

EDITORIAL



Welcome to the first edition of *The Good Egg* for 2014!

The Egg Nutrition Council looks forward to keeping you up to date with eggs, nutrition and health related issues throughout the year with regular editions of *The Good Egg*, presence at various health professional conferences and updates to our eggs and health position statements. The beginning of the year coincides with back to school so there's no better time to highlight the importance of a healthy breakfast for children to start and/or continue their breakfast eating habit. Research is growing around the benefits of an egg based breakfast and with only 6% of children eating eggs for breakfast on any given day, eggs provide a way to vary the breakfast meal, while also providing at least 10% of the RDI for 11 different vitamins and minerals. Read our lead article to find out more about kids breakfast eating habits and see overleaf for recent research briefs.

Wishing you good health throughout 2014!

The Egg Nutrition Council

Benefits of Eggs at Breakfast for Kids

As children head back to school, the importance of eating a healthy breakfast becomes top of mind for parents and carers as well as dietitians. Results of the 2013 Australian Bureau of Statistics CensusAtSchool survey show almost 15% of school age children skip breakfast daily with the highest rates of breakfast skipping occurring in the Northern Territory (22.3%) and the Australian Capital Territory (20.1%)¹. These results indicate that in some parts of Australia, 1 in 5 children are going to school without breakfast. Foods that children most commonly report eating at breakfast are shown in table 1.

Table 1: Foods consumed at breakfast by Australian school children

Food	Percentage Consuming
Breakfast cereal	37.4%
Bread & bread products	26.7%
Did not eat breakfast	14.8%
Milk or milk products	12.7%
Other	9.7%
Fruit or fruit juice	8.5%
Tea/coffee	7%
Eggs	6.2%
Meat or meat products	3.4%
Noodles or rice	2.7%
Baked beans/spaghetti	1.3%
Breakfast bar	1.3%
Soft drink	1%
Lollies/potato chips	0.9%

While cereal is the most popular breakfast choice, recent research shows <10% of children consume cereals that are very high in fibre². In addition, while eating breakfast has been shown to improve cognitive performance³ and motor functional skills⁴ in school children, if breakfast cereal is consumed, the type and it's glycemic index may be important factors in maintaining these positive health benefits⁵. Many popular children's cereals are also low in protein and a high protein breakfast, compared to a high carbohydrate breakfast has been shown to increase feelings of satiety over the morning in adults⁶. Results in this area with children however are mixed.

There is a lack of research evaluating the health and nutritional benefits of an egg based breakfast for children. However, one recent study in adults, compared three types of breakfasts for their effects on subjective ratings of satiety,



hunger, fullness and desire to eat. The breakfasts consisted of eggs on toast, cereal (cornflakes) with milk and toast, or a croissant and orange juice. Results showed increased satiety, less hunger and a lower desire to eat after the breakfast containing eggs relative to the cereal, and croissant-based meals. The egg breakfast was also accompanied by a significantly lower intake of energy relative to the croissant- and cereal-based breakfasts at a subsequent buffet lunch and evening meal, respectively. This study highlights the importance of food choice at breakfast as a means of increasing satiety in the morning and reducing energy intake at lunch which may have particular benefits for addressing childhood obesity. This, however, requires confirmation through further research.

In the meantime, 2 eggs on 2 slices of wholemeal toast provides 60% of the average RDI for protein, 30% of the RDI for vitamin A, 38% of the RDI for thiamin, 51% of the RDI for riboflavin, 47% of the RDI for iron and 22% of the average AI for dietary fibre for 9-13 year olds, therefore providing a nutrient dense breakfast choice for school aged kids.

References:

- 1 Australian Bureau of Statistics. CensusAtSchool. (2013). <http://www.abs.gov.au/censusatschool>.
- 2 Grieger, J.A. et al. *Nutr Diet* (2013) 70, 132-138.
- 3 Wesnes, K.A. et al. *A. Appetite* (2012) 59, 646-649
- 4 Baldinger, N. et al. *J Am Coll Nutr* (2012) 31, 87-93.
- 5 Ingwersen, J. et al. *A. Appetite* (2007) 49, 240-244.
- 6 Vander Wal, J.S. et al. *J Am Coll Nutr* (2005) 24, 510-515.

