Guidelines for allergy prevention in infants

Introduction

ASCIA has developed these guidelines to outline practices that may help reduce the risk of infants developing allergies, particularly early onset allergies such as eczema and food allergy. These guidelines are based on current published evidence, including information published after 2010.

The reasons for the continued rise in allergic diseases, such as food allergy, eczema, asthma and allergic rhinitis (hay fever) are complex and not well understood. Although infants with a family history of allergic disease are at higher risk of allergies, infants with no family history can also develop allergies.

Therefore, these guidelines are relevant for all families, including those in which siblings or parents already have food allergies or other allergic conditions.

If your infant already has an allergic disease (such as severe eczema or food allergy), you should discuss what specific measures might be useful with your doctor.

Maternal diet during pregnancy and breastfeeding

- ASCIA recommends a healthy balanced diet, rich in fibre, vegetables and fruit. This provides many health benefits to the mother and infant during pregnancy and breastfeeding.
- Exclusion of any particular foods (including foods considered to be highly allergenic) from the maternal diet during pregnancy or breastfeeding is not recommended, as this has not been shown to prevent allergies.
- Up to 3 serves of oily fish per week may be beneficial, as there is some evidence that omega-3 fatty acids (found in oily fish) during pregnancy and breastfeeding may help prevent eczema in early life.
- Whilst there is moderate evidence that probiotics during pregnancy and breastfeeding may help prevent eczema in early life, recommendations about probiotic supplements cannot currently be made because the optimal species and dose of probiotics that might have an effect is unclear. More research is required in this area before clear and specific recommendations can be made.

Breastfeeding and infant formula

- Breastfeeding is recommended for at least 6 months and for as long as mother and infant wish to continue. There is no consistent evidence that breastfeeding is effective for the prevention of allergic disease. However, breastfeeding is recommended for the many benefits it provides to mother and infant.
- Breastfeeding during the period that complementary “solid” foods are first introduced to infants from 4-6 months may help reduce the risk of the infant developing allergies, although evidence for this is low.
- If breastfeeding is not possible, a standard cow’s milk based formula can be given. There is no evidence that soy or goat’s milk formula reduce the risk of allergic disease when used in preference to standard cow’s milk based formula.
- Based on a recently published review of studies, there is no consistent convincing evidence to support a protective role for partially hydrolysed formulas (usually labelled ‘HA’ or Hypoallergenic) or extensively hydrolysed formulas for the prevention of eczema, food allergy, asthma or allergic rhinitis in infants or children.
Introduction of complementary “solid” foods to infants

- Infants differ in the age that they are developmentally ready for complementary “solid” foods.
- Solid foods should not be introduced before 4 months of age.
- ASCIA recommends the introduction of complementary “solid” foods within the window of 4-6 months and preferably whilst breastfeeding. There is some evidence this is protective against the development of allergic disease.
- There is some evidence that the introduction of common allergenic foods (including cooked eggs, peanuts, nuts, wheat, fish) should not be delayed. However further evidence is required to clarify optimal timing for each food.
- There is good evidence that introducing peanut into the diet of infants who already have severe eczema and/or egg allergy before 12 months of age can reduce the risk of these infants developing peanut allergy. If this applies to your infant, you should discuss how to introduce peanut with your doctor who has experience with food allergy.
- There is moderate evidence that introducing cooked egg into an infant’s diet before 8 months of age, where there is a family history of allergy, can reduce the risk of developing egg allergy. Raw egg is not recommended.
- When introducing foods that other family members are allergic to, it is important to follow risk minimisation strategies to prevent cross contamination of allergens, for those who are allergic to the foods.
- Infant feeding advice consistent with these guidelines is available on the ASCIA website: [www.allergy.org.au/patients/allergy-prevention](http://www.allergy.org.au/patients/allergy-prevention)

Other measures

- Do not smoke during pregnancy, or in the presence of the infant, or in enclosed spaces where the infant sleeps or plays.

Levels of Evidence- What does low, moderate and high evidence mean?

Researchers usually grade evidence from research studies to help them understand the importance of the study findings. Generally, this is based upon the study design, size and overall quality of the study:
- “Low/poor/some”- means evidence from poorly conducted or observational studies only
- “Moderate”- means evidence from reasonably well conducted studies or well conducted single studies
- “High/good/strong”- means convincing evidence from well conducted studies, or many well conducted studies results pooled into a large analysis (meta-analysis)

Acknowledgements

These guidelines have been developed by the ASCIA Paediatric and Dietitian Committees, and reviewed by the ASCIA membership, with significant input from the Centre for Food & Allergy Research (CFAR), a National Health and Medical Research Council (NHMRC) Centre of Research Excellence (CRE).

Disclaimer

ASCIA information is reviewed by ASCIA members and represents available published literature at the time of review.

The content of this document is not intended to replace professional medical advice and any questions regarding a medical diagnosis or treatment should be directed to a medical practitioner.

Development of this document is not funded by any commercial sources and is not influenced by commercial organisations.
References

- Boyle RJ et al. Hydrolysed formula and risk of allergic or autoimmune disease: a systematic review and meta-analysis. BMJ. 2016;352:i974 | doi: 10.1136/bmj.i974
- Gunaratne AW et al. Maternal prenatal and/or postnatal n-3 long chain polyunsaturated fatty acids (LCPUFA) supplementation for preventing allergies in early childhood. Cochrane Database Syst Rev. 2015 Jul 22.
- Kramer MS et al. Maternal dietary antigen avoidance during pregnancy or lactation, or both, for preventing or treating atopic disease in the child. Cochrane Database Syst Rev. 2012 Sep 12;9.