

Position Statement for Healthcare Professionals

Eggs and Pregnancy

Updated April 2017

Pregnancy and lactation increase a woman's nutritional requirements for key nutrients such as energy, protein, omega-3 fatty acids and most vitamins and minerals including folate, iron and zinc. Adequate nutrition during pregnancy is essential to optimise both maternal health and that of the developing child^{1,2}.

Adopting a healthy eating pattern throughout pregnancy and lactation is important and should include the consumption of lean meats and alternatives including eggs to provide energy, protein and a range of important micronutrients. The 2013 Australian Dietary Guidelines recommend pregnant women consume 3-4 serves of lean meats and/or alternatives daily (1 serve is equivalent to 65g cooked lean meat or 2 large eggs)², however only 10% of Australian women meet this recommendation³. Furthermore a 2016 study found Australian pregnant women displayed poor knowledge of and adherence to dietary recommendations⁴. A 2017 systematic review of dietary changes made by pregnant women found they commonly reported decreasing egg consumption⁵.

Energy Intake (kilojoules)

Kilojoule intake throughout pregnancy must be sufficient to allow optimal weight gain of the developing foetus. Evidence suggests that many pregnant women in developed countries are not meeting recommended kilojoule intakes⁶. In Australia average energy intakes in pregnancy are around 9200kJ per day⁶. Many women experience morning sickness and heartburn during pregnancy, which can lead to a reduction in the variety of foods eaten and/or frequent vomiting. As a result, nutrient availability and absorption may be reduced. Consumption of nutrient dense foods that are easily tolerated is important at this time and eggs may play a useful role.

Women who are overweight prior to pregnancy are encouraged to gain less weight than women of a healthy body weight⁷. Overweight and obese women may need to limit food intake to reduce the rate of weight gain⁷. It is therefore particularly important for overweight women to consume nutrient dense foods during pregnancy within a kilojoule-controlled diet. Eggs are a nutrient dense food which provides 11 vitamins and minerals along with high quality protein. One serve of eggs* provides 620kJ, representing 33-44% of the additional kilojoule requirements during pregnancy and 29-31% during lactation, while providing up to 200% or more of the additional requirements for a selection of vitamins and minerals. Table 1 shows the extra nutrients required during pregnancy, and the amount provided by one serve of eggs*.

Table 1 Additional Nutrient Requirements During Pregnancy ⁸

Nutrient	Additional requirements during pregnancy	% additional RDI provided by one serve of eggs*
Energy	1400kJ (1 st trimester)	44%
	1900kJ (3 rd trimester)	33%
Protein	14g	91%
Iron	9mg	18%
Zinc	3mg	17%
Folate	200µg	49%
Iodine	70µg	61%
Vitamin B12	0.2µg	>200%
Vitamin A	100µg	>200%

Table 2 Key nutrients in eggs and their role in pregnancy

Nutrient	Role in Pregnancy	Amount in 1 serve eggs	Benefits from eggs
Protein	Required for growth and development of infant.	12.7g [21%RDI]	Eggs contain all essential amino acids. Protein from eggs is highly bioavailable ⁹ .
Iron	Required for transporting oxygen around the body.	1.7mg [6%RDI]	
Zinc	Vital role in development of genetic material.	0.5mg [4% RDI]	
Folate*	Required for foetal cell division and growth. Reduces the risk of neural tube defects.	97µg [16% RDI]	
Vitamin B12	Required for growth and development, manufacture of DNA, function of the nervous system and production of red blood cells.	0.8µg [31%RDI]	Eggs are a key source of vitamin B12, particularly for ovo-vegetarians who are at high risk of vitamin B12 deficiency.
Vitamin A	Required for normal growth and development as well as immune function.	239µg retinol [30% RDI]	Eggs contain a highly bioavailable form of vitamin A which is easily absorbed due to presence of fat ¹⁰ .
Vitamin D*	Required for bone health. Possible role in development of immune function.	0.8µg [16% AI]	Eggs are one of the few food sources of vitamin D.
Long chain omega-3 fatty acids	Required for development of visual and brain function.	114mg [99% AI]	Eggs provide an alternate source of omega-3s to fish and seafood options.
Iodine	Required for normal thyroid function. Iodine deficiency can cause miscarriage, stillbirth and mental impairment of the foetus.	43µg [20% RDI]	Eggs are one of the few natural sources of iodine in the diet.
Choline	Required for growth and development including normal brain development and function.	437mg [99% AI]	Eggs provide more choline per kJ than most other foods.

*Notes: Folate needs are highest prior to conception and during the first few weeks of pregnancy⁸, and a 400-500µg folate supplement at these times is recommended¹¹. In 2011, the Royal Australian and New Zealand College of Obstetrics and Gynaecology released guidelines recommending all obese pregnant women should be screened for vitamin D deficiency¹² given obesity is a risk factor for low vitamin D status.

Eggs and Food Safety

While eggs provide an array of important nutrients during pregnancy, it is important to be aware of the food safety guidelines surrounding their use by pregnant women. All egg dishes should be cooked thoroughly and raw egg in food (such as in home-made mayonnaise and aioli) needs to be avoided during pregnancy¹³. Commercial products containing eggs such as mayonnaise and aioli can be consumed as the products are heat treated, destroying any potential harmful bacteria.

Conclusions

Pregnancy is a time of increased nutritional requirements with only a moderate increase in total kilojoule requirements. It is therefore essential to consume a nutrient dense diet, which includes a variety of foods from the core food groups. Including eggs in the diet is an excellent way of assisting pregnant and lactating women to meet their increased nutritional requirements without exceeding daily energy requirements. One serve of eggs* provides almost 100% of the additional protein requirements and around a third of the extra kilojoules required during pregnancy and lactation. They also assist in reaching the increased micronutrient requirements during pregnancy such as iodine, zinc, folate and iron. Eggs are recommended as part of a healthy eating pattern that also includes sufficient 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)*

Useful links:

NSW Food Authority – Pregnancy and food safety

<http://www.foodauthority.nsw.gov.au/foodsafetyandyou/life-events-and-food/pregnancy/foods-to-eat-or-avoid-when-pregnant>

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