Peanut and tree nut allergy

**Background**

Nut allergy, to both peanuts and tree nuts, is one of the commonest food allergies, affecting about 1-2% (1 in 100 to 1 in 50) of children in Britain. The prevalence of nut allergy, as with all allergic conditions, is increasing. Risk factors for the development of nut allergy are a family history with an affected brother or sister, moderate to severe eczema and/or egg allergy. There is no evidence that if a mother eats nuts when she is pregnant or breast-feeding that her child is at greater risk of developing nut allergy; indeed recent evidence suggests that early contact (from 4 months old) may prevent the child from developing nut allergy. This has recently been confirmed by the LEAP study in children with egg allergy or severe eczema.

As well as being one of the commonest food allergies, nut allergy is unfortunately also one of the most dangerous as it can cause severe reactions (anaphylaxis). Some children are very sensitive and only very small amounts of nut (2-5mg) are needed to trigger a full allergic or anaphylactic reaction (compared with 300-500mg of egg). Non-ingestion contact, from touching nuts or inhaling airborne allergens (dust), is very unlikely to trigger a severe reaction.

The peanut is not really a nut. It belongs to the legume family and is related to beans, peas, lentils, soya and lupin. Children who are peanut allergic rarely react to the other legumes (only around 5%). By contrast, children who are allergic to one tree nut a have a greater risk (about 40%) of allergy to another tree nut. Patients presenting for assessment of possible nut allergy are tested in our clinic to 8 nuts: almonds, Brazil nuts, cashew nuts, hazel nuts, pecan nuts, pistachio nuts, walnuts and peanuts. Challenges may be offered to confirm or exclude single or multiple nut allergies.

**Symptoms**

Allergic reactions usually occur immediately or very soon after contact with a nut; most reactions will have occurred within 30 minutