

The 2013 Australian dietary guidelines and recommendations for older Australians

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Background

Dietary guidelines are designed to assist people to make appropriate food choices to reduce their risk of diet-related diseases. In 2013, the *Australian Dietary Guidelines* were updated and now includes food group recommendations for two groups of older Australians (51–70 years and 70+ years), where previously only one older age group existed (60+ years).

Objective

The aim of this article is to raise awareness among general practitioners (GPs) about the latest *Australian Dietary Guidelines* and to identify relevant resources that will help GPs provide up-to-date dietary advice for older patients.

Discussion

The 2013 *Australian Guide to Healthy Eating* visually represents the proportions of the five food groups recommended for daily consumption. The Recommended Dietary Intake for some nutrients is higher for older people, compared with the general adult population. Older people often turn to their GP for nutritional advice.

Dietary guidelines are designed to assist people to choose a healthy, adequate diet that meets their nutritional requirements. The *Australian Dietary Guidelines* (the Guidelines) have been developed by the government in conjunction with the National Health and Medical Research Council (NHMRC) to reduce the burden of preventable diet-related diseases in the population (*Table 1*). The Guidelines include advice about dietary patterns that promote general health and wellbeing. The recommendations are broad enough to accommodate a range of cultural and personal food preferences and health behaviours, thereby providing individuals with choice and options.

In 2013, the NHMRC published the most recent Guidelines,¹ which replaced the 2003 *Dietary Guidelines for Australian Adults* and integrated updates of other guidelines. The second recommendation (Guideline 2) in the Guidelines is to eat a variety of nutritious foods, in the recommended daily amounts, from the following five food groups to maintain good health:

- vegetables
- fruit
- grains (cereals)
- lean meats and poultry, fish, eggs, tofu, nuts/seeds and legumes/beans
- milk, yoghurt, cheese and/or alternatives.

These foods are grouped together because they provide similar amounts of the key nutrients in that food group. The 2013

Guidelines now include recommendations for the intake of food groups for two categories of older individuals (men and women aged 51–70 years and aged 70+ years). The 2003 guidelines only included recommendations for men and women aged 60+ years.

The Guidelines include the *Australian Guide to Healthy Eating* (AGHE), which visually represents (in the shape of a round plate) the proportions of the five food groups (listed above) recommended for consumption each day. The foods recommended for consumption in the AGHE were informed by the Food Modelling System:² a technical document that describes a range of computer-generated diets that translate the Nutrient Reference Values (NRVs)³ into dietary patterns (dietary models) to describe different types, combinations and amounts of foods that will meet the nutrient requirements for each age and gender group of different height and activity level in the population.¹ The NRVs are the recommended amounts of macronutrients and micronutrients required to avoid deficiency and toxicity states, and to prevent chronic disease. Recommended Dietary Intakes (RDIs) include the amounts of essential nutrients considered to be adequate to meet the nutritional needs of most healthy people and are based on age, gender, level of physical activity and whether they are pregnant or lactating.

The suggested RDIs for some nutrients, such as vitamin B2, vitamin B6, vitamin D, calcium and protein, are higher for older Australians, compared with younger adults³ (Table 2). For example, individuals aged 70+ years require three times the amount (15 µg) of vitamin D, compared with adults aged 19–50 years (5 µg). The NRVs are currently under review to ensure they remain relevant, appropriate and useful (www.nrv.gov.au).

Awareness of dietary requirements and recommendations

Older people recognise the importance of making healthy food choices in order to maintain wellbeing and independence as they age.^{4–8} However, studies suggest

that older people do not realise that their requirement for some nutrients increases with age. For example, among a sample of 152 Scottish residents aged 75+ years living independently, there was widespread agreement with the view that healthy eating meant the same thing for older people as it did for the rest of the population.⁷ In fact, very few people in the study thought there were any special nutritional requirements that older people should adopt to safeguard or improve their health in old age. A similar finding emerged in a small qualitative study of 29 Australians aged 65+ years.⁹ The majority of participants were also unaware of the existence of the national dietary guidelines or any other age-adjusted nutrition recommendations.

General practitioners (GPs) are well positioned to educate older people about their nutritional needs given that older people frequently use GP services. Studies have shown that patients consider GPs to be a credible source of health information, including nutritional advice.^{10–12} Interventions to prevent undernutrition in general practice patients¹³ and the challenges associated with routine nutritional screening of older patients¹⁴ have been the subject of other papers published in this journal.

The aim of this paper is to raise GPs' awareness about the 2013 Guidelines and to identify relevant resources that will help GPs provide up-to-date dietary advice for their older patients. This paper will focus on Guideline 2 – 'Enjoy a wide variety of nutritious foods from the five food groups every day' – and the recommendations for older Australians.

