



# Nutrition and mental health in food service

**Foreword:** Nutrition plays a complex role in people's mental health. Trust, respect, and hearing each person's lived experience is crucial to being able to provide appropriate and safe nutrition counselling. It is important to uphold truly person-centred care alongside evidence-based practice, and to acknowledge that mental health is multifactorial and more complex than diet alone.

## Purpose of this resource

The aim of this resource is to improve the knowledge and skills of graduate and emerging dietitians working in food service with people who are experiencing or have experienced a mental health condition, with a view to providing support for professional development through evidence-based discussions and practice tips.

## Nutrition needs in mental health facilities

People who are admitted to mental health facilities have unique nutritional needs when compared with the general hospital population, and food service practices may need to be altered to account for this. People are often experiencing significant challenges at admission, and a person-centred approach

to food service which supports the health and wellbeing of individuals and their food preferences should be adopted whenever possible. There are a number of key food service considerations for people admitted to mental health facilities:

- **Poorer physical health outcomes.** People with mental health concerns have a 1.4 to 2 fold increased risk of cardio metabolic disease compared to the general population, and a shorter life expectancy of up to 25 years (1-3).
- **Poorer dietary quality** (higher intake of saturated fat and discretionary foods, lower intake of fibre, fruit and vegetables), with a tendency to over consume kilojoules and under consume other nutrients, increasing the risk of malnutrition (1,4).
- **Medications** which may affect appetite, metabolic pathways, or the gastrointestinal system, as outlined in the MHANDi resource 'Nutrition Consequences of Psychotropic Medications'.
- **Longer length of stay**, which in some cases is years (rehabilitation and long stay), and for some individuals a frequent rate of readmission.

## Varying roles of a mental health food service dietitian

A mental health dietitian can be a core driver of the food service system. In order to ensure the food service is appropriate to its clientele, a needs assessment should be clearly identified through surveys, audits, feedback, or best practice guidelines. A problem should be addressed when:

- there is a significant issue to a ward, department or facility
- a problem is identified by other staff or consumers
- there is supporting evidence that a problem exists
- best practice supporting evidence is available

Each mental health service will have varying priorities, issues and processes. A mental health dietitian's overall role is to advocate for a person-centred approach and food service systems that are known to improve a person's health and wellbeing. This may include:

- audits of serve sizes: are these consistent, and in-line with guidelines? Are these appropriate for the service's population?
- quantitative assessment of nutrition provided by the menu (food audits), or review of the menu's core food groups only
- nutrition analysis of recipes or the entire menu
- review of nutrition care and special diet policies and procedures

- auditing of processes to identify malnutrition or over nutrition and providing nutrition support, and identifying how food service integrates into nutrition care e.g. malnutrition screening tools
- Analysis of client satisfaction of the food service system and menu: meeting individual needs and expectations, maximizing personal food choices, suitable availability of healthy snacks outside meal times, providing appropriate intakes, minimise wastage and improve food quality
- presenting findings and recommendations to meet appropriate guidelines to relevant stakeholders
- developing, auditing and maintaining the food safety plan, especially the allergen management processes
- developing and annually reviewing standard recipes for all menu items, along with specification sheets
- training and educating food service staff, nursing staff and other key stakeholders (e.g. staff who run cooking groups). This may focus on food safety, food handling, nutrition and mental health, the Australian Dietary Guidelines, or other existing guidelines to help develop food service

In addition, a hospital employed dietitian may be able to provide ongoing training to staff, or education sessions to clients. Contracted dietitians may only be able to provide one-off opportunities for training or developing resources to be used in the facility.

