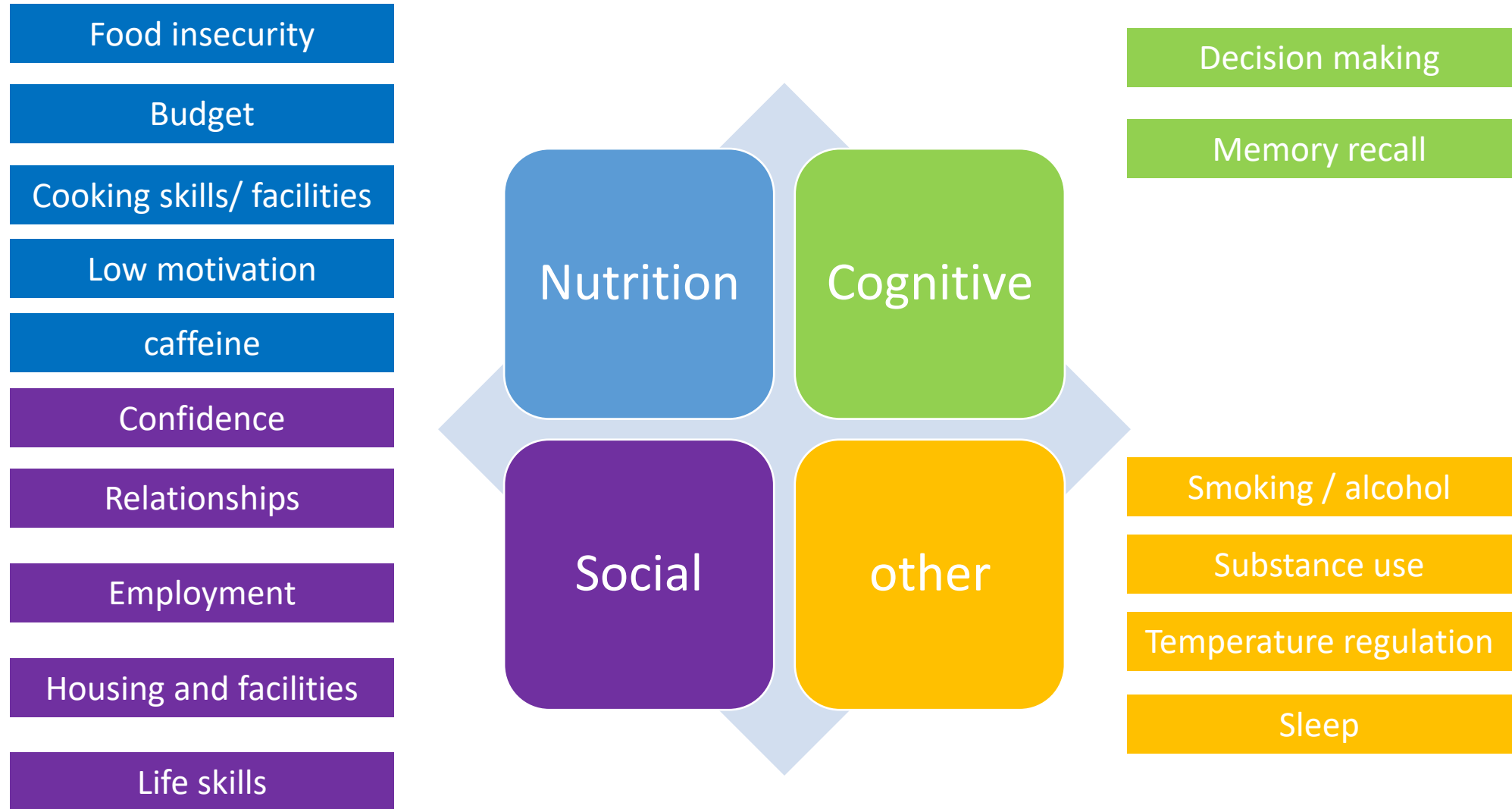




# Why are dietitians important in mental health?

- The Lancet Psychiatry Commission regarding physical health in individuals with mental illness identified an urgent need for optimised lifestyle interventions and associated implementation strategies.<sup>10</sup>
- The 2018 World Health Organisation guidelines on the management of physical health in severe mental disorders recommends lifestyle intervention as a first-line treatment.<sup>11</sup>
- The Royal Australian and New Zealand College of Psychiatrists (RANZCP) now mandate lifestyle interventions (targeting exercise, sleep, diet and alcohol intake) as the foundation of first-line treatments in their 2020 clinical practice guidelines for mood disorders.<sup>12</sup>

