

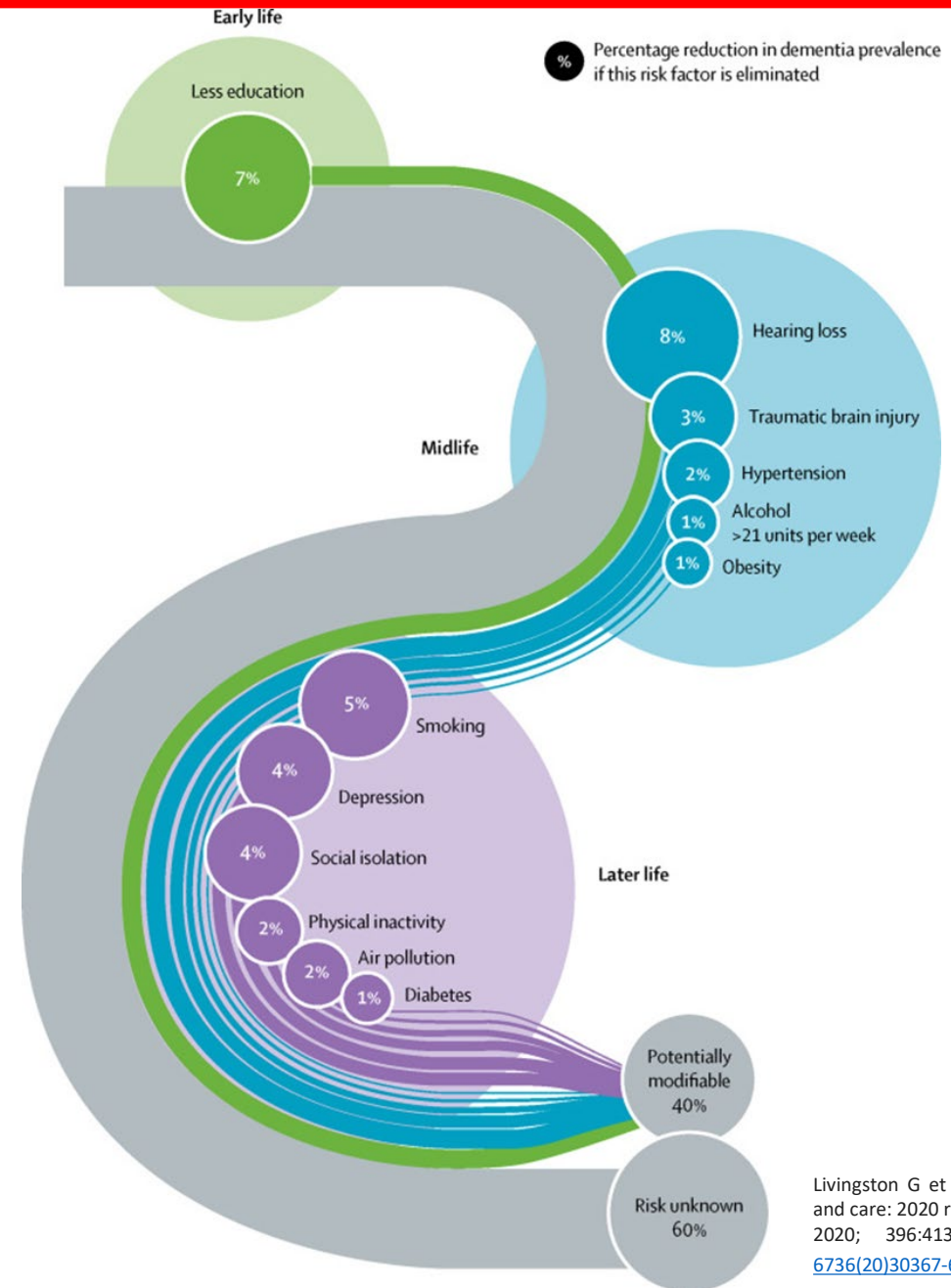
Food for thought: How does diet impact brain health?