## Food service considerations in mental health settings

Policies and guidelines exist to help guide food service in mental health services. Current policies which acknowledge food service and can support clinicians in menu planning to meet consumer needs include:

- NSW Agency for Clinical Innovation (ACI) Nutrition Standards for Consumers of Inpatient Mental Health Services in NSW (5)
- Menu and Nutritional Standards for Public Hospitals in South Australia (6)
- Queensland Health Nutrition Standards for Meals and Menus (3)

Overarching principles of these guidelines include:

| Menu consideration                             | Rationale/Examples   |
|--|--|
| Longer menu cycles with increased menu variety | <ul style="list-style-type: none"> <li>• Increases food choice and prevent menu fatigue</li> <li>• Reduces inpatients sourcing food externally</li> <li>• Maintains consistent energy and nutrient intake for weight stability</li> <li>• Special themed days or BBQs may be alternative options for additional variety</li> <li>• Ensure adequate vegetarian options are considered.</li> </ul> |

| Menu consideration   | Rationale/Examples  |
|--|---|
| Minimum amount of fish meals offered (at least 3 fish meals per week)  | <ul style="list-style-type: none"> <li>• Omega 3 fatty acids and omega 3 supplementation can have positive effects on: (7,8)               <ul style="list-style-type: none"> <li>• Depression at low dose of 1 g/day</li> <li>• Bipolar disorders with reference to depressive but not manic symptoms at low dose of 1-2 g/day</li> <li>• Mild cognitive impairment, improved depressive symptoms and improved verbal fluency</li> </ul> </li> <li>• ACI (5) guidelines recommended an average of 430mg of omega 3 fats (EPA+DHA) per day               <ul style="list-style-type: none"> <li>• To support good mental health, 430mg is the suggested dietary target for women. Those with higher needs will often be prescribed fish oil supplements (5).</li> </ul> </li> <li>• Add tinned tuna, sardines, mackerel or salmon to sandwiches and salads</li> <li>• Add one tablespoon of grounded flaxseed into hot or cold breakfast cereal or porridge, yogurt.</li> <li>• Add 1 tablespoon of chia seeds into smoothies, salad dressings such as lemon juice, vinegars, honey and olive oil, chia seed puddings.</li> </ul> |
| Healthy meal and mid meal/supper options should be available and promoted  | <ul style="list-style-type: none"> <li>• Options can include:               <ul style="list-style-type: none"> <li>• Salads or steamed vegetables as sides to meals</li> <li>• Fresh fruit available in a food bowl and/or with yoghurt</li> <li>• Vegetables available for snacks e.g. celery, carrot, with a low kilojoule dip like tzatziki or hummus, a handful of nuts, hard-boiled eggs, microwaved popcorn, string cheese, apples and 2 tablespoon of peanut butter, cottage cheese and crackers.</li> </ul> </li> </ul>   |
| Target of at least 25 – 30 grams of fibre per day  | <ul style="list-style-type: none"> <li>• Inactivity, habitual food intake, medications including typical and atypical antipsychotics, MAOIs, anticholinergics and poor fluid intake can contribute to a higher risk of constipation</li> <li>• Key strategies to increase fibre include:               <ul style="list-style-type: none"> <li>• Include wholegrain breads</li> <li>• Include high fibre (&gt;5g/serve) breakfast cereals</li> <li>• Include high fibre crackers as a snack option</li> <li>• Include the skin on fruit and vegetables where possible</li> </ul> </li> <li>• Measure intake with a <a href="#">fibre counter</a> (9).</li> </ul>   |
| High energy, high protein options and nutritional supplements should be available for those who find it difficult to meet their energy requirements from the standard menu | <ul style="list-style-type: none"> <li>• Under nutrition may occur due to:               <ul style="list-style-type: none"> <li>• Cognitive and communication difficulties</li> <li>• Eating behaviours such as early satiety, eating disorders, poor appetite, a lack of interest in food,</li> <li>• Increased nutritional requirements for specific disease states (e.g. substance misuse, cachexia, or trauma)</li> <li>• Increased energy requirements as a result of elevated mood, hyperactivity, pacing or restlessness.</li> </ul> </li> <li>• Examples can include: adding sauces/dressings to meals, milk or fruit based supplements, dairy snacks between meals.</li> </ul>   |
| Macro and micro nutrient targets to achieve nutritional adequacy   | <ul style="list-style-type: none"> <li>• ACI guidelines (5) recommend a target for total energy, protein and saturated/trans fats, however individual requirements can vary significantly</li> <li>• The Australian Dietary Guidelines (10) can be used to determine servings per day from each core food group based on individual's age and gender.</li> </ul>  |
| Macro and micro nutrient targets to achieve portion control  | <ul style="list-style-type: none"> <li>• Consider sugar, milk, bread, spreads and breakfast cereals items which are individually portioned</li> <li>• Portion controlled plate/bowl by using medium sized plate or bowl to prevent weight gain during length of stay (11,12).</li> </ul>  |

