



Early exposure to egg: egg allergy prevention

Intervention

Introduction of egg to the diet of infants aged 4–6 months.

Indication

[Hen's egg allergy is the second most common food allergy in infants and young children (cow's milk is the most common). Most children outgrow egg allergy by adolescence.]

Infants, particularly those at higher risk of food allergy, with the aim of reducing the risk of developing egg allergy. (See Precautions.)

Infants who started eating egg between 4 and 6 months of age show a 40% relative risk reduction of egg allergy compared with children who started egg later in life. In terms of absolute risk reduction, in a population where 5.4% of people have egg allergy (ie reported UK prevalence rate), early egg introduction could prevent 24 cases of egg allergy per 1000 people.

The **Australasian Society of Clinical Immunology and Allergy** recommends introduction of solids (including egg and peanut) for *all* infants between 4 and 6 months of age.

Precautions

Infants with a personal history of atopy (particularly moderate-severe eczema) or with a family history of atopy are at high risk of developing allergic disease, including food allergies.

These infants may benefit from evaluation by an allergist or a general practitioner trained in management of allergic diseases in this age group to diagnose food allergy and assist in early egg introduction if appropriate.

Adverse effects

There were no deaths in the studies (which included children at higher risk) and no significant differences in rates of serious adverse events in egg consumption groups and egg avoidance groups.

Availability

The egg formulations given in trials included heated egg powder, raw whole egg protein, cooked egg and raw egg.



Description

Before introducing egg, infants should be:

- › at least 4 months of age
- › able to tolerate some solid foods (eg cereals, fruits and vegetables).

If these criteria are met, the infant is given a taste of egg. There should be an oral antihistamine available.

If there is no apparent reaction, egg can be introduced in gradually increasing amounts.

Tips and challenges

The key message is that consumption not avoidance reduces the risk of developing egg allergy. This is part of a broader message of early introduction of a range of foodstuffs consistent with a change in guidelines (see Consumer resources).

Supporting this message is the finding that hydrolysed preparations do not reduce the risk of allergic or autoimmune disease.

The timing of egg introduction is not associated with risk of allergy to other foods

Grading

NHMRC level II evidence.

References

Ierodiakonou D, Garcia-Larsen V, Logan A, et al. *Timing of allergenic food introduction to the infant diet and risk of allergic or autoimmune disease. A systematic review and meta-analysis.* <https://www.ncbi.nlm.nih.gov/pubmed/27654604> JAMA 2016;316(11):1181–92. doi:10.1001/jama.2016.12623.

Boyle RJ, Ierodiakonou D, Khan T, et al. *Hydrolysed formula and risk of allergic or autoimmune disease: Systematic review and meta-analysis.* <http://www.bmj.com/content/352/bmj.i974> BMJ. 2016; 352:i974.

Consumer resources

Australian Breastfeeding Association. *Confused about introducing solids?* <https://www.breastfeeding.asn.au/bfinfo/solids.html>

UpToDate Patient education: Starting solid foods during infancy (Beyond the basics) <http://www.uptodate.com/contents/starting-solid-foods-during-infancy-beyond-the-basics>

Guidelines for the diagnosis and management of food allergy in the United States <https://www.niaid.nih.gov/sites/default/files/faguidelinespatient.pdf>