Dr Emma Lea, Dr Kathleen Doherty, Prof. Anna King, Dr Edward Hill,
Dr Andrew Phipps



Dementia risk factors

- Age is the biggest risk factor for dementia
- Over our life course other factors contribute to dementia risk
- The risk of dementia could be reduced by up to 40% if we attend to “modifiable” risks



Livingston G et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *Lancet*. 2020; 396:413–446. [https://doi.org/10.1016/S0140-6736\(20\)30367-6](https://doi.org/10.1016/S0140-6736(20)30367-6)

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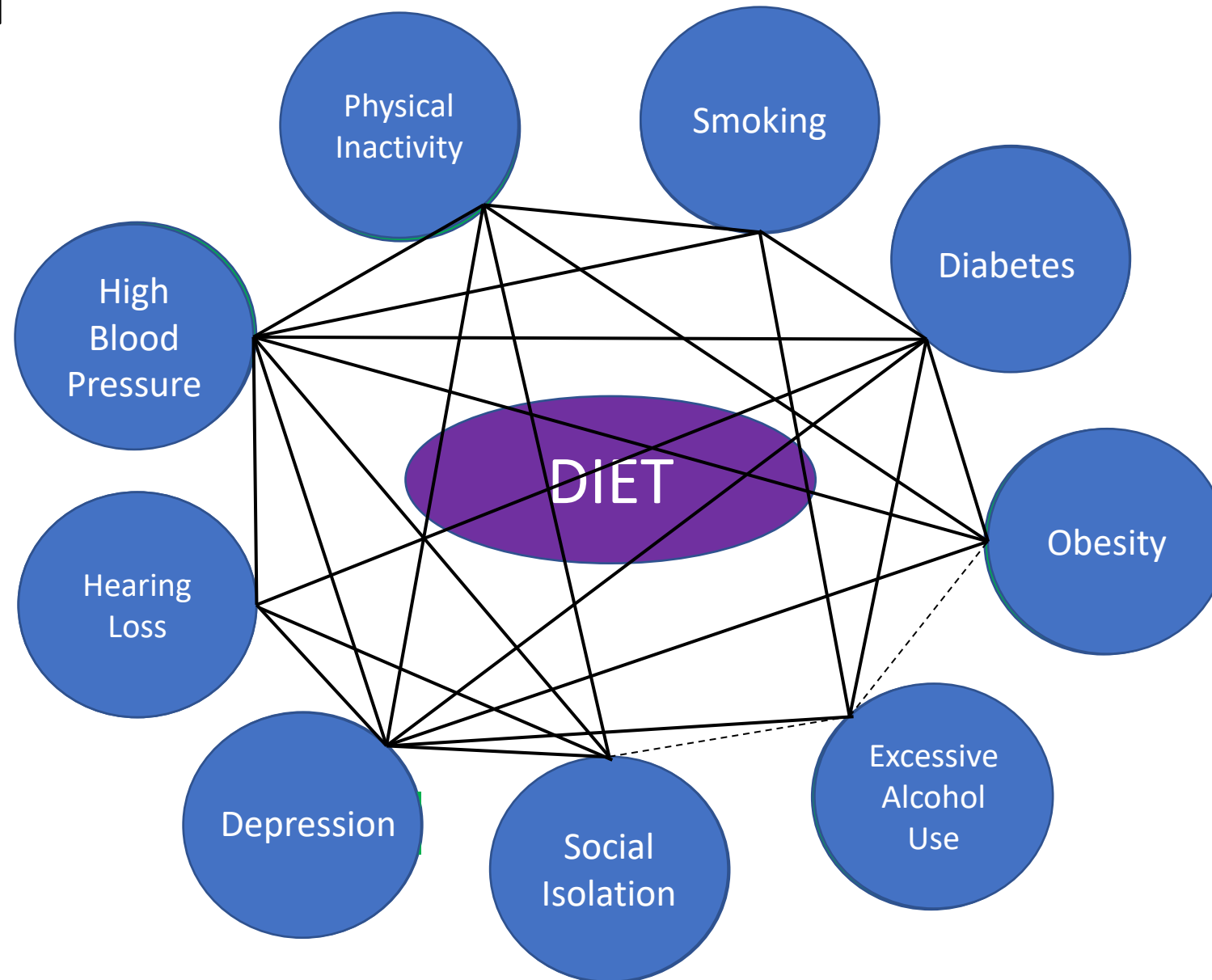