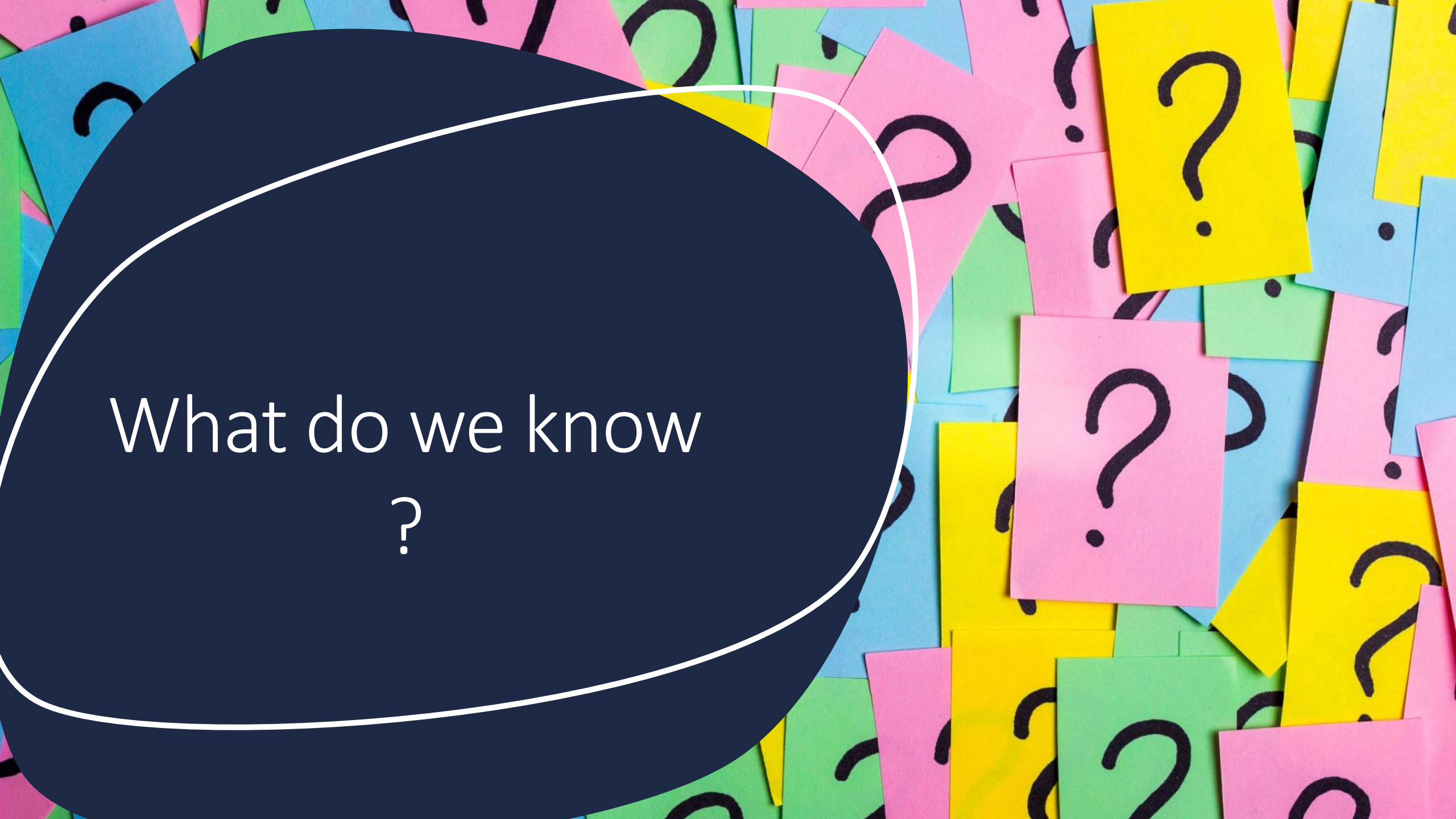
# Considerations in mental health





Diet is important but  
what about  
behaviours?