EGG-VESTIGATOR

Nutritional benefits of eggs¹

This conference report summarises the proceedings of a meeting held by the Royal Society of Medicine in May 2013. Experts at the meeting discussed the areas of eggs and cardiovascular disease and eggs and allergy. It was concluded that egg consumption does not translate into significant risk of cardiovascular disease (CVD) and that there is no reliable recommendation to restrict egg intake in those with higher risk of CVD. Experts also agreed that avoidance of eggs during pregnancy does not prevent egg allergy in the child and that evidence exists indicating consumption of small amounts of egg in baked foods may increase tolerance in children with existing egg allergy.

The role of egg yolk in egg allergic children²

This study examined the reaction to both egg white and egg yolk in children with egg allergy. Fifty two children with known egg allergy and an average age of 4 years participated. Skin-prick tests were conducted with whole egg, egg white and egg yolk preparations. The findings showed that all children reacted to whole egg and egg white tests and 78% of the children reacted to egg yolk. The authors concluded that egg yolk allergy appears to be more common than previously assumed.

Updated guideline for reducing risk of heart disease³

Updated guidelines on lifestyle recommendations for reducing the risk of heart disease have been published by the American Heart Association and American College of Cardiology. The guidelines highlight that dietary patterns are associated with lower risk of heart diseases rather than individual nutrients or supplements. The guidelines strongly recommend a balanced dietary pattern, a reduction in salt intake and limitation of sweets, sugar-sweetened drinks and red meats. The authors also concluded that a diet low in saturated and trans fats is recommended for lowering LDL-cholesterol (bad cholesterol). However there is insufficient evidence in the current literature to support a reduction in dietary cholesterol as a strategy to reduce LDL-cholesterol.

References:

1. Gray J and Griffin BA. Nutr Bull 2013;38:438-449
2. Brossard C, et al. Clin Trans Allergy 2013;3(Supp 3):p86
3. Eckel RH, et al. J Am Coll Cardiol. 2013; doi:10.1016/j.jacc.2013.11.003

FOR MORE INFORMATION

If you would like to go on the mailing list to receive future editions of *The Good Egg*, e-newsletters, monthly research updates or nutrition and recipe leaflets, contact Yelli at yelli@aecl.org.



MASTERCLASS

Wholemeal zucchini, spinach and pumpkin seed muffin

Makes: 6 large muffins (2 per serve)
Cost per serve: \$2.40

Preparation Time: 15 mins
Cooking Time: 25 mins

Ingredients:

½ cup pumpkin, roughly chopped in 1cm dices	2 eggs
½ cup zucchini, roughly chopped in 1cm dices	pinch pepper
½ cup spring onions, sliced	2 cup wholemeal flour
1 large handful baby spinach leaves	1 tsp baking powder
1 cup skim milk	2 tbsp pumpkin seeds

Method:

1. Preheat oven to 180°C.
2. Place pumpkin into a microwave-safe bowl, cover with water and cook in the microwave for 3 minutes or until slightly softened. Drain and add zucchini, spring onions and spinach.
3. Lightly beat eggs and milk, pour over the vegetables and season.
4. Sift flour and baking powder over the top and stir until just combined.
5. Spoon mixture into baking paper lined, non-stick muffin trays, sprinkling with pumpkin seeds, and bake for 25 minutes or until done.

Cooking tips:

For the more mature palate, crumble low fat fetta and chopped sun dried tomatoes. Serve: spread with low fat cream cheese.

Nutritional Analysis – Wholemeal zucchini, spinach and pumpkin seed muffin (not including serving suggestion) Serving size: 160g

	Quantity per serve	%DI / RDI*
Energy	1060kJ	12%
Protein	12.0g	24%
Fat, Total	5.0g	7%
- Saturated	1.1g	5%
Carbohydrate	36.2g	12%
- Sugars	3.8g	4%
Dietary Fibre	6.9g	23%
Sodium	150mg	7%
Folate	65µg	33%
Iron	2.8mg	23%
Vitamin A	132µg	18%

One serving of wholemeal zucchini, spinach and pumpkin seed muffin is a source of iron and vitamin A; a good source of protein, fibre and folate; and low in sodium

* DI = Daily Intake; RDI = Recommended Dietary Intake
Reference source: FSANZ Standards 1.2.8 and 1.1.1 for labelling purposes