12 dementia risk factors



Source: Livingston et al. A, et al. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission

Many of the modifiable risk factors for dementia are interrelated

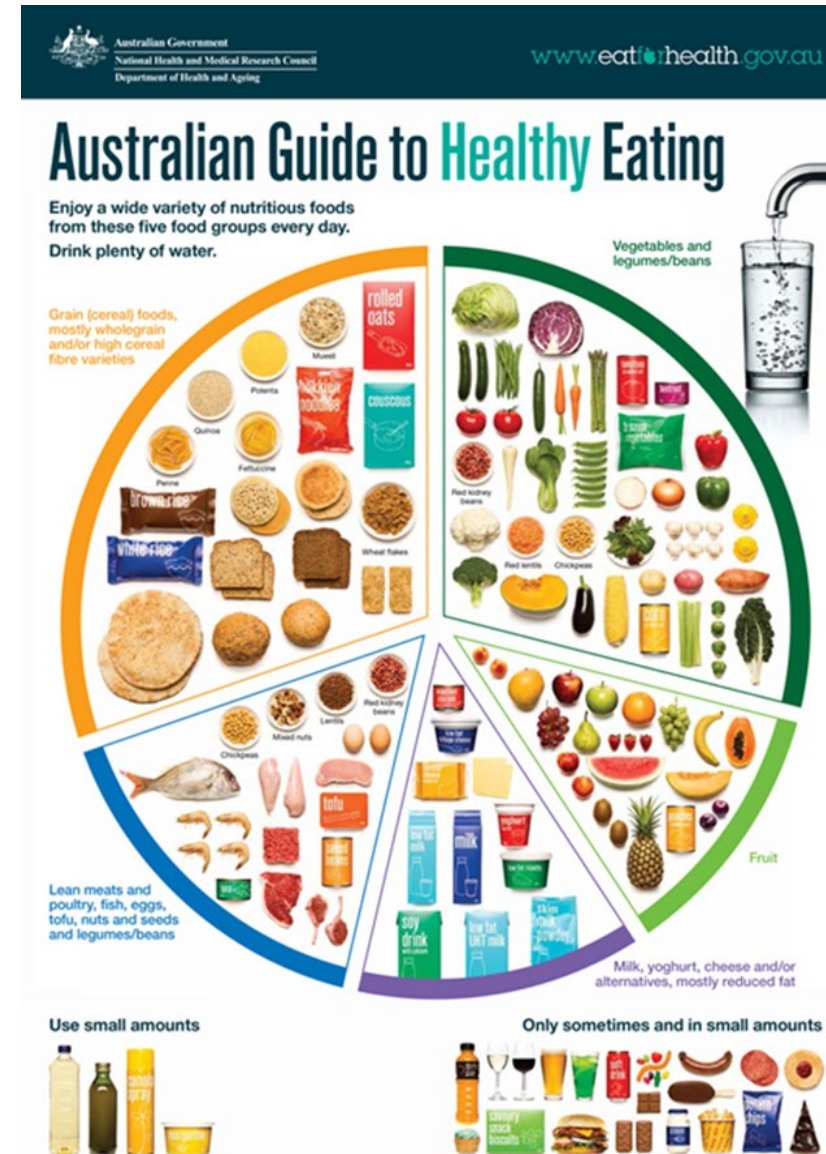


What are the healthy eating guidelines for Australians?

To stay healthy, you should drink plenty of water and eat foods from the 5 food groups every day.

- Vegetables and legumes or beans – at least 5 serves a day (1 serve = ½ cup)
- Grain (cereal) foods, mostly wholegrain and high-fibre varieties – 4 to 6 serves a day (1 serve = 1 slice of bread)
- Fruit – 2 serves a day
- Lean meats and poultry, fish, eggs, tofu, nuts, seeds, and legumes or beans – 2.5 to 3 serves a day
- Dairy and alternatives (mostly reduced fat) - 2.5 to 4 serves a day

<https://www.health.gov.au/health-topics/food-and-nutrition/about/eating-well>



What is a typical Australian diet?