The background of the image is a dense, overlapping collage of small, rectangular sticky notes in various colors: yellow, pink, light blue, and light green. Each sticky note features a large, bold, black question mark. In the foreground, on the left side, there is a large, dark navy blue shape with a white outline, resembling a speech bubble or a thought bubble. Inside this shape, the text "What do we know" is written in a white, sans-serif font, with a single white question mark centered below it.

What do we know  
?





## Who ?

- 47% of people self perceive themselves to have food addiction
- 86% of people believe that certain foods are addictive
- Not medically recognised in DSM-5 often assessed through self report tools such as the Yale Food Addiction Scale (YFAS)
- Systematic reviews report 15-20% of people have addictive eating behaviours that impact on their daily functioning <sup>1</sup>

Ruddock et al Current Addiction reports, 2017 4(2): 110

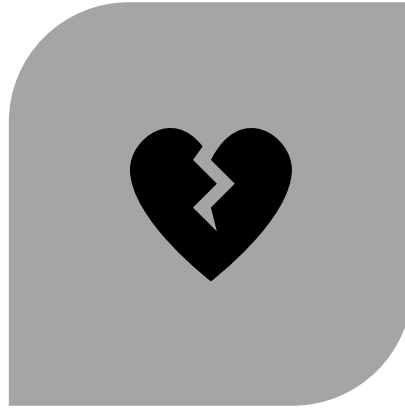
De Pierre et al Journal of substance use, 2014 19 (1-2)

Pursey et al Nutrients, 2014 6: 4552-4590

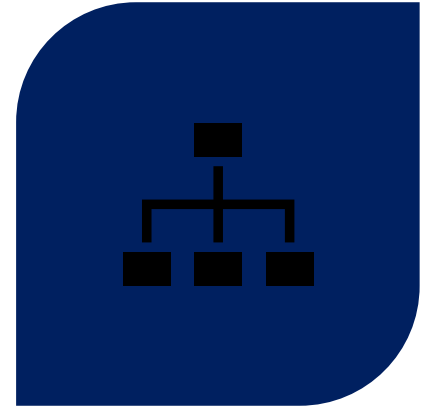
# Yale Food Addiction Scale



**SYMPTOMS**



**SEVERITY**



**CLASSIFICATION**

# Symptoms

1. Substance (certain foods) taken in larger amount and for longer period than intended
2. Persistent desire yet repeated unsuccessful attempts to quit
3. Great deal of time spent to obtain, use, and/or recover certain foods
4. Important social, occupational, or recreational activities given up or reduced due to addictive-like eating behavior
5. Consumption of certain foods despite knowledge of adverse physical/emotional consequences
6. Tolerance (marked increase in amount of certain foods consumed; marked decrease in desired affective experience)
7. Withdrawal symptoms when cutting down or abstaining from certain foods and consumption of certain foods to relieve withdrawal
8. Craving for certain foods
9. Failure to fulfill role obligations due to addictive-like eating behavior
10. Consumption of certain foods despite interpersonal/social consequences
11. Consumption of certain foods in physically hazardous situations

