

Position Statement for Healthcare Professionals

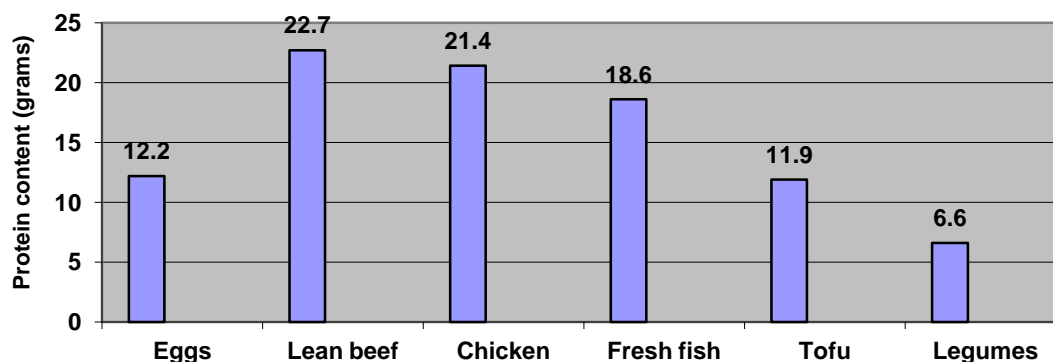
Eggs and Protein

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Eggs have the highest nutritional quality protein of all food sources, providing all the essential amino acids in amounts that closely match human requirements. Egg protein is therefore the nutritional standard against which all other proteins are compared ¹. Both the biological protein value and digestibility of egg protein contributes to the remarkable nutritional quality of eggs. Greater than 95% of egg protein is digestible, meaning eggs are classified as a highly digestible protein source ².

One serve of eggs* contains 12.7 grams of protein, representing 20% of the recommended dietary intake (RDI) for men and 27% of the RDI for women ³. Figure 1 highlights the protein content of eggs compared to other common meat and meat alternative food sources.

Figure 1: Comparison of protein content per 100 grams ⁴



Australians' intake of protein

The average Australian protein intake for adults aged 19 years and over is 91.2 grams daily ⁵, therefore easily meeting the recommended dietary intake (RDI) of 46 grams for women and 64 grams for men ³. The 2007 Children's Nutrition and Physical Activity Survey showed children in all age groups exceeded the RDIs for protein, with average intakes found to be two to four times higher than recommendations ⁶. However, there are certain groups within the population that may benefit from increased intakes or higher quality sources, including ovo-vegetarians, children and adolescents, elderly people and those participating in resistance training.

Ovo-vegetarians:

- Due to the smaller variety of protein containing foods eaten by ovo-vegetarians, these people may have a limited intake of essential amino acids if they do not follow a balanced eating pattern ². Additionally, the protein digestibility and lower biological protein value of many plant proteins may result in deficient dietary intakes of essential amino acids in ovo-vegetarian diets ². The total protein content of a vegetarian diet is significantly lower than an omnivore diet ⁷. Due to their high protein quality and high digestibility, eggs may therefore be particularly useful in the diets of ovo-vegetarians ².



Children and adolescents:

- Children and adolescents have increased requirements for protein during periods of growth⁸. Evidence also shows that higher protein, low glycemic load diets can improve symptoms of acne that is common in teenagers^{9,10}. Eggs are an excellent source of protein for children and adolescents due to their ideal amino acid profile, nutrient density and versatility.

Elderly people:

- Elderly people aged 70 years and over have a greater RDI than younger people, and may need additional protein intake to stimulate muscle protein formation¹¹. It has been demonstrated that the formation of muscle protein in the elderly can be stimulated by the increased availability of protein and/or amino acids of foods¹². Muscle mass in the elderly can be maintained through adequate protein intake combined with resistance training¹³. Increasing protein intake may also assist wound healing in the elderly¹. Eggs are an ideal protein source for the elderly as they are economical, easy to prepare and easy to chew.

Athletes:

- Some athletes can benefit from higher protein intakes for preservation of lean muscle mass and weight loss^{14,15}. Athletes who undergo resistance training, particularly in the early phases of their program where muscle synthesis is high, can also benefit from extra dietary protein¹⁶. One study¹⁷ examined the effect of consuming different amounts (0, 5, 10, 20 and 40 grams) of egg protein after resistance exercise on muscle building. Muscle and albumin protein synthesis increased in relation to the amount of egg protein consumed, however reached a plateau at 20 grams. Above this level, the protein was used for energy. Eggs are a highly bioavailable protein source that can easily be included in the diets of athletes without adding unwanted bulk.

Restricted diets:

- People following a kilojoule-controlled diet may benefit from an increased percentage of energy from protein. A growing body of evidence, including a number of Australian clinical trials, have demonstrated that moderately higher protein, lower carbohydrate, kilojoule controlled diets provide an effective weight loss strategy for some¹⁸⁻²¹. Recently a higher protein, low GI diet was found to be the most beneficial diet for weight loss maintenance²². It is likely that protein's role in weight management is largely due to its effects on satiety and appetite²³. Being nutrient dense and a good source of high quality protein, eggs are one food that fit well within the dietary recommendations for moderately higher protein weight loss diets. The CSIRO's Total Well-being Diet is one such weight loss diet that encourages and provides scientific evidence for the use of moderately higher protein intakes.

Due to their significant contribution to nutrient intakes, eggs can be a valuable inclusion in a healthy diet and contribute significant amounts of high quality protein to assist in meeting daily requirements.

This statement is for healthcare professionals only.

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

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