



Position Statement for Healthcare Professionals

The Role of Eggs in a Healthy Diet

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Eggs are a highly nutritious food that can make an important contribution to a healthy, well balanced diet. The 2013 Australian Dietary Guidelines include eggs as an example of a nutritious food under the second guideline: "*Enjoy a wide variety of nutritious foods*"¹ and specifically within this guideline the recommendation to "*enjoy lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans*".

Eggs are nutrient rich being a natural source of at least 11 different vitamins and minerals. Due to the variety of nutrients found in eggs, they can make a significant contribution to increasing population daily nutrient intakes. Research supports this assertion with a US study showing egg consumers have higher intakes of vitamins A, E, B12 and folate compared to non-egg consumers². Furthermore, the protein found in eggs is considered to be of the highest quality, providing the right amount and balance of amino acids to match human requirements³. A serve of eggs* provides an average of 12.7grams of protein, representing a quarter of the recommended dietary intake (RDI) for adults and a third of the RDI for children⁴. Eggs are also a source of the antioxidants lutein and zeaxanthin which have been linked to eye, skin and heart health⁵⁻⁷. Research to date suggests that these antioxidants are more bioavailable from eggs than when consumed from plant sources^{8,9}. Furthermore a recent study found the consumption of whole eggs with raw salad vegetables effectively increases the absorption of carotenoids, including lutein and zeaxanthin as well as carotenoids not found in eggs such as α -carotene, β -carotene and lycopene¹⁰ [Refer to Attachment 1 for further details on the contribution a serve of eggs makes to recommended nutrient intakes for Australian adults.]

Table 1 highlights some key nutrients found in eggs and compares their nutritional profile to other meat and meat alternatives.

Table 1: Comparison of eggs with common meats and meat alternatives in the Australian diet

Per 100g serve	Eggs	Lean beef	Chicken breast	Fish#	Oily fish#	Tofu	DI / RDI*
Energy (kJ)	559 (133Cal)	529 (156Cal)	576 (137Cal)	357 (85Cal)	594 (141Cal)	475 (113Cal)	8700 kJ
Protein (g)	12.2	22.7	21.4	18.6	19.5	11.9	50 g
Fat, total (g)	9.9	3.9	5.5	1.1	7.1	6.8	70 g
- saturated (g)	3.3	1.6	1.7	0.4	1.6	1.0	24 g
- polyunsaturated (g)	1.6	0.3	0.7	0.4	2.7	3.8	-
- monounsaturated (g)	5.1	2.1	2.2	0.3	2.0	1.5	-
Cholesterol (mg)	383	67	66	40	52	0	-
Vitamin A (µg)	230	6.0	16	5.0	12.0	13.0	750 µg
Folate (µg)	93	10	9.0	7.0	16	22	200 µg
Vitamin B12 (µg)	0.8	1.08	0.4	2.5	3.2	0	2.0 µg
Selenium (µg)	39	10	17.8	25.4	36.5	8.9	70 µg
Long Chain Omega-3 (mg) ^{11,12}	110	41	37	379	595	0	Males 160mg (AI) ⁴ Females 90mg (AI)
Cost comparison [^]	\$0.43 - \$1.45*	\$1.20	\$0.90	\$2.10	\$2.99	\$1.06	

*Food Standards Australia New Zealand Reference Value for Recommended Dietary Intakes on Food Labels, Standard 1.1.1 Schedule, Column 3 and Daily Intakes, Standard 1.2.8 Table to subclause 7(3) unless otherwise specified

Fish is ling. Oily fish is Atlantic salmon *Price range is for cage eggs – organic free range eggs.

AI – Adequate intake ^ Prices from Coles Online as at 10.04.16

Eggs are relatively inexpensive and may be particularly important for people following a restricted diet or for those who have increased nutrient requirements.

Such groups include:

- Ovo-vegetarians – one serve of eggs contains useful amounts of selenium (59% RDI), vitamin B12 (40% RDI) and iron (14% RDI), all nutrients that can be lacking in a vegetarian diet¹³.
- Pregnancy – eggs are an excellent way for pregnant women to meet their increased nutritional requirements, containing useful amounts of protein, iron, iodine, vitamin B12, vitamin A and omega-3 fats. Eggs are a particularly good source of folate providing the same amount as a glass of orange juice. Eggs are one of only a few food sources of choline and provide more choline per kilojoule than most other foods¹⁴. Choline is particularly useful in the diet of pregnant and lactating women. Eggs are therefore highly recommended at this time of life¹⁵. Eggs are also one of the main contributors of vitamin D to the diet of pregnant women¹⁶. With research showing only 10% of Australian women meet the recommended intake of foods from the meats and alternatives food group during pregnancy, increasing intake of eggs may be one useful way of reaching these recommendations¹⁷.
- Children and adolescents – eggs provide useful amounts of nutrients such as riboflavin, magnesium, phosphorus, zinc, folate, vitamin A, vitamin B6 and iron that can be low in many children's and teenagers diets^{18,19-21}.
- Sports people – eggs provide a valuable source of nutrients required by sports people including iron, folate and vitamin B12. Eggs are also a source of protein which can help meet the higher protein requirements of sports people²² and the antioxidants in eggs may assist recovery from exercise by reducing muscle and cell damage²³.