Vegetables

Vegetables are a good source of many nutrients including vitamin A, vitamin C, vitamin K, folate (folic acid), potassium and magnesium.¹ Vegetables provide dietary fibre, which is important in maintaining digestive health and function. Most vegetables are naturally low in fat and calories. Eating a diet rich in vegetables as part of an overall healthy diet may reduce the risk of heart disease, stroke and some types of cancer.¹ Plant foods also contain non-nutrient compounds such as phytochemicals that are biologically active in the body. Examples of phytochemicals

Table 1. Summary of the NHMRC 2013 Australian Dietary Guidelines

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.

Guideline 2

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

Guideline 3

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.

Guideline 4

Encourage, support and promote breastfeeding.

Guideline 5

Care for your food; prepare and store it safely.

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Table 2. Increased Recommended Dietary Intakes (RDIs) per day with ageing³

Men	Vitamin B2	Vitamin B6	Vitamin D*	Calcium	Protein
19–50	1.3 mg	1.3 mg	5 µg	1000 mg	64 g
51–70	1.3 mg	1.7 mg	10 µg	1000 mg	64 g
70+	1.6 mg	1.7 mg	15 µg	1300 mg	81 g
Women					
19–50	1.1 mg	1.3 mg	5 µg	1000 mg	46 g
51–70	1.1 mg	1.5 mg	10 µg	1300 mg	46 g
70+	1.3 mg	1.5 mg	15 µg	1300 mg	57 g

*Vitamin D does not have an RDI but an AI (adequate intake) value

include flavonoids, which are found in most vegetables, and carotenoids found in carrots, pumpkin, spinach, sweet potatoes and tomatoes. These compounds act as potent antioxidants and are associated with reduced risk of cancer and other diseases.¹⁵

The most recent dietary survey data for Australians – the 2011–2012 National Nutrition and Physical Activity Survey (NNPAS) – is a comprehensive study that used a 24-hour dietary recall to obtain data about the dietary practices of the Australian population. The findings from this survey indicate that in relation to the consumption of vegetables, less than 10% of the population aged 51 years and over met the recommended target of five serves of vegetables daily (5.5 serves for men aged 51–70 years).¹⁶ The proportion of the general adult population that attained the recommended intake for the number of vegetables was even lower. The softer texture of cooked vegetables (and stewed fruit) may be more suitable for some older people with oral health problems such as dental problems.

Fruit

Fruit is a rich source of vitamin A, vitamin C, folate, and potassium. Fruit also provides dietary fibre and a range of phytochemicals. In particular, fruits rich in the blue pigments such as blueberries, blackberries and purple/black grapes contain anthocyanins, a type of flavonoid with potent antioxidant properties.¹⁷ Regular consumption of fruit is associated with a reduced risk of coronary heart disease, stroke, oral and nasopharyngeal cancer and obesity.¹ According to the NNPAS, just over half of the adult population aged 51–70 years consumed the recommended intake of two serves of fruit daily. The proportion of older adults who reached this target for fruit increased to 70% of women and 60% of men aged 71 years and over.¹⁶

Grain (cereal) food group (mostly wholegrain and/or high cereal fibre varieties)

Key nutrients in wholegrain cereals include B group vitamins (excluding B12), vitamin E,

iron, magnesium, phosphorus, zinc, starch (complex carbohydrate), protein and dietary fibre.¹ Wholemeal or wholegrain varieties are preferable because they provide more dietary fibre, vitamins and minerals than refined grain (cereal) foods. The NNPAS found that 92% of men and 90% of women aged 51–70 years consumed a 'cereal or cereal product', compared with 96% of both men and women aged 70+ years in the 24-hour dietary recall period.¹⁶ A high intake of wholegrain forms of grain (cereal) foods may not be well tolerated if there are dental problems. Softer varieties, such as finely milled wholemeal bread, cooked grains (eg oats, rice and quinoa) and/or other fibre-enriched foods may be more suitable.¹

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

The foods in this group are good sources of nutrients such as vitamin B12 (with the exception of plant foods unless fortified), iron, zinc, essential fatty acids and protein. Men and women aged 70+ years require approximately 20% more protein each day than those aged 19–70 years (*Table 2*). Even higher rates of protein intake have been recommended for older people: the PROT-AGE Study group recommends that persons aged 65 years and over consume 1.0–1.2 g/kg body weight (BW) protein daily to moderate the loss of lean muscle mass.¹⁸ Brownie and Coutts¹⁹ found that the majority of participants (mainly older women), thought that their need for red meat, in particular, was reduced in old age.

Consuming whey protein is a convenient way to help older people meet their daily protein needs, particularly those with reduced appetite, lack of interest in food, or an impaired ability to consume protein-rich foods.

Milk, yoghurt, cheese and/or alternatives food group (mostly reduced fat)

Dairy foods are good sources of nutrients such as riboflavin, vitamin B12 (with the

exception of plant foods, unless fortified), vitamin A, vitamin D, calcium, iodine, zinc and protein. For older Australians, milk is a good source of calcium, protein and energy. Women aged 51+ years are advised to consume four serves of 'mainly reduced fat' foods from the dairy group each day.¹ This upward adjustment of serves from this food group (compared with women <50 years of age) will help older women to achieve the additional calcium needed to protect against bone loss at this stage in their life. Furthermore, the extra serves of dairy foods will help women aged 70+ years in particular to reach the age-adjusted increased RDI target for protein.

