Position Statement for Healthcare Professionals

Eggs and Vegetarians

Updated June 2017

Plant-based diets, both vegan and vegetarian, are rising in popularity in Australia. Between 2012 and 2016, the number of Australian adults whose diet is all or almost all vegetarian has risen from 1.7 million people (or 9.7% of the population) to almost 2.1 million (11.2%)[1]. The research also showed many Australians adopt a vegetarian diet for health and/or weight-loss reasons.

Vegetarian eating patterns are generally characterized by the exclusion of animal-based foods however there are various forms of vegetarian eating as listed below.

Table 1: Types of vegetarian eating patterns[2]

Type of Vegetarian Diet	What foods are usually consumed?
Vegan	Strictly plant foods only. No animal products of any nature. Often organic and ethically sourced options are preferred.
Lacto Vegetarian	Predominately plant based foods but also consume dairy products.
Lacto-Ovo Vegetarian	Predominately plant based foods but also consume eggs as well as dairy products.
Pesco Vegetarian	Predominately plant based foods but also consume fish and other seafood (may or may not consume eggs and dairy products) but avoid all other meats.
Semi Vegetarian	Predominately plant based foods with the occasional inclusion of fish, chicken and other meats.

Scientific research suggests a number of possible health benefits to vegetarian eating with a 2016 systematic review and meta-analysis of 96 observational studies reporting significantly reduced body mass index, total-cholesterol, LDL-cholesterol and glucose levels in vegans and vegetarians compared with omnivores[3]. There was also a protective effect of vegan and vegetarian diets on incidence and/or mortality from ischemic heart disease and cancer[3]. It has also been suggested that vegetarian diets are an effective option for prevention of type 2 diabetes and could be used as a tool to improve blood glucose management[4].

Well planned vegetarian eating pattern can meet nutritional needs for good health and may reduce the risk of cancer, cardiovascular disease, metabolic syndrome, insulin resistance, type 2 diabetes, hyperthyroidism, hypertension and obesity[5-11]. As well as experiencing overall better health, on average vegetarians also live longer than non-vegetarians[12].

As they consist of predominantly plant based foods, most vegetarian eating patterns are lower in saturated fat and higher in dietary fibre, magnesium, potassium, folate, antioxidants such as vitamins C and E and phytochemicals compared to meat-containing diets[13]. However inadequately planned vegetarian diets may result in insufficient intakes of a number of key nutrients such as vitamin B12, iron, calcium and zinc in particular[14]. Furthermore, while the average energy content of vegetarian diets are similar to non-vegetarian diets, the bulkiness of a high intake of fibre-rich plant foods [15] has the potential to result in lower energy and nutrient intakes in infants and young children with smaller appetites[14,16]. Table 2 outlines details of the possible nutrients at risk in a vegetarian eating pattern.

Nutrient	Intakes in vegetarian populations	Amount in 1 serve of eggs	Benefits from eggs
Protein	Can be significantly lower than omnivore diets[17,18]. Possible lower intakes of the amino acids methionine and lysine[19].	12.7g [25% DI]	Protein from eggs contain all essential amino acids. High quality and high digestibility[19].
Long-Chain Essential Fatty Acids	Vegetarian and vegan diets tend to be high in omega-6[24,25] with little to no omega-3 DHA and EPA[20,26].	114mg [71-127% AI]	Eggs are one of the only food sources of DHA in an ovo-vegetarian diet.
Vitamin B12	Low serum levels of vitamin B12 have been reported in adult and children vegan and vegetarians[20,21].	0.8µg [40% RDI]	Eggs are one of the few food sources of vitamin B12 in an ovo-vegetarian diet.
Iron	Low iron levels can be common, particularly in young Australian vegetarian and semi-vegetarian women[22]. They have also been reported in some vegetarian children[23].	1.7mg [14% RDI]	Eggs contain both heme and non-heme iron[24]
Calcium	Low in vegan dietary patterns[2].	49mg [6% RDI]	While it is not common practice in Western populations, eggshells can be crushed and used as an extra source of calcium in the diet[25].

Amongst vegetarians, populations that are the most vulnerable to nutrient inadequacies include vegans[26], children[13], young women[27] and pregnant women[2712,3128]. These groups, in particular, need to take extra care to ensure they are achieving a balanced, varied diet and taking a vitamin B12 supplement if advised by their health professional.

As the 2013 Australian Dietary Guidelines state, Australians following a vegetarian diet can still meet nutrient requirements if energy needs are met and the appropriate number and variety of serves from the five food groups are eaten throughout the day[29]. Choosing nutrient dense foods such as eggs and dairy (lacto-ovo vegetarians), nuts, seeds, legumes and green leafy vegetables is important to provide sufficient vitamins, minerals, essential amino acids and essential fatty acids.

Conclusions

Eggs can play a significant role in a vegetarian diet due to the provision of high quality protein, vitamin B12, iron and omega-3s, nutrients that can be low in a vegetarian eating pattern. Overall, eggs are a highly nutritious food that can play an important role in the diets of ovo-vegetarians as well as pesco- and semi-vegetarians. Eggs are recommended as part of a healthy eating pattern that also includes adequate amounts of wholegrain breads and cereals, fruits, vegetables, legumes, low fat dairy foods and unsaturated fats.

This statement is for healthcare professionals only.

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

References

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