



Position Statement for Healthcare Professionals

Eggs and Older Adults (65+)

Updated May 2017

Nutrition plays a significant role in maintaining the health of older adults. Ensuring adequate dietary intake can help enhance quality of life, reduce chronic disease risk and increase longevity¹⁻³.

Older Australians are faced with a range of issues that can affect their food intake, including a reduction in appetite. At the same time they are faced with age-related changes in body composition and functioning, for example loss of muscle mass and decreased mineral absorption which in turn may increase their nutrient requirements. In the 2011-13 Australian Health Survey⁴, older Australians generally rated themselves as having poorer health than younger people, with persons aged 75-84 years and 85 years and over recording the highest proportions of fair or poor health at 31.4% and 37.5% respectively. Furthermore, approximately 70% of deaths in Australians aged 65-84 years are due to cardiovascular disease or cancer, both of which are closely linked to diet⁵.

Food & Nutrition Issues

The 2011-2012 National Nutrition & Physical Activity Survey (NNPAS) provides a snapshot of food and nutrient intakes across Australians of all ages.

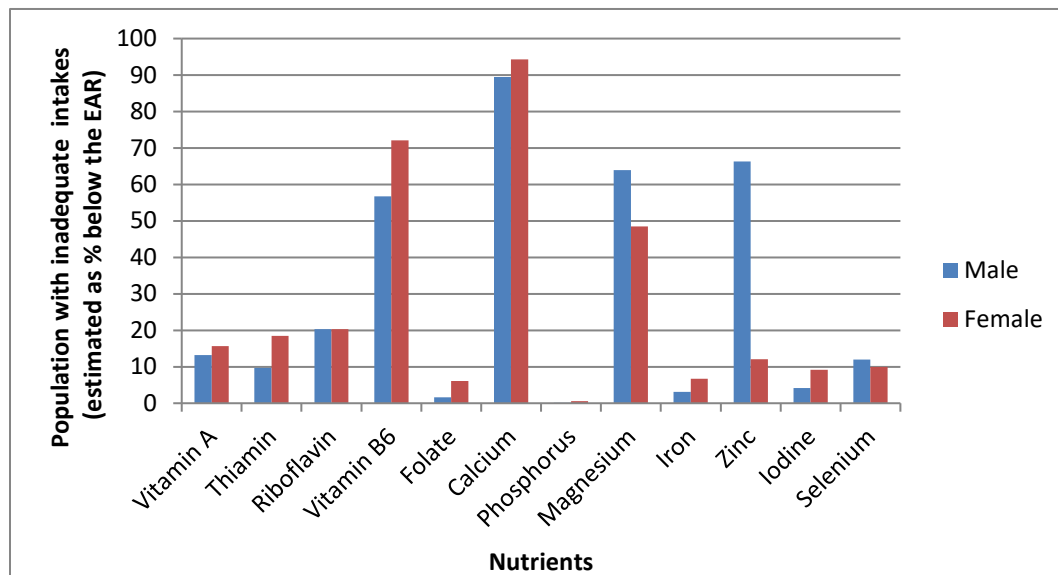
Results of the survey, suggest older Australians are:

- More likely to meet vegetable intake recommendations compared to younger adults (6% vs 3%)
- More likely to meet fruit intake recommendations compared to younger adults (30% vs 23%)
- Less likely to meet dairy and alternatives intake recommendations compared to younger adults (3% vs 10%)
- More likely to meet lean meat and alternatives intake recommendations compared to younger adults (29% vs 11%)
- Older males (24%) are less likely and older females (39%) more likely to meet grain intake recommendations compared to younger adults (35% younger males and 8% younger females)

These results tend to reflect the changes in food group recommendations for this age group (i.e. increased number of dairy serves and decreased number of lean meat and grain serves are recommended for 51-70 and 71+ age groups) but nevertheless highlight where older Australians need to improve their intakes.

In addition, those aged 51-70 years were most likely to report being on a special diet, such as a weight loss diet, low fat, salt or sugar or a high fibre diet. Furthermore, older Australians aged 71 and over are not meeting the estimated average requirement (EAR) for protein, riboflavin, vitamin B6, calcium, magnesium, selenium and zinc⁶. From figure 1, particular nutrients of concern are calcium, vitamin B6 and magnesium⁶.

Figure 1: Percentage of older Australians (aged 71 and over) with nutrient intakes less than the EAR⁶



Zinc is a major nutrient of concern in males who are more than five times as likely as females to have intakes below the EAR (66.3% vs. 12.1%)⁶.