- 56% of **women** meet the fruit intake guideline
- Only 1 in 9 (11%) meet the vegetable intake
- 1 in 13 (7.7%) meet both
- 47% of **men** meet the fruit intake guideline
- Only 1 in 25 (4.1%) meet the vegetable intake guideline
- Less than 1 in 30 (3%) meet both
- Older men were more likely to meet the guideline than younger men
- <https://www.aihw.gov.au/reports/men-women/female-health/contents/lifestyle-risk-factors/diet>
- <https://www.aihw.gov.au/reports/men-women/male-health/contents/lifestyle-and-risk-factors/diet>
- <https://www.csiro.au/en/news/News-releases/2021/New-CSIRO-tool-to-combat-Australia-1-diet-issue>



5.1 SERVES The average amount of discretionary foods eaten daily

3,000 KILOJOULES The approximate number of daily kilojoules from discretionary foods

0-3 SERVES The number of discretionary foods recommended in the Australian Dietary Guidelines

5 serves equates to about one of these:



Why eat less discretionary foods?

- 1 Assist with weight loss
- 2 Boost your diet quality
- 3 Improves your health risk

Most popular discretionary foods and drinks

#	Category	% of intake*
1	Alcohol	20.8%
2	Cakes & Biscuits	18.7%
3	Sugary Drinks	12.2%
4	Savoury Pastries	9.0%
5	Takeaway	8.1%
6	Processed Meats	7.2%
7	Chocolate & Lollies	6.8%
8	Fried Potato	5.4%
9	Salty Snacks	5.2%
10	Ice Cream	5.0%
11	Snack Bars	1.6%

Top ways for reducing discretionary food intake

- Eliminate** ↓ 26% reduction in total energy (kJ)
- Halve amount** ↓ 17% reduction in total energy (kJ)
- Cut back (eat less often)** ↓ 6-18% reduction in total energy (kJ)

Discover if you are eating too much discretionary food and how to cut back with the all new Junk Food Analyser at the CSIRO Total Wellbeing Diet



junkfoodanalyser.com

*Condiments and fats have been excluded from this calculation

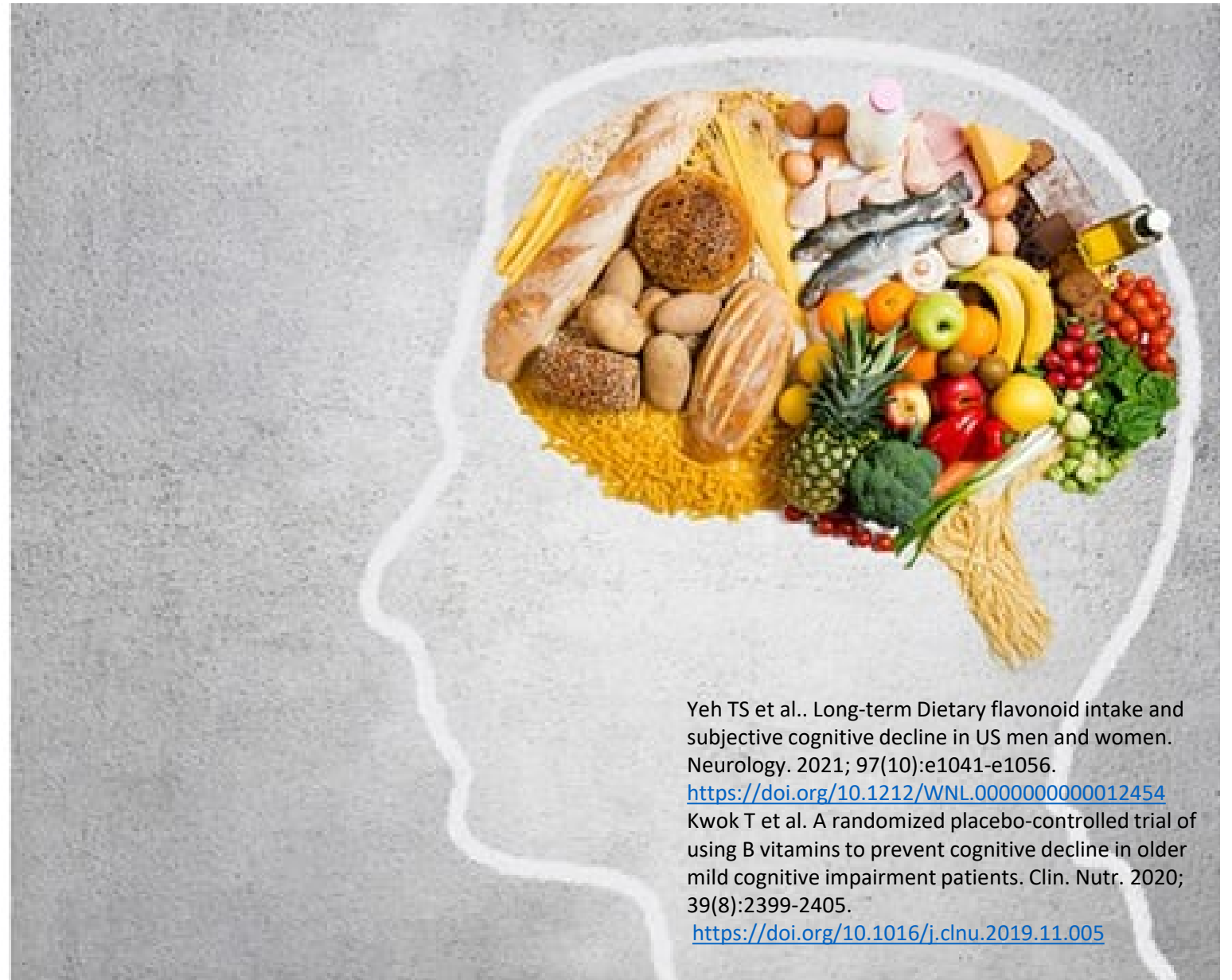
References: James-Martin, G.; Baird, D.L.; Hendrie, G.A. Strategies to Reduce Consumption of Unhealthy Foods and Beverages: Scenario Modeling to Estimate the Impact on the Australian Population's Energy and Nutrient Intakes. *Journal of the Academy of Nutrition and Dietetics*, 2020