All milks, including whole milk, are good choices for older people whose appetites are reduced, or who have lost weight, unless medically advised otherwise.¹ Lactose-intolerant people are encouraged to consume alternative calcium-fortified products and to seek advice from a health professional about whether they can include small amounts of dairy food into their diet and if they need to take calcium supplements.¹

The recommended number of servings of the five food groups are shown in *Table 3*.

Who do the Guidelines apply to?

In the older population, the Guidelines apply to healthy older individuals who are not at risk of undernutrition or malnutrition and who have limited age-related impairments. The Guidelines also apply to individuals with diet-related risk factors such as overweight and obesity, in addition to those with chronic disease(s), such as hypertension, heart disease, insulin resistance and/or type 2 diabetes, although tailored individual guidance may be necessary. Referral to a dietitian should be considered for older persons with complex health needs, especially frail older individuals.¹

Resources for GPs and their patients

The Guidelines are located at www.eatforhealth.gov.au, where GPs and their patients can find a range of resources

intended to improve the nutritional health of Australians. Alternatively, GPs and patients can navigate their way around the website to find interactive web tools and healthy eating fact pages and tips. The key resources for GPs and their patients are summarised in *Table 4*.

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Sadly Dr Brownie passed away suddenly on 24 November 2014. She will be missed greatly by her family, friends and colleagues.

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Table 3. NHMRC recommended daily servings from the five food groups¹

Age group (years)	Men			Women		
	19–50	51–70	70+	19–50	51–70	70+
Vegetables*	6	5.5	5	5	5	5
Fruit†	2	2	2	2	2	2
Grains (cereals)‡	6	6	4.5	6	4	3
Lean meats and poultry, fish, eggs, tofu, nuts/seeds, and legumes/beans§	3	2.5	2.5	2.5	2	2
Milk, yoghurt, cheese and/or alternatives	2.5	2.5	3.5	2.5	4	4

*A standard vegetable serve is about 75 g (100–350 kJ): ½ cup cooked green or orange vegetables (eg broccoli, spinach, carrots or pumpkin); ½ medium potato or other starchy vegetables (eg sweet potato, taro or cassava); 1 cup green leafy or raw salad vegetables; ½ cup cooked dried beans or canned beans, peas or lentils; ½ cup sweet corn; 1 medium tomato

†A standard fruit serve is about 150 g (350 kJ): 1 medium apple, banana, orange or pear; 2 small apricots, kiwifruit or plums; ½ cup fruit juice (with no added sugar) – only occasionally; 30 g dried fruit (eg 4 dried apricot halves or 1.5 tablespoon of sultanas) – only occasionally; 1 cup diced or canned fruit (with no added sugar)

‡A standard cereal serve is about 500 kJ: 1 slice (40 g) bread or ½ medium bread roll; w cup (75–120 g) cooked rice, pasta, noodles, barley, buckwheat, semolina, polenta, bulgur or quinoa; ½ cup (120 g) cooked porridge; ¾ cup (30 g) wheat cereal flakes; ¼ cup (30 g) muesli

§A standard meat or alternative serve is about 500–600 kJ: 65 g cooked lean meats (eg beef, lamb, veal, pork, goat or kangaroo [about 90–100 g raw weight]); 80 g cooked lean poultry (eg chicken or turkey [about 100 g raw weight]), 100 g cooked fish fillet (about 115 g raw weight or one small can of fish); 2 large eggs (120 g); 1 cup (150 g) cooked or canned legumes/beans, such as lentils, chickpeas or split peas (no added salt); 170 g tofu; 30 g nuts, seeds, peanut or almond butter, tahini or other nut or seed paste

||A standard dairy or alternative serve is about 500–600 kJ: 1 cup (250 mL) milk; ½ cup (125 mL) evaporated milk; 2 slices (40 g) of cheese; ¾ cup (200 g) yoghurt; 1 cup (250 mL) soy, rice or other cereal drink with at least 100 mg of added calcium per 100 mL; ½ cup (120 g) ricotta cheese

Table 4. Key resources

Eat for Health Educator Guide – Information for nutrition educators (NHMRC Ref N55b)

67-page booklet has been written for people who educate others about eating for good health

Australian Dietary Guidelines – Summary (NHMRC Ref N55a)

53-page booklet has been developed to assist 'consumers' to understand the guidelines and how to apply them and choose a healthy diet using a variety of foods

Includes practical information on serve sizes and recommended number of serves for each food group depending on age, gender and activity level of interest to patients who want to better understand the scientific basis of the Guidelines

Healthy Eating for Adults – Brochure (NHMRC Ref N55g)

2-page brochure provides a brief overview of the Guidelines and some tips for choosing nutritious foods and drinks

Australian Guide to Healthy Eating – A4 poster (NHMRC Ref N55o)

1-page poster is a food selection guide that visually represents the proportion of the five food groups recommended for consumption each day

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