

# Nutrition and falls

## Murrumbidgee LHD NSW Falls Prevention Network Forum

Prepared by **Sheree Morris**  
A/Dietitian in Charge  
Wagga Wagga Health Service

March 2018



**Health**  
Murrumbidgee  
Local Health District

# Overview

- Protective factors
- Risk factors
- Practical recommendations



# Falls Prevention<sup>®</sup> is *everyone's* business

- NSW Clinical Excellence Commission (CEC) *April Falls Day*
  - 1<sup>st</sup> Friday of April each year
  - 2018 theme is ***Nutrition and Hydration in Falls Prevention***



Health  
Murrumbidgee  
Local Health District

# National Safety & Quality Health Service Standards

- Improve the quality of health care provided by health service organisations and to protect the public from harm
- **Standard 5: Comprehensive Care**
  - **Minimising patient harm**
    - Preventing falls
    - Provide adequate nutrition and hydration



# Who are Dietitians?

- University-qualified allied health professionals
- Translate nutrition science into practical dietary advice
  - Assess client needs
  - Negotiate realistic goals
  - Provide individualised advice that is sustainable in the long term

*Good nutrition is everyone's responsibility and good nutrition is important for everyone!*



**Health**  
Murrumbidgee  
Local Health District

# Protective factors

---



**Health**  
Murrumbidgee  
Local Health District

# Modifiable risk

- Diet quality is one of the key factors influencing:
  - Bone strength
  - Muscle strength
  - Fracture repair
  - Rehabilitation
  - Prevention of subsequent fractures
- Nutrition is a **modifiable** risk factor



# Varied diet

- Research tends to focus on nutrients rather than foods
  - Maintaining or increasing muscle mass and bone density through adequate **protein, energy, calcium, vitamin D**
  - *In combination with resistance training (in collaboration with physiotherapists)*
- Foods are mixtures of various nutrients
  - **A widely varied diet means greater chance of getting all the nutrients the body needs**





# Australian Guide to Healthy Eating

Enjoy a wide variety of nutritious foods from these five food groups every day. Drink plenty of water.

Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties



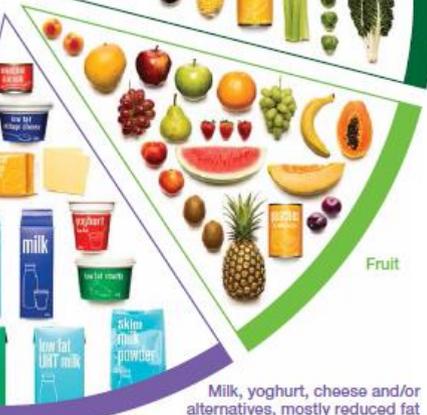
Vegetables and legumes/beans



Lean meats and poultry, fish, eggs, tofu, nuts and seeds and legumes/beans



Fruit



Milk, yoghurt, cheese and/or alternatives, mostly reduced fat



Use small amounts



Only sometimes and in small amounts



Health  
Murrumbidgee  
Local Health District

# Special diets?

- Special diets for conditions such as high blood pressure, high cholesterol, diabetes, or diets aimed at weight loss are **often not appropriate for older people**
  - Restricted diets compromise nutrition
  - Older people require the same quantity or often more nutrients than younger people
  - **Older people on special diets are at risk of muscle wasting and therefore falling**



# Body weight in the elderly

- Often people lose weight as they get older
  - This is not desirable
- Weight loss is not a normal part of the ageing process
  - A sign of disease?
  - Leads to **loss of muscle, loss of strength, increased risk of falls, loss of bone mineral density, increased fractures**
    - Even *intentional* weight loss



# Body weight in the elderly

- It is better to carry a little extra weight
  - Useful when unwell (energy storage)
    - Just one or two days of reduced food intake can lead to rapid muscle loss
  - **The best hip protector!**
- Overweight elderly people have **better health outcomes**
  - Ideal BMI: 22-27kg/m<sup>2</sup> (vs 20-25kg/m<sup>2</sup> <65 years)



# Calcium

- Calcium is the major mineral of bone
  - Positive correlation between calcium intake and bone mineral density
- Recommendation is **food before supplements**:
  - Encourage high-calcium foods (e.g. a glass of milk) before bed, because calcium is best absorbed overnight
  - Men: 3 serves of dairy products daily
  - Women: 4 serves of dairy products daily