Hendrie, G.A.; Lyle, G.; Mauch, C.E.; Haddad, J.; Golley, R.K. Understanding the Variation within a Dietary Guideline Index Score to Identify the Priority Food Group Targets for Improving Diet Quality across Population Subgroups. *Int J Environ Res Public Health*, 2021 Jan 6;18(2):378



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How do we know what foods increase or reduce our risk of dementia?



Yeh TS et al.. Long-term Dietary flavonoid intake and subjective cognitive decline in US men and women. *Neurology*. 2021; 97(10):e1041-e1056.

<https://doi.org/10.1212/WNL.00000000000012454>

Kwok T et al. A randomized placebo-controlled trial of using B vitamins to prevent cognitive decline in older mild cognitive impairment patients. *Clin. Nutr*. 2020; 39(8):2399-2405.

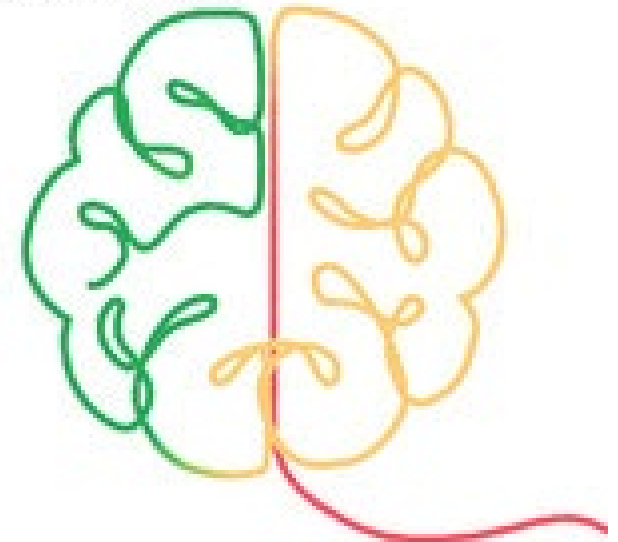
<https://doi.org/10.1016/j.clnu.2019.11.005>

What is a healthy diet?