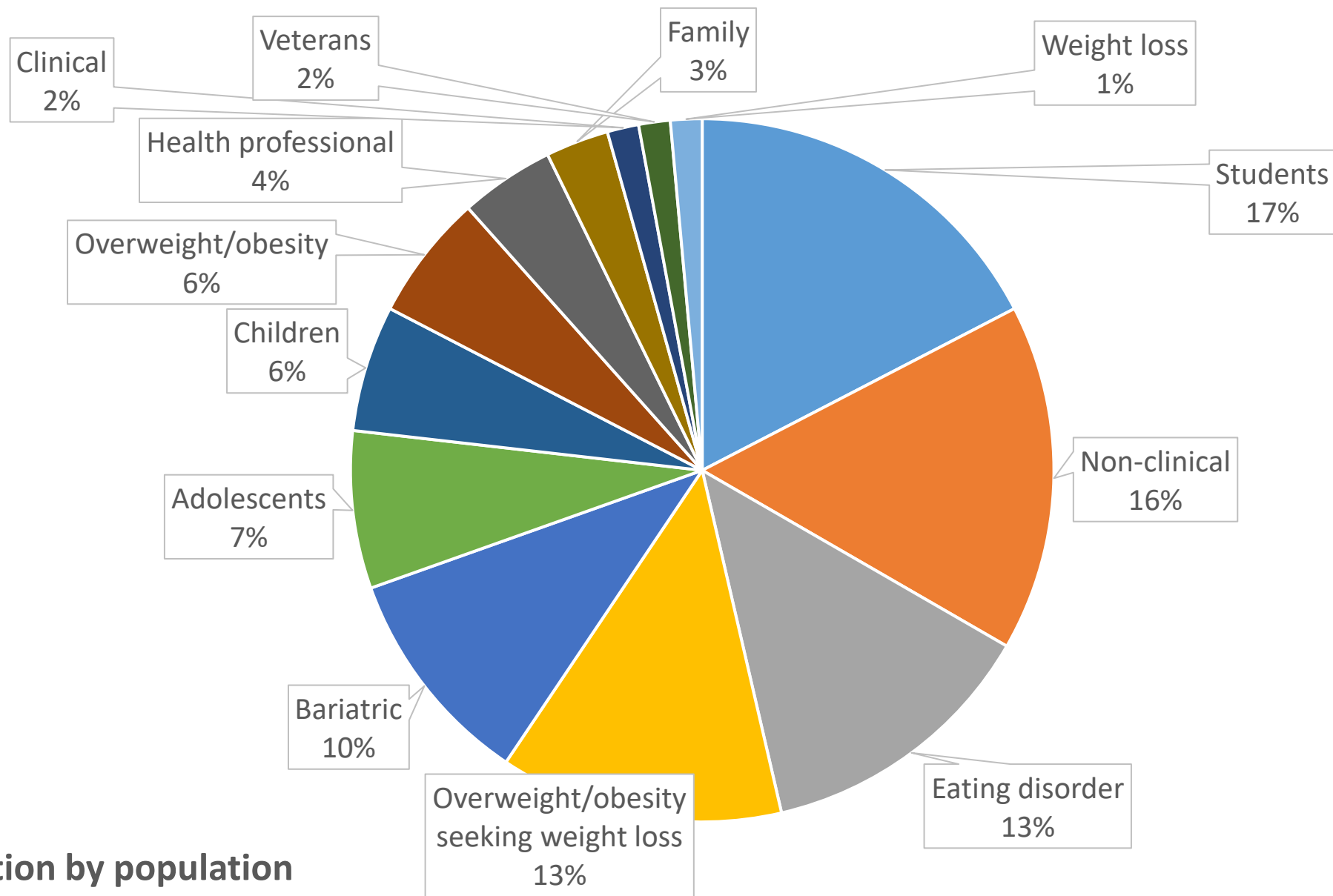


## Addictive Eating:

Defined as a compulsive over eating that impacts on an individuals day to day functioning

## Associated with:

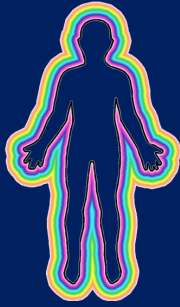
- Females
- Higher weight status
- Mental Health conditions