# Calcium

- One serve of dairy:
  - 250 mL milk (whole, reduced fat, skim, fortified soy)
  - 250 mL custard
  - 200 mL high-calcium milk
  - 200 g yoghurt
  - 45 g hard cheese (soft cheese has less calcium)
- Check the label for soy, oat, rice, almond milk etc.
- Note foods that lower or prevent calcium absorption (e.g. foods containing caffeine, soft drinks)



## Vitamin D

- Necessary for mineralisation of bone
- Contributes to absorption of calcium
- **Low vitamin D is in many cases a causal factor of osteoporosis**
  - Fragile or brittle bones are at increased risk of breaking or fracturing

# Vitamin D

- Vitamin D is produced by the skin under UV irradiation
- Difficult/impossible to get adequate vitamin D from food
- UV rays from the sun are our main source of vitamin D
  - **10-15 minutes of sun exposure per day to the legs (approximately 15% of skin)**
  - Limit exposure during the hottest times of day
  - People with darker skin need more time in the sun
  - **Remember:** Glass and sunscreen block UV rays



# Vitamin D

- Vitamin D supplementation is recommended to:
  - prevent falls in older people
  - prevent/treat osteoporosis
- Very important for those who are unable to spend sufficient time in the sun
- >70 years: recommended dose is 25mcg (1000 IU) daily

