

How do egg and milk allergy influence allergic disease?



Approximately 40% of infants and young children with eczema suffer from food allergy, with hen's egg, cow's milk, soy and wheat accounting for about 90% of allergenic foods.¹

HOW COMMON IS EGG ALLERGY, HOW DOES IT PRESENT AND HOW LONG DOES IT LAST?

- The prevalence of egg allergy is estimated at approximately 2% in children and 0.1% in adults²
- The first presentation of egg allergy is usually in infancy; patients typically present with urticaria and/or angioedema/vomiting/wheeze with rapid onset (usually within minutes) after ingestion of egg with evidence of sensitisation (the presence of specific IgE on testing)²
- Most reactions are mild, with facial urticaria only. More severe reactions with significant respiratory symptoms are less common²
- Approximately 70% of children with egg allergy will outgrow it by 5 years of age³
- Mild egg allergy often resolves and an attempt to introduce well-cooked egg as an ingredient may be made when appropriate – 70-80% of children with an egg allergy can eat plain cakes and biscuits containing egg²
- Children with a history of a severe egg reaction are more likely to have persistent disease and should be referred to a specialist²

HOW COMMON IS COW'S MILK ALLERGY (CMA), HOW DOES IT PRESENT AND HOW LONG DOES IT LAST?

- CMA, which usually presents in the first months of life, is the most common food allergy among infants and young children; affecting between 1.9% to 4.9% of children⁴
- CMA is the most clinically complex food allergy; many of the symptoms of CMA can overlap with a number of other conditions that are commonly experienced in early childhood, e.g. reflux, colic, eczema. Furthermore, more so than any other food allergy, CMA can present with either delayed onset symptoms of non-IgE-mediated allergy or with acute onset symptoms of IgE-mediated allergy (including anaphylaxis)⁴
- For IgE-mediated CMA, infants often react on their first known ingestion of milk with symptoms presenting within a few minutes after milk exposure. For non-IgE-mediated CMA (type 4 hypersensitivity), symptoms usually occur within a couple of hours but can occur days after milk exposure⁴
- The symptoms of mild to moderate IgE-mediated CMA can include:⁴

Skin	Acute pruritus
	Erythema
	Urticaria
	Angioedema
	Acute 'flaring' of atopic eczema
Gastrointestinal	Vomiting
	Diarrhoea
	Abdominal pain/colic
Respiratory	Acute rhinitis
	Conjunctivitis

For a list of non-IgE-mediated symptoms visit the [NICE](#) or [MAP Guidelines](#)

- Approximately 85% of children with milk allergy will outgrow it by 5 years of age³

WHICH ALLERGIC DISEASES ARE LINKED WITH EGG AND MILK ALLERGY?

- Egg and milk allergy can trigger flares of eczema⁵
- About 40-60% of children with egg or milk allergy will develop asthma and 30-55% will develop allergic rhinitis³
- The presence of eczema is a significant risk factor for egg allergy²
- Children with egg allergy are at an increased risk of other allergic disease especially asthma and peanut/nut allergy²

HOW CAN ALLERGY BE DIAGNOSED IN PRIMARY CARE?

The NICE Food allergy guidelines recommend that:

1 HISTORY

If food allergy is suspected, a healthcare professional with the appropriate competencies should take an allergy-focused clinical history.⁶

Click here to download a copy of our expert-developed, food allergy-focused, history form

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2 TESTING

If the patient history suggests an IgE-mediated allergy conduct a blood test (allergen-specific IgE), or by trained, competent clinical staff in a clinical environment with sufficient clinical support and facilities to manage anaphylaxis, a skin prick test can be performed.⁶

For information on identifying and diagnosing non-IgE mediated allergy please see [the NICE guidelines on food allergy](#).

Specific IgE (also known as ImmunoCAP and, as a previous technology, known as RAST) is no different, in terms of venipuncture, to many other blood tests. It is the gold-standard quantitative IgE test and has an excellent clinical performance (sensitivity 84-95% and specificity 85-94% depending on the allergen). It is available from your local pathology laboratory and a 1 ml sample of blood in a serum tube is sufficient to test for up to 10 allergens.

3 MANAGEMENT

A result of ≥ 0.1 kU_A/L is indicative of sensitivity

Results should always be read in conjunction with the clinical history

The NICE Guidelines (2011) and the NICE Quality standard (2016) offer clear advice on the diagnosis and management of food allergy.^{6,7}

Most patients, i.e. those with a clear diagnosis and mild but persistent symptoms, should be managed in primary care, but some will require referral and management to secondary care.⁶

The child or young person should be referred to secondary care, if they have:⁶

- Fluctuating growth in combination with one or more gastrointestinal symptoms (see NICE for list of symptoms)
- Not responded to a single-allergen elimination diet
- Had one or more acute systemic reactions
- Had one or more severe delayed reactions
- Confirmed IgE-mediated food allergy and concurrent asthma
- Significant atopic eczema where multiple or cross-reactive food allergies are suspected by the parent or carer

Or, there is:⁶

- Persisting parental suspicion of food allergy (especially in children or young people with difficult or perplexing symptoms) despite a lack of supporting history
- Strong clinical suspicion of IgE-mediated food allergy but allergy test results are negative
- Clinical suspicion of multiple food allergies

References

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4. MAP Guidelines. Available from <http://cowsmilkallergyguidelines.co.uk/what-is-cows-milk-allergy/>; last accessed June 2016.
5. Allergy UK. Food allergies and eczema. Available from <https://www.allergyuk.org/childhood-food-allergy/food-allergies-and-eczema>; last accessed June 2016.
6. National Institute for Health and Care Excellence. Food allergy in children and young people (CG116). 2011. London: National Institute for Health and Care Excellence.
7. National Institute for Health and Care Excellence. Food allergy (QS118). 2016. London: National Institute for Health and Care Excellence.