Other research studies have suggested that older Australians may be at risk of vitamin D and vitamin B12 deficiencies^{7,8}. Of note, research has shown that up to 80% of women and 70% of men living in hostels or nursing homes in Victoria, New South Wales and Western Australia were vitamin D deficient⁸. Older people are also less efficient at converting vitamin D from sunlight through the skin compared to younger people⁹. Older adults have the highest risk of anaemia according to the 2011-12 Australian Health Survey⁴, with rates rapidly increasing after the age of 65 years. Given the higher risk of nutritional deficiencies in older adults, consuming nutrient rich foods becomes an even higher priority.

Physiological changes

Age-related physiological changes such as decreased immune function, increase in oxidative stress, decreased mineral absorption, decreased gastric acid production and other changes in the gastrointestinal tract can increase the requirements for vitamins B6, B12, E, C, D, folic acid, zinc, calcium, iron and carotenoids¹⁰. Reduced salivary flow, difficulty in swallowing, poor dentition and reduced appetite can also impair the nutritional status of older adults due to decreased food intake¹¹. For example, a 2012 Australian study found those with lower chewing ability had lower compliance with dietary guidelines in relation to fibre, sugar, fat and salt¹².

Given these physiological changes, older adults may require softer textured, high nutrient content foods to enable them to obtain sufficient nutritional value from the foods they are able to eat.

Body composition changes and protein intake

Body composition also changes with age, with a particularly notable reduction in skeletal muscle mass (sarcopenia) and other body proteins such as organ tissue, blood cells and immune factors¹³.

Ensuring adequate protein intake is particularly important to address these changes. The current Australian protein RDI for adults aged 70 years and over (81g protein/ day for men and 57g for women)⁹ is around 25% higher than the protein needs of younger adults due to increased protein requirements with age.

Recommendations to slow the age related loss of skeletal muscle mass were released by the European Society for Clinical Nutrition and Metabolism (ESPEN) in 2014¹⁴:

- In healthy older adults the diet should provide at least 1.0–1.2 g protein/kg body weight/day
- In older adults who are malnourished or at risk of malnutrition due to acute or chronic illness, the diet should provide 1.2–1.5 g protein/kg body weight/day

In conjunction with adequate protein intake, daily physical activity or exercise (resistance training, aerobic exercise) should be undertaken by all older people, for as long as possible.

Table 1 shows the contribution of one serve* of eggs towards the vitamin and mineral RDIs for older Australians. Egg consumption data from the Australian Bureau of Statistics shows 17.9% of adults aged 71 years and over consumed eggs and egg dishes on the day prior to the interview¹⁵. Eggs can play a role in meeting the vitamin and mineral requirements of older adults.

Table 1: Contribution to RDIs of One Serve of Eggs in Older Australians

Nutrient	% RDI ⁹ for ages 70+
Protein	16-22%
Long-chain Omega-3s	71-127% adequate intake (AI)
Selenium	59-68%
Vitamin B12	33%
Iodine	29%
Iron	21%
Vitamin A	27-34%
Folate	24%
Vitamin E	24-34%
Vitamin D	5% AI
Zinc	4-6%

Health issues

Overweight, high blood pressure and high cholesterol are significant health issues that affect older adults and are risk factors for chronic diseases such as Type 2 diabetes and heart disease. Overweight and obesity rates peak in people aged 65-74 years with 74.9% being overweight or obese¹⁶. Type 2 diabetes occurs in 17% of individuals over the age of 75 years¹⁶. High blood pressure is also a risk factor for stroke, with 46.2% of those aged 65 years and over diagnosed with high blood pressure¹⁶. Nearly half of adults aged 55-64 years have high total cholesterol levels¹⁷.

Another relevant health issue for older adults is eye health. There is evidence that high-dose supplementation with vitamin A, antioxidants and zinc may reduce the amount of visual degeneration in the elderly¹⁸. There is also evidence indicating a role for omega 3 fatty acids and the antioxidants lutein and zeaxanthin in the prevention of age-related macular degeneration¹⁹⁻²⁴. Eggs provide bioavailable vitamin A, omega 3 fatty acids, the antioxidants lutein and zeaxanthin, selenium and zinc. For further details, refer to ENC's *Eggs and Eye Health* statement.

Conclusion

Due to the variety of nutrients found in eggs, they are an ideal food to include in the diets of older adults. They are also economical, easily prepared and soft in texture which makes them appropriate for people of this age group. Eggs are recommended as part of a healthy eating pattern that also includes adequate amounts of wholegrain breads and cereals, fruits, vegetables, low fat dairy foods, lean meat, fish and poultry and unsaturated fats.

This statement is for healthcare professionals only.

**One serve = 2x60g eggs (104g edible portion)*

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