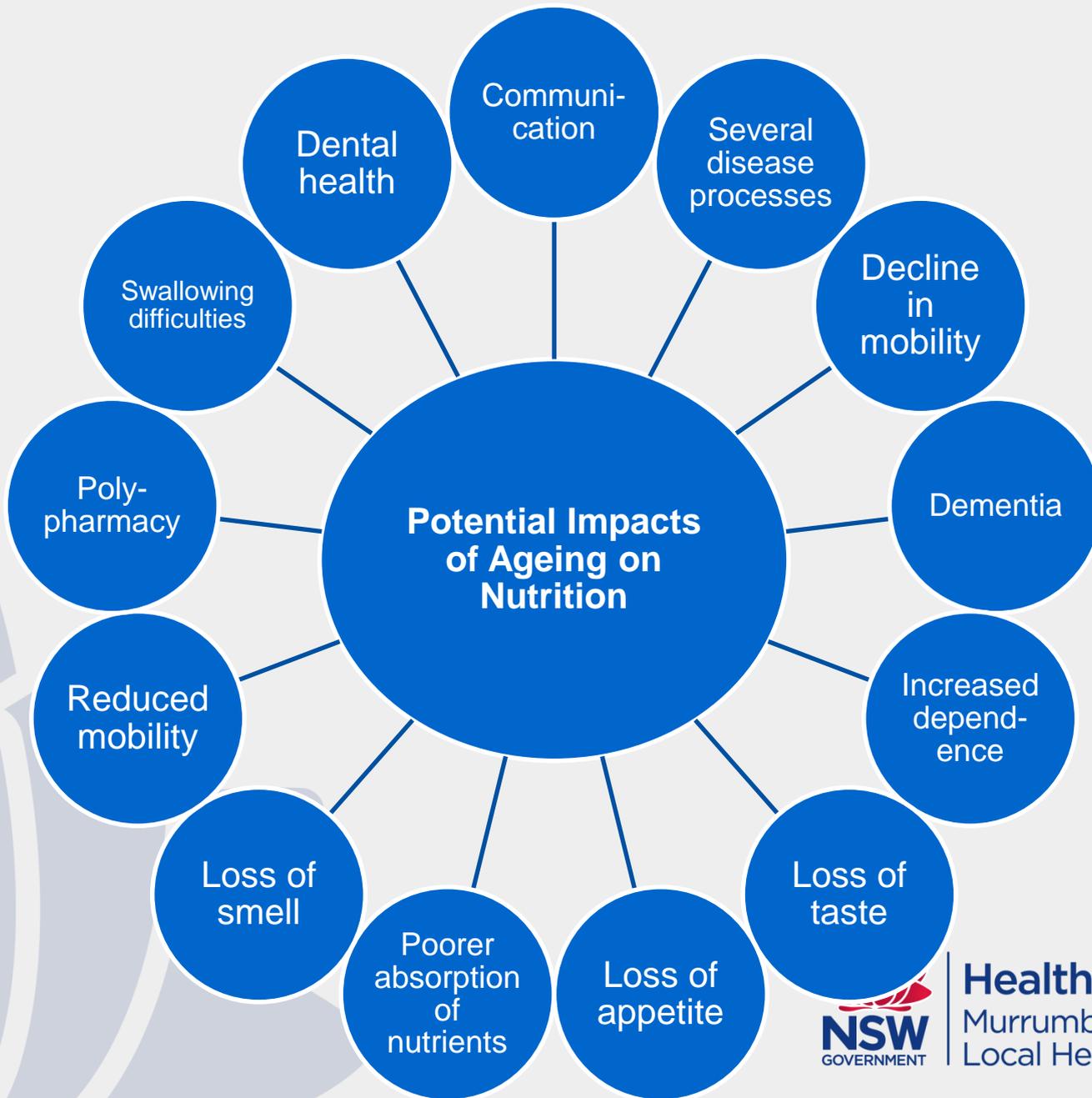


# Risk factors

---



**Health**  
Murrumbidgee  
Local Health District



# Malnutrition

*A state of nutrient deficiency that produces a measurable change in body composition or function*

- Common and poorly recognised
- Malnutrition rates in Australia:
  - 10-30% in the community
  - 30-50% in hospitals
  - 30-50% in rehabilitation centres
  - **40-70% in aged care facilities**





# Malnutrition and falls

- May lead to **increased falls** due to decreased muscle mass and therefore decreased strength
  - May lead to **poorer outcomes** if malnourished at the time of a fracture occurring, and during recovery
- Malnutrition screening is essential in the elderly population



# Dementia

- At high risk of malnutrition
- Often difficult to maintain weight
  - Occasionally experience rapid weight loss
- Improvements in nutrition are **beneficial and achievable**
- Provide **gentle support** to maintain independence in eating



# Dehydration

- **Older people may not recognise when they are thirsty**
- The importance of hydration does not decrease with age
- Fluid requirements are different for every body. Fluid is not just water! Fluid includes:

Tea	Coffee	Milk	Ice blocks	Juice	Hot chocolate
Sports drinks	Ice cream	Cordial	Custard	Jelly	Soup

- Older people may restrict their intake if they are incontinent
  - Concentrated urine increases the desire to urinate and increases risk of a UTI



# Practical recommendations

---



**Health**  
Murrumbidgee  
Local Health District

# Malnutrition screening

- It's **quick and simple**
- It's everyone's responsibility (can be done by anyone)
- Early identification and treatment of those at risk prevents:
  - Loss of mobility
  - Loss of independence
  - Poor quality of life



# Malnutrition Screening Tool

1. Have you / have they lost weight recently without trying?

No 0

Unsure 2

Yes, how much (kg)?

1-5 1

6-10 2

11-15 3

>15 4

Unsure 2

2. Have you / have they been eating poorly because of a decreased appetite?

No 0

Yes 1

Total score —

- Applies to the last 3-6 months
- Unintentional/ unexpected weight loss
- **Overweight/ obese people with unintentional weight loss can become malnourished too**

*Prompts: are your clothes looser? Do you have to do your belt up tighter?*

- Meaning less than  $\frac{3}{4}$  usual intake

*Prompts: are you skipping meals? Eating smaller meals than usual? Snacking less? Is chewing/swallowing a problem?*

# Treating malnutrition

- Make every mouthful count
  - High protein high energy
    - Three meals a day that are rich in meat/ dairy/ legumes
  - Encourage fluids and offer them frequently
  - Provide adequate assistance at meal times
- Referral pathways to dietitians and other allied health
- Training for staff?



# NSW Health My Health Learning module

Nutrition Screening for Malnutrition

Menu About Resources Help

**Nutrition Screening for Malnutrition**

This module is designed for relevant health care providers who undertake nutrition screening in health care organisations.

It will take approximately 20 minutes to complete the module. In order to be marked as having completed the module, you must attempt all activities and view all slides.

58% 35% 42% 21%

Click to go to next page

Page 1 of 32

# Best Practice Food and Nutrition Manual for Aged Care

Edition 2



# Eating Well



A Nutrition Resource  
for Older People and their Carers



Written by Carolyn Bunney, Home Economist, Nutritionist  
and Rudi Bartl, Dietitian  
Nutrition Services, Central Coast Local Health District

# Not sure? Ask a Dietitian!

- Find out who your local dietitian is – and give them a call!
- Contacts in MLHD
  - Sheree Morris (Dietitian in Charge, WWHS)  
02 5943 3456 [sheree.morris@health.nsw.gov.au](mailto:sheree.morris@health.nsw.gov.au)
  - Jackie Priestly (Dietetics Adviser, MLHD)  
02 6938 6416 [jacq.priestly@health.nsw.gov.au](mailto:jacq.priestly@health.nsw.gov.au)