- *"The Mediterranean-like diet may be recommended to adults with normal cognition and mild cognitive impairment to reduce the risk of cognitive decline and/or dementia."*
- *"A healthy, balanced diet should be recommended to all adults based on WHO recommendations on **healthy diet**."* <https://www.who.int/en/news-room/fact-sheets/detail/healthy-diet>
 - Includes fruit, vegetables, legumes, nuts and whole grains
 - ≥400g of fruit and vegetables (5+ portions) per day, excluding potatoes and other starchy roots
 - <10% total energy intake from free sugars (about 12 level teaspoons)
 - <30% total energy intake from fats – preferably unsaturated
 - <5g of salt (about 1 teaspoon) per day
- *"Vitamins B and E, polyunsaturated fatty acids and multi-complex supplementation should not be recommended to reduce the risk of cognitive decline and/or dementia."*

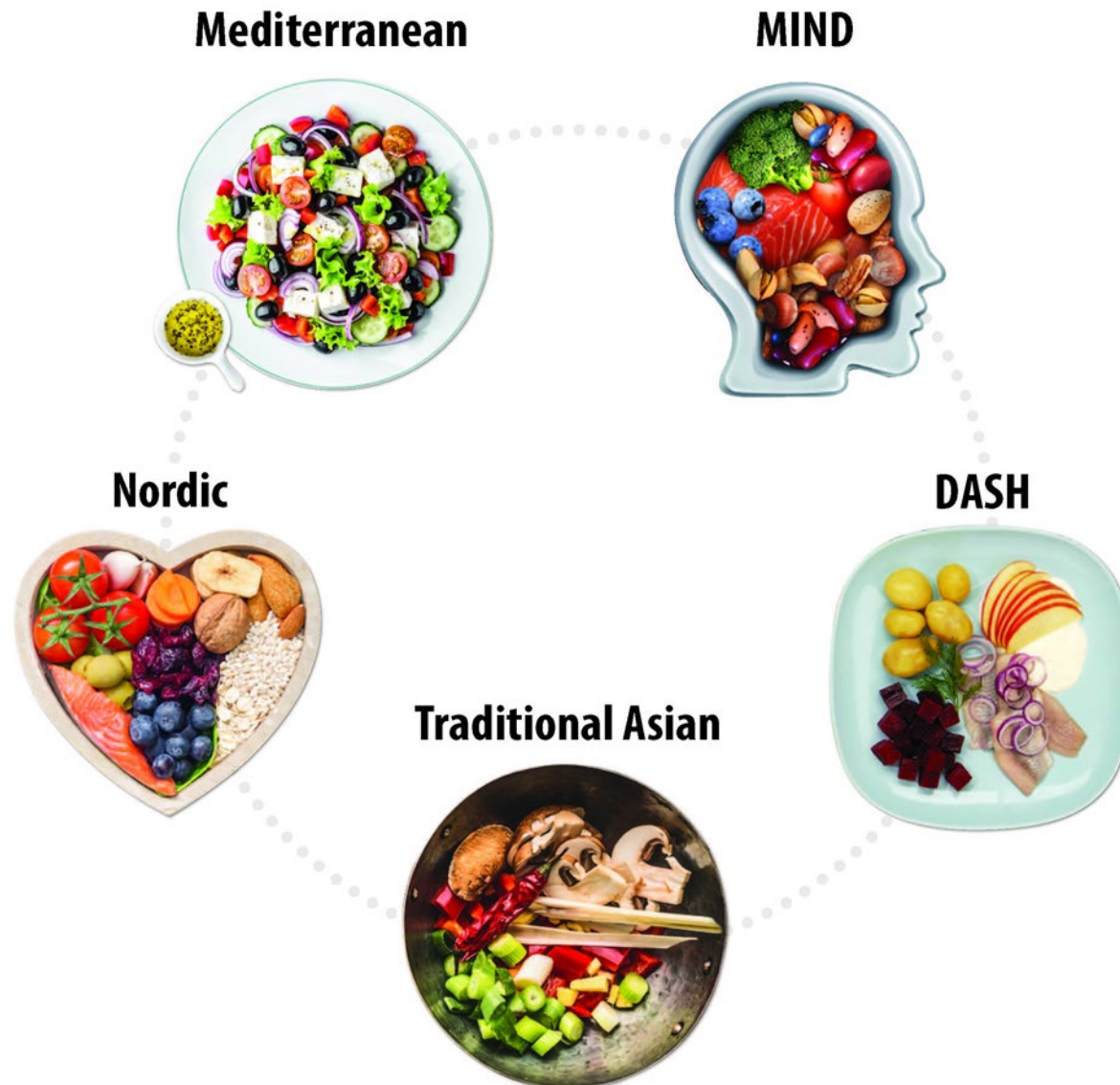
RISK REDUCTION OF COGNITIVE DECLINE AND DEMENTIA

WHO GUIDELINES



<https://www.who.int/publications/i/item/risk-reduction-of-cognitive-decline-and-dementia>

What are some recommended dietary patterns?