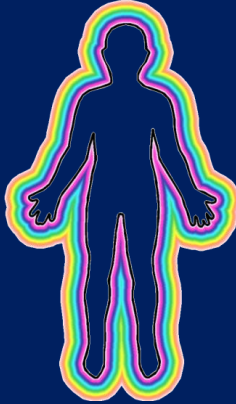
## Food Addiction by population

# Food Addiction... Not just over eating

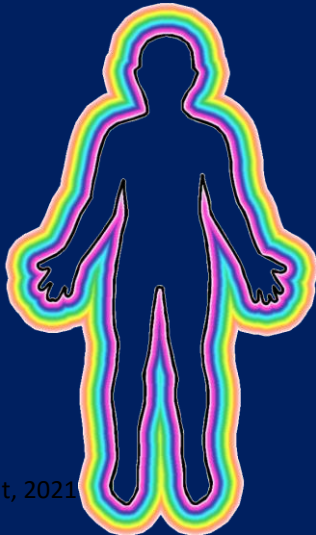
Mild



Moderate



Severe



- *Many reported it started in childhood*
- *'I still remember the first time... as a teenager... it was lamingtons'*
- *'I started doing it in secret'*



# Consumers

*Mood Foods*

*High perceptions of **CONTROL** around food, weight*

**COMPULSION** including cravings, urges, can't stop, impulse, need, drive, obsession, and temptation

Eating for psychological reasons rather than physiological

Addictive Foods vs Addictive Eating behaviour

Social factors influencing maintenance  
e.g. triggers

# What do Health Professionals think?

72% have been asked  
about addictive eating

48% interested in addictive  
eating being a diagnostic term

50% believe 'food addiction' is a stigmatising term

60% support that  
addictive eating  
exists

65% interested in a referral  
pathway for treating addictive  
eating

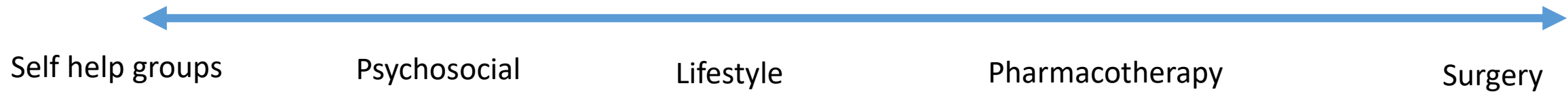
58% report individuals with addictive eating have little  
to no control over eating habits

Preferred terminology:

- Compulsive overeating (23%)
- Addictive eating (19%)
- Compulsive overeating disorder (15%)
- Food addiction (13%)

# Treatment

- Existing reviews show a range of methods are being trialed







# TRACE

**Program**

A Personality  
based eating  
awareness  
program

Feasibility study n= 52 adults

Process Evaluation

Co design and refinement with  
consumers and health  
professionals

Randomised Controlled trial

5 x telehealth sessions with  
dietitians  
Self guided workbook  
Website + facebook group  
N =50

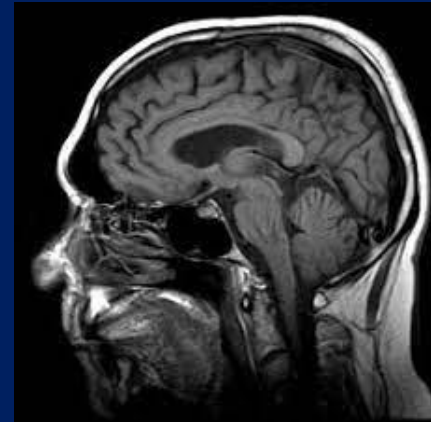
Self guided workbook  
Website + facebook group  
N= 50

Waitlist Control  
N= 50

# Do you have patients who might benefit from TRACE ?

TRACE program + Biomarkers

- recruiting now [https://redcap.link/TRACE\\_biomarkers](https://redcap.link/TRACE_biomarkers)



To determine are there differences in the brain and hormones and can these be changed through a behavioural intervention

# Summary

- Addictive eating is an evolving area of consumer interest, scientific research
- Have an awareness of the connection between mental health and addictive eating behaviours as well as food and diet
- Open and responsive to questions arising
- One size fits all approach unlikely



# Case Study 1

Janine is a 58 year old female, 2 teenage daughters. She gets quite anxious, and often gets 'cravings' when anxious, often 'eats more than planned'

- BMI 30 kg/m<sup>2</sup>
- Medical records show family history of heart disease.
- Has trouble sleeping at night
- Often eats snacks in her room

1. What might be some practical suggestions?
2. What other steps would you take in the management of Janine's mental health?