| <b>Menu consideration</b>  | <b>Rationale/Examples</b>  |
|--|--|
| <p>Appropriate drink options including;</p> <ul style="list-style-type: none"> <li>Decaffeinated tea and coffee</li> <li>Water available at all times</li> <li>Sweetened drinks such as soft drinks and juice should be limited</li> </ul> <p>Low joule drink options available but not offered in excessive amounts (e.g. diet cordial)</p> | <ul style="list-style-type: none"> <li>Adequate fluid intake may prevent/manage constipation</li> <li>Dehydration may affect mood and concentration</li> <li>Medications such as mood stabilisers can increase thirst</li> <li>Monitor fluid intake to prevent hyponatraemia</li> <li>Excessive caffeine intake (&gt;600mg/day) may exacerbate or induce anxiety, panic attacks, psychosis and mania (13,14). In addition, it can interact with the metabolism of some psychotropic drugs such as Clozapine and benzodiazepines (15).</li> <li>Excessive sugar sweetened beverages are associated with weight gain and the development of Type 2 diabetes and cardiovascular disease independent of weight. Limit these beverages (16,17).</li> <li>Aim for an adequate fluid intake of 30-40ml/kg/day, noting restriction may be required in some individuals, for example end stage renal disease or heart failure.</li> </ul> |
| <p>One low Glycaemic Index (GI) carbohydrate option should be available per meal</p>   | <ul style="list-style-type: none"> <li>People with a psychotic illness are more than three times more likely to be diagnosed with diabetes</li> <li>Consider low GI carbohydrate in appropriate portions, such as basmati rice, wheat pasta, wholegrain bread</li> <li>Discover more about <a href="#">low GI foods and portion sizes</a> (18):</li> </ul>   |

In addition to these overarching principles, special considerations may be required for various mental health settings, as outlined below:

| <b>Mental health service setting</b>  | <b>Additional considerations</b>   |
|---|--|
| Acute unit  | <ul style="list-style-type: none"> <li>Length of admission is significantly shorter with higher turn around rates; less intensive nutritional intervention is required.</li> <li>Elderly patients with dementia are at risk of weight loss as they may refuse to eat or not eat adequate amounts at normal meal times.</li> </ul>  |
| Sub-acute unit  | <ul style="list-style-type: none"> <li>Serve sizes and number of serves available should ensure the energy needs of the patient are met, rather than catering to desired amounts.</li> </ul>   |
| Rehabilitation unit / Long term stays   | <ul style="list-style-type: none"> <li>Rehabilitation or long stay unit consumers are more likely to have access to and desire for food sources outside the menu due to menu fatigue/boredom and day placement</li> <li>Consider seasonal, longer cyclic menus</li> <li>Some rehabilitation units may encourage self-catering. Ensure there is adequate education around healthy cooking, food safety, and shopping on a budget, to reduce reliance on take away or convenience foods.</li> </ul>  |
| Residential care (wide range of length of stays, from weeks to months and beyond) | <ul style="list-style-type: none"> <li>Menus are often developed by employees and residents, hence may not follow specific guidelines or best reflect the dietary considerations of the population</li> <li>Residential care services should be governed by the nutritional considerations of state and national hospital guidelines, to best address the increased rates of lifestyle related diseases</li> <li>These facilities may benefit from regular training of staff e.g. working with chefs or those involved in meal preparation, developing rules and procedures to support safe, varied, and nutritious food.</li> </ul> |