- Elderly – due to their soft texture, eggs may be a particularly suitable food in the diets of frail elderly. As well as providing omega-3 for heart health benefits, eggs provide the vitamins A and E and the antioxidants lutein and zeaxanthin which have been associated with lower rates of age-related macular degeneration (AMD)^{24,25}. They also provide a good source of protein which is important for maintaining bone and muscle mass with age²⁶ and which may assist in the prevention of unwanted weight loss in this group²⁷. The Australian Health Survey revealed that 14% of males and 4% of females aged 71 and over did not meet their increased requirements for protein and this was the highest of all age groups. Vitamin A inadequacy was also prevalent in older Australians with 13.2% males and 15.7% females not meeting recommended intake²¹.

A serve of eggs* provides 581 kilojoules (138 calories), representing 7% of the energy in a typical 8,700 kilojoule (2070 calorie) a day diet. Considering eggs contribute significantly more than 7% of the RDI for a broad range of nutrients, they may be classified as a nutrient dense food. When people are dieting, or for those who want to optimise their health, it is important to choose foods that are nutrient dense, such as eggs.

In the 2013 Australian Dietary Guidelines, eggs are included in the lean meats and poultry, fish, eggs, tofu, nuts and seeds and legume/beans group as a meat alternative¹. The recommended serves of this group for children and adults is 1-3 serves a day depending on age and sex. During pregnancy, 3-4 serves a day are recommended to provide additional iron and zinc. Examples of a serve includes: 2 large eggs, 80g cooked chicken, 65g cooked lean meat or 100g cooked fish.

Overall, eggs are a highly nutritious food that can play an important role in a healthy eating pattern and may be a particularly valuable inclusion in the diet of vulnerable groups. Eggs are recommended as part of a healthy eating pattern that also includes wholegrain breads and cereals, fruits, vegetables, dairy foods, lean meat, fish and poultry and unsaturated fats. Research supports the inclusion of eggs daily as part of a healthy diet.

This statement is for healthcare professionals only.

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

Attachment 1: Nutrient Profile of Eggs and Contribution to Recommended Dietary Intakes (RDI) of Various Nutrients Per Serve

Nutrients	Per serve – 2 x 60gram eggs (104g edible portion)	
		%DI/RDI
Energy (kJ)	581	7%
Protein (g)	12.7	25%
Fat (g)	10.3	15%
Sat fat (g)	3.4	14%
Mono fat (g)	5.3	n/a
Poly fat (g)	1.7	n/a
Cholesterol (mg)	398	n/a
Carbohydrate (g)	1.4	0%
Sugars (g)	0.3	0%
Sodium (mg)	141	6%
Potassium (mg)	138	4-5% [^]
Magnesium (mg)	13	4%
Calcium (mg)	49	6%
Phosphorus (mg)	208	21%
Iron (mg)	1.7	14%
Selenium (µg)	41	59%
Zinc (mg)	0.5	4%
Iodine (µg)	43	29%
Thiamin (mg)	0.12	11%
Riboflavin (mg)	0.5	29%
Niacin (mg)	<0.01 [~]	n/a
Vitamin B6 (mg)	0.05	3%
Vitamin B12 (µg)	0.8	40%
Pantothenic acid (vitamin B5) (mg)	2.1	42%
Folate (µg)	97	49%
Vitamin A (Retinol) (µg)	239	32%
Vitamin D (µg)	0.8	8%
Vitamin E (Alpha-tocopherol) (mg)	2.4	24%
Omega - 3 (total) (g)	0.18	12-20% [^]
Short chain Omega-3 (ALA) (g)	0.06	5-8% [^]
Long chain Omega-3 (DHA/DPA) (mg)	114	71-127% [^]
Omega-6 (g)	1.42	11-18% [^]
Lutein (mg)	0.40	n/a
Zeaxanthin (mg)	0.14	n/a
Lutein + zeaxanthin (mg)	0.53	n/a
Biotin (µg)	<8 [~]	n/a
Fluoride (mg)	<1 [~]	n/a
Chromium (mg)	<0.01 [~]	n/a
Copper (mg)	<0.02 [~]	n/a
Manganese (mg)	0.024	0%
Molybdenum (mg)	0.012	5%
Vitamin K (µg)	<2 [~]	n/a

* Food Standards Australia New Zealand Food Standards Code. Reference Values for Recommended Dietary Intakes on Food Labels, Standard 1.1.1, Schedule Column 3 and Daily Intakes, Standard 1.2.8, Table to subclause 7(3)

[^] National Health and Medical Research Council. Nutrient Reference Values for Australia and New Zealand, 2006. Adequate Intake Values (AI)

[~] Limit of Quantification

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