# Case Study 1

## 1. What might be some practical suggestions?

Start eating at the table and avoid eating in the bedroom, as location may be a trigger for overeating

Increase awareness of what anxiety and emotional regulation in general, “Surf the urge “ ride with it rather than fight it, distract like walking around the block

## 2. What other steps would you take in the management of Janines mental health?

Mindfulness exercises, mind chill, counting backwards from 10 slowly, breathing deeply

Triggers for Eating Checklist

Triggers for eating	Yes	No	Maybe	Comments
<b>Emotional</b>				
Angry				
Happy				
Sad				
Lonely				
Relaxed				
Tired				
Stressed				
Boredom				
Other				
<b>Psychological state</b>				
Anxious				
Depressed/feeling down				
Social isolation				
Trauma				
<b>Places</b>				
Home				
Car				
Supermarket				
Food outlets				
Work				
Social gatherings				
Too hungry				
Alone				
<b>Cues</b>				
Visual				
• TV				
• Advertising				
• Driving				
Smell				
Taste				
People				
• Family				
• Friends/co-workers				
<b>Times of day</b>				
Morning				
Lunch				
Dinner				
Afternoon				
After work				
Later at night				
After dinner				
<b>Physical hunger</b>				
Hungry				
Skipping meals				
Habit/routine				
After exercise				
Other triggers				

# Case Study 2

Gary is 43 years old and has a BMI of 36kg/m<sup>2</sup>. At a recent GP visit, he asked for help with his eating calling it “addiction like: behaviours”, not satisfied with his current weight.

Previous medical history

- High number of depression like symptoms
- Works in a stressful job.



1. What might be some simple suggestions or questions that might be useful to improve his relationship with food ?
2. What other steps would you take in the management of Gary's mental health?



# Case Study 2.

1. Consider asking, Why he eats ? May be a link between food intake and low mood ? Mood monitor checklist ?
2. Consider if he is eligible for Medicare Eating disorder plan ?
3. Refer him to an Accredited Practising Dietitian to do a thorough dietary assessment.
4. Consider checklists ....

## Who is eligible

To be eligible, your patient must be enrolled in Medicare and be diagnosed with anorexia nervosa.

Your patient may also be eligible if they meet the following criteria:

- be diagnosed with bulimia nervosa, binge-eating disorder or other feeding or eating disorder
- a score of 3 or more on the Eating Disorder Examination Questionnaire
- rapid weight loss or binge eating or inappropriate compensatory behaviour 3 or more times a week.

If your patient has not been diagnosed with anorexia nervosa they must also have at least 2 of the following indicators:

- body weight less than 85% of expected weight as a result of an eating disorder
- high risk of, or current medical complications due to eating disorder behaviours and symptoms
- serious comorbid medical or psychological conditions that significantly impact their medical or psychological health
- hospital admittance for an eating disorder in the last 12 months
- inadequate treatment response to evidence-based eating disorder treatments over the last 6 months.

You can check if your patient is eligible for Medicare through the Health Professionals Online Services (HPOS) item checker. You can also call Medicare.

You need your patient's consent to check their eligibility for Medicare services.

# EATING DISORDER EXAMINATION QUESTIONNAIRE - SHORT (EDE-QS)

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Weight: \_\_\_\_\_ Height: \_\_\_\_\_

ON HOW MANY OF  
THE PAST 7 DAYS....