| Mental health service setting         | Additional considerations   |
|---------------------------------------|---|
| Take-away ordering on inpatient units | <ul style="list-style-type: none"> <li>Each unit will develop its own policy regarding take away or external foods being brought onto units. This may depend on the type of ward. Policies must be formed in negotiation with clients and the multidisciplinary team. Possible policies may include:               <ul style="list-style-type: none"> <li>Take away only on a particular day/s or a particular time of day</li> </ul> </li> </ul>   |
| Cooking classes/supermarket tours     | <ul style="list-style-type: none"> <li>A mental health dietitian may provide recommendations for appropriate recipes to ensure they reflect the specific nutritional considerations and food literacy of this group.</li> </ul>   |
| Hospital cafes/Vending machines       | <ul style="list-style-type: none"> <li>State policies exist for public health facilities, which can help guide decisions around the food and drinks available in service vending machines or hospital cafes.</li> <li>Healthy Eating Advisory Service has an online, <a href="#">free healthy vending assessment</a> which can assess if a vending machine meets the Healthy Choices recommendations of (19):               <ul style="list-style-type: none"> <li>at least 50% of foods and drinks are from the green category</li> <li>no more than 20% of foods are from the red category</li> </ul> </li> <li>Amber foods and drinks may also be supplied, but should not be placed more prominently than green choices.</li> </ul> |

## Resources

Resources which can guide a mental health food service quality improvement project include:

- Meal Quality [Audit Tool](#) (19)
- Menu and mealtime quality [assessment tool](#) for residential aged care.
- A [guide](#) to conducting a food waste assessment
- CSIRO [Healthy Diet Score](#)
- Cancer Council [Dietary Questionnaire](#) for Epidemiological Studies
- Healthy eating index for Australian Adults (HEIFA-2013) HEIFA diet quality score (15)
- [Patient](#) and [resident](#) satisfaction questionnaires

## Relevant websites

Nutrition standards and guidelines

- NSW Agency for [Clinical Innovation Nutrition Standards](#) for Consumers of Inpatient Mental Health Services in NSW (2013)
- [Menu and Nutritional Standards](#) for Public Hospitals in South Australia (revised 2014)
- Queensland Health [Nutrition Standards for Meals and Menus](#) 2015 and Foodservice

State policies regarding vending machines and healthy food and drinks in hospitals

- [ACT](#)
- [NSW](#)
- [QLD](#)
- [VIC](#)
- [WA](#)

## Acknowledgements

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**Afterword:** When working to improve the mental health and wellbeing of others, it's also important to look after your own mental health. Personal life stress, and stress related to work can affect your mood, thoughts and feelings in different ways, at different times. Remember to be mindful of your own wellbeing and make time to take care of your mental health at work, such as debriefing, taking a short walk/break outdoors, seeking support, and practising self-care. If any of the topics discussed in this resource brought up any distress for you, you can find helpful resources at Beyond Blue, Head to Health, and Mental Health Australia.