Cena H, Calder PC. Defining a healthy diet: evidence for the role of contemporary dietary patterns in health and disease. *Nutrients*. 2020; 12(2):334. <https://doi.org/10.3390/nu12020334>

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Hill, E., et al. (2019). Diet and biomarkers of Alzheimer's disease: a systematic review and meta- analysis. *Neurobiology of Aging*, 76, 45–52. <https://doi.org/10.1016/j.neurobiolaging.2018.12.008>

Hill, E., et al. (2018). Dietary patterns and β -amyloid deposition in aging Australian women. *Alzheimer's & Dementia (New York)*, 4, 535–541. <https://doi.org/10.1016/j.trci.2018.09.007>

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POSTDOCTORAL RESEARCH FELLOW

What is a Mediterranean diet?



p=portion Serving or portion size based on frugality and local habits

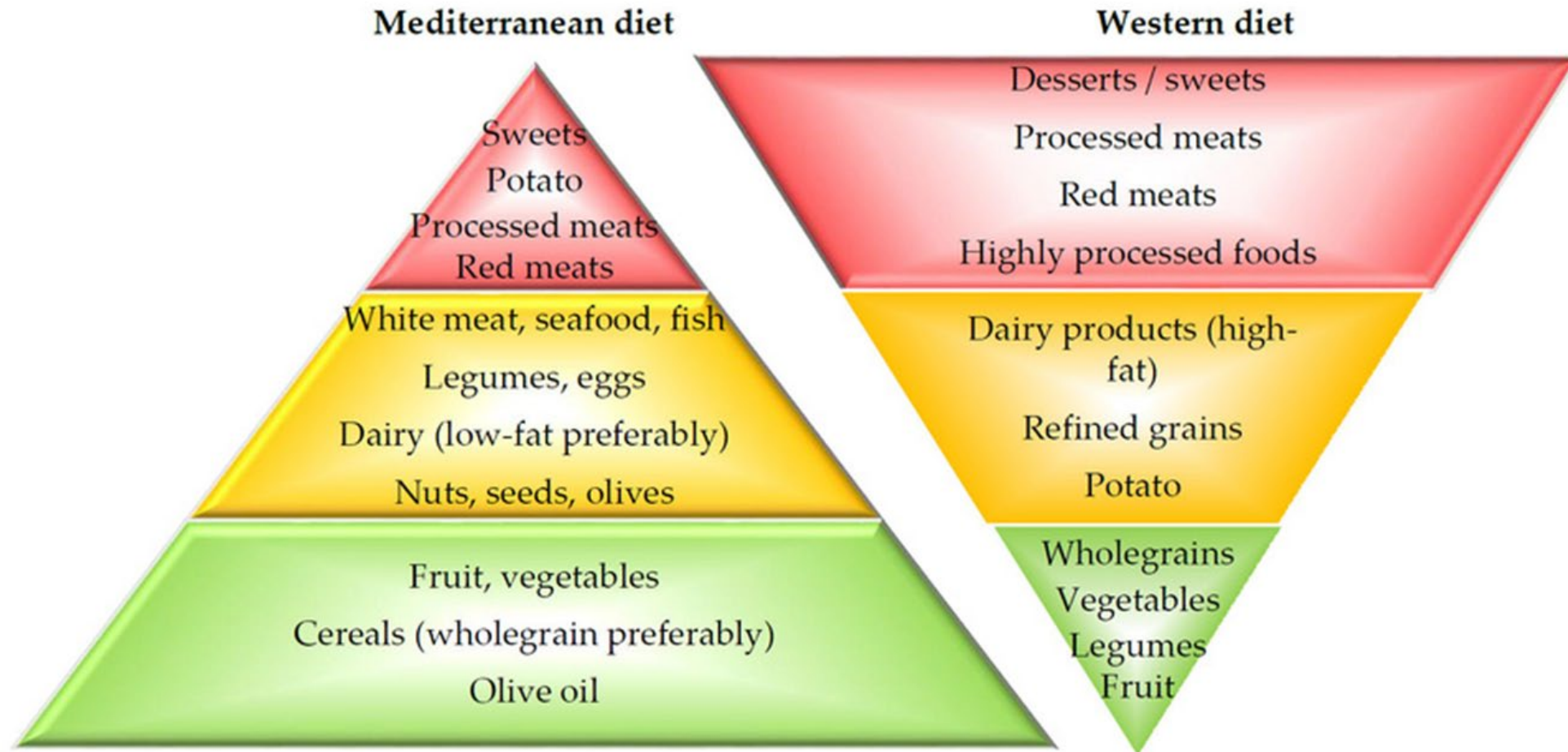
Regular physical activity
Adequate rest
Conviviality
Wine (and other alcoholic fermented beverages) in moderation and respecting social beliefs