# References

- Agarwal et al. Nutritional status and dietary intake of acute care patients: results from the Australasian Care Day Survey 2010. *Clinical Nutrition* 2012. 31:41-7
- American Diabetes Association. (2008) Nutrition recommendations and interventions for diabetes. A position statement of the American Diabetes Association, *Diabetes Care*;31 (Supplement 1 S61-S78 ).
- Australian Commission on Safety and Quality in Health Care (2009) *Preventing Falls and Harm from Falls in Older People*. <https://www.safetyandquality.gov.au/our-work/falls-prevention/>
- Australian Commission on Safety and Quality in Health Care (2017) *National Safety and Quality Health Service Standards* <https://www.safetyandquality.gov.au/our-work/assessment-to-the-nsqhs-standards/nsqhs-standards-second-edition/>
- Bartly & Bunney, CCLHD (2015). *Best Practice Food and Nutrition Manual for Aged Care Edition 2* <http://www.cclhd.health.nsw.gov.au/ourservices/nutrition/Pages/Nutrition-Resources.aspx>
- Bowman CS (2010). *The food and dining side of the culture change movement: Identifying barriers and potential solutions to furthering innovation in nursing homes*. <https://www.pioneernetwork.net/wp-content/uploads/2016/10/The-Food-and-Dining-Side-of-the-Culture-Change-Movement-Symposium-Background-Paper.pdf>
- Cameron et al (2008). Interventions for preventing falls in older people in nursing care facilities and hospitals. *Cochrane Database of Systematic Reviews* (3) Art. No.: CD005465. DOI: 10.1002/14651858.CD005465.



- Central Coast Local Health District (CCLHD) (2015). Eating Well. A Nutrition Resource for people and their Carers. <http://www.cclhd.health.nsw.gov.au/ourservices/nutrition/Pages/Nutrition-Resources.aspx>
- Diabetes Centre, SA Health (2012) *Healthy eating & diabetes: A guide for aged care facilities*
- Dietitians Association of Australia (2018) <https://daa.asn.au/>
- Ensrud et al (2003). Intentional and unintentional weight loss increase bone loss and hip fracture in older women. *Journal of the American Geriatrics Society*, 51(12), pp 1740-7.
- Evidence based practice guidelines for the nutritional management of malnutrition in adult patients across the continuum of care. *Nutrition & Dietetics*; 2009; 66 (Suppl. 3:S1):34.
- Isenring EA, Bauer JD, Banks M, Gaskill D. (2009) The Malnutrition Screening Tool is a useful tool for identifying malnutrition risk in residential aged care. *Journal of Human Nutrition & Dietetics*. Dec; 22(6):545-50
- Kaiser et al. (2010) Functionality and mortality in obese nursing home residents: an example of 'Risk Factor Paradox'? *Journal of the American Medical Directors Association*. 11(6):428-35.
- Miller SL, Wolfe RR. (2008) The danger of weight loss in the elderly. *Journal of Nutrition, Health & Aging*. [Review]. Aug-Sep; 12(7):487-91.



- Moore & Boltong (2011). Don't fall for weight: a systematic review of weight status and falls. *Nutrition & Dietetics*, 68, pp. 273-279.
- National Health and Medical Research Council (NHMRC) (1991). *Recommended Dietary Intakes for Use in Australia*, NHMRC, Canberra.
- NHMRC (2015). *Australian Dietary Guidelines*. <http://www.ealforhealth.org.au>
- Nowson C, Diamond T, Pasco J, Mason R, Sambrook P and Eisman J (2004). Vitamin D in Australia. Issues and recommendations. *Australian Family Physician* 33(3):133–138.
- NSW Falls Prevention Network (2015). <http://fallsnetwork.neura.edu.au>
- NSW Health (2017). *Nutrition Care Policy Directive PD2017\_041*. <https://www.aci.health.nsw.gov.au/resources/nutrition/nutrition-food-in-hospitals/nutrition-policy>
- Valtin H. (2002) 'Drink at least eight glasses of water a day.' Really? Is there scientific evidence for '8 x 8'? *Am J Physiol Regul Integr Comp Physiol*. [Review]. Nov; 283(5):R993-1004.
- Winter, Wattanapenpiaboon & Nowson. (2011) Body weight and mortality in older adults: a meta-analysis. *Proceedings of the Nutrition Society of Australia*. 2011;35:31.
- Woodward M. (2007) *Guidelines to effective hydration in aged care facilities*. Dec , 12