## References

1. Firth J, Siddiqi N, Koyanagi A, Siskind D, Rosenbaum S, Galletly C, et al. The Lancet Psychiatry Commission: a blueprint for protecting physical health in people with mental illness. *Lancet Psychiatry*. 2019 Aug 1;6(8):675–712.
2. Mental illness can lead to 20 year loss in life expectancy: Research [Internet]. NewsGP. [cited 2021 May 23]. Available from: <https://www1.racgp.org.au/newsgp/clinical/mental-illness-can-lead-to-20-year-loss-in-life-ex>
3. Nutrition and Menu Work Group, Statewide Foodservices. Queensland Health Nutritional Standards for Meals and Menus [Internet]. Brisbane, Queensland: Queensland Health; 2018 Dec [cited 2021 May 25]. Available from: [https://www.health.qld.gov.au/\\_data/assets/pdf\\_file/0030/156288/qh-nutrition-standards.pdf](https://www.health.qld.gov.au/_data/assets/pdf_file/0030/156288/qh-nutrition-standards.pdf)
4. Dipasquale S, Pariente CM, Dazzan P, Aguglia E, McGuire P, Mondelli V. The dietary pattern of patients with schizophrenia: A systematic review. *J Psychiatr Res*. 2013 Feb 1;47(2):197–207.
5. Agency for Clinical Innovation. Nutrition Standards for Consumers of Inpatient Mental Health Services in NSW [Internet]. Agency for Clinical Innovation. 2013 [cited 2021 May 29]. Available from: <https://aci.health.nsw.gov.au/resources/nutrition/nutrition-food-in-hospitals/nutrition-standards-diets/nutrition-standards-inpatient-mental-health>
6. SA Health Hospital Nutrition & Menu Standards Working Party. Menu and Nutritional Standards For Public Hospitals in South Australia [Internet]. South Australia: SA Health, Government of South Australia; 2014 Aug [cited 2021 May 26]. Available from: <https://www.sahealth.sa.gov.au/wps/wcm/connect/45b4ae0045d04e7d9bdcfbac725693cd/14130+1+Menu+Nutr+Stand+Report-v5.pdf?MO=D=AJPERES&CACHEID=ROOTWORKSPACE-45b4ae0045d04e7d9bdcfbac725693cd-nwLZ5rF>
7. Bozzatello P, Brignolo E, De Grandi E, Bellino S. Supplementation with Omega-3 Fatty Acids in Psychiatric Disorders: A Review of Literature Data. *J Clin Med*. 2016 Jul 27;5(8):67.
8. Lange KW. Omega-3 fatty acids and mental health. *Glob Health J*. 2020 Mar 1;4(1):18–30.
9. Nutrition Health Experts. Fibre Counter [Internet]. 2015 [cited 2021 May 27]. Available from: [https://www.nutritionhealth.com.au/site/assets/files/1112/fibre\\_counter.pdf](https://www.nutritionhealth.com.au/site/assets/files/1112/fibre_counter.pdf)
10. Australian Government Department of Health and Aging, New Zealand Ministry of Health. Nutrient Reference Values for Australia and New Zealand Executive Summary [Internet]. Canberra: National Health and Medical Research Council; 2017 Sep [cited 2021 May 29]. Available from: <https://www.nhmrc.gov.au/sites/default/files/images/Nutrient-reference-aus-nz-executive-summary.pdf>
11. Lee H, Kane I, Sereika S. Portion-control intervention for people with serious mental illness: A feasibility study. *Perspect Psychiatr Care*. 2020 Oct;56(4):858–63.
12. SA Health, Government of South Australia. Portion Sizes [Internet]. scheme=AGLSTERMS.AglsAgent; corporateName=Department for Health and Wellbeing; address=11 Hindmarsh Square, Adelaide, SA, 5000; contact=+61 8 8226 6000; [cited 2021 May 30]. Available from: <https://www.sahealth.sa.gov.au/wps/wcm/connect/Public+Content/SA+Health+Internet/Healthy+Living/Healthy+Eating/Healthy+Eating+Tips/Portion+Sizes>
13. Goiney CC, Gillaspie DB, Villalba CLA. Addressing Caffeine-induced Psychosis: A Clinical Perspective. undefined [Internet]. 2012 [cited 2021 May 30]; Available from: /paper/Addressing-Caffeine-induced-Psychosis%3A-A-Clinical-Goiney-Gillaspie/be139e20069b93f6903ce8e785dfc1458ee37298
14. Winston AP, Hardwick E, Jaber N. Neuropsychiatric effects of caffeine. *Adv Psychiatr Treat*. 2005 Nov;11(6):432–9.
15. Taylor D, Barnes TRE, Young AH. The Maudsley prescribing guidelines in psychiatry. 13th edition. Hoboken, NJ: Wiley; 2019. 1 p.
16. Malik VS, Hu FB. Sugar-Sweetened Beverages and Cardiometabolic Health: An Update of the Evidence. *Nutrients* [Internet]. 2019 Aug 8 [cited 2021 May 30];11(8). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723421/>
17. Schulze MB. Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women. *JAMA*. 2004 Aug 25;292(8):927.
18. Baker Heart & Diabetes Institute. Carbohydrates and Glycaemic Index (GI) [Internet]. Baker Heart & Diabetes Institute; 2020 [cited 2021 May 30]. Available from: <https://baker.edu.au/-/media/documents/fact-sheets/baker-institute-factsheet-carbohydrates-and-glycaemic-index.pdf>
19. Victoria State Government, Nutrition Australia. Healthy Eating Advisory Service's Food Checker [Internet]. 2016 [cited 2021 May 30]. Available from: <https://foodchecker.heas.health.vic.gov.au/>