Biodiversity and seasonality
Traditional, local and eco-friendly products
Culinary activities

Serra-Majem L et al. Updating the Mediterranean diet pyramid towards sustainability: focus on environmental concerns. *Int. J Environ. Res. Public Health.* 2020; 17(23):8758. <https://doi.org/10.3390/ijerph17238758>

How is a Mediterranean diet different from a Western diet?



Guilleminault L et al. Diet and asthma: is it time to adapt our message? *Nutrients*. 2017; 9:1227. <https://doi.org/10.3390/nu9111227>

Food for thought

- Changing behaviours, like the type of food you eat, is difficult. There are many reasons why people eat the way they do:



- **Seek information** - including shopping lists, recipes, and personalised nutrition information
 - Australian Government Eat For Health website <https://www.eatforhealth.gov.au/>
- **Seek support** - social (friend, family member) and/or professional (e.g., GP, dietitian)
- **Use prompts** - e.g., put a sticker on the fridge
- **Set manageable goals** - e.g.:
 - Try a new Mediterranean-like food or recipe each week
 - Eat one more serve of vegetables a day
 - Substitute olive oil for other oils and fats
 - Consume one less 'treat' food or drink each day
- **Self-monitor behaviour** – e.g., keep a food diary

Hummus dip

Serves 14. Preparation time 2 minutes.

Ingredients

- Chickpeas, canned, drained, 1 x 400g can
- Sea salt, 1 pinch
- Olive oil, 2 teaspoons
- White pepper, ground, ½ teaspoon
- Tahini, 1 tablespoon
- Cumin seeds, 1 teaspoon, toasted
- Natural yoghurt, low fat, 2 tablespoons
- Lemon juice, 2 tablespoons

Method

- In a blender, add the chickpeas, a pinch of white pepper, salt, oil, tahini, cumin seeds, yoghurt and lemon juice. Blend for 30 seconds, or until combined and smooth.
- If the mixture is a little dry, add 1 tablespoon of warm water.
- Pour into a bowl and serve with vegetable crudités.



<https://www.totalwellbeingdiet.com/au/recipes/healthy-summer-recipes/hummus/>

Take-home messages

1. Eating a healthier diet can improve a number of health outcomes, which can have wide-ranging, holistic benefits.
2. Focus on dietary patterns rather than individual foods:
 - Eat a Mediterranean-like diet based largely on plant foods and minimising processed foods to improve cognitive health.
3. What can you do? Dietary change can be difficult so it's OK to start with small actions, such as:
 - Think of one dietary goal you can set and one person who can support you with this.
 - Talk to a GP, dietitian or other relevant health professional.
 - Seek information on healthy diets, such as the Australian Dietary Guidelines: <https://www.eatforhealth.gov.au>
 - Simply try to be more conscious of your food intake!



Disclaimer

Please note that the information presented in this webinar does not constitute medical advice. For any issues that may arise for you personally, or for medical or dietary guidance, we encourage you to discuss this with your family doctor or another health care professional. You may also obtain further information from your local Alzheimer's disease or dementia society or association.

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