0  
days

1-2  
days

3-5  
days

6-7  
days

1. Have you been deliberately trying to limit the amount of food you eat to influence your weight or shape (whether or not you have succeeded)?
2. Have you gone for long periods of time (e.g., 8 or more waking hours) without eating anything at all in order to influence your weight or shape?
3. Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (such as working, following a conversation or reading)?
4. Has thinking about your weight or shape made it very difficult to concentrate on things you are interested in (such as working, following a conversation or reading)?
5. Have you had a definite loss and you might gain weight?
6. Have you had a strong desire to lose weight?
7. Have you ever exercised or fasted or used by making yourself sick (vomit) or taking laxatives?
8. Have you exercised in a driven or compulsive way as a means of controlling your weight, shape or body fat or to burn off food?
9. Have you had a sense of having lost control over your eating (at the time that you were eating)?
10. On how many of these days (i.e. days on which you had a sense of having lost control over your eating) did you eat what other people would regard as an unusually large amount of food in one go?

OVER THE PAST 7 DAYS ...

Not at all

Slightly

Moderately

Markedly

11. Has your weight or shape influenced how you think about (judge) yourself as a person?
12. How dissatisfied have you been with your weight or shape?

## Eating disorder examination Questionnaire

## Distraction List

Anxiety proneness/  
Depression Proneness

Sensation proneness/  
Impulsivity proneness

Drink a glass of water	Exercise
Slow breathing	Walk
Count to 10	Jog
Smile	Gym
Laugh out loud	Weights
Take a break lie on the bed for 20mins	Exercise class
Pat dog or cat	Boxing
Light a candle	Dance
Read a book	Cleaning
Write in a journal	Washing
Colouring in	Dishes
Have a picnic	Vacuuming
Imagine a relaxing scene/safe place	Dusting
Look at beautiful art or scenery	Gardening
Go to a beautiful place	Water your plants
Be aware and let sounds come and go	Wash the car
Enjoy sounds of nature	Walk the dog
Enjoy smells of nature or flowers	Mow the lawn
Watch the stars	Call a friend
Exercise	Shopping
Walk	Favourite movie
Yoga	Favourite book
Dance	Favourite music
Sing	Favourite TV show
Listen to soothing music	Play a challenging video game
Listen to a relaxation app.	Listen to invigorating music
Apply your favourite perfume	Read a magazine
Apply your favourite lotion	Read a newspaper
Bubble bath	Puzzles (e.g. crossword or sudoku)
Shower	Volunteer somewhere
Massage	Give someone a present
Soak feet	Do something thoughtful
Brush hair	Make something for someone
Do nails	

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## The Food Line

This is an awareness raising tool to be used in conjunction with other strategies



### Well Below your Food Line

#### ... Crazy with hunger

It's been way too long since you last ate. As a result, you might feel dizzy, nauseous or even weak. You may also feel irritable or 'hangry' and all you can think about is food.



### Below your Food Line

#### ... Hungry

You can still function pretty well, but you may have low energy.

Your stomach feels almost empty and is probably starting to growl. It's time to eat.



### Approaching your Food Line

#### ... Neither hungry nor full

Your stomach feels neither empty nor full.

You may be able to sense food in your stomach, but you can still eat more.



### On Your Food Line

#### ... Comfortably full

Physically you're at a nice stage when you feel a little full - your stomach has food in it and you're pleasantly full.



### Over your Food Line

#### ... Uncomfortably full

You should have stopped some mouthfuls ago because now you're finding eating may no longer be enjoyable and you may not even really taste the food you are eating.





# Case Study 3

Alex is 17 years old and has a BMI of 25kg/m<sup>2</sup>. He experiences depression and lives at home with his parents.

He has a poor lifestyle with low physical activity and little sleep

His mum attends appointments

1. What might be some simple suggestions or questions that might be useful?

# Case Study 3

## 1. What might be some simple suggestions or questions that might be useful?

Create and ensure strong family focus

Encourage engagement with people, sitting with them

Cooking meals can be useful good way to create self efficacy

No Money No time  
<https://nomoneynotime.com.au/>



 @ProfCCollins  
 @ProfTBurrows

*Thank you*

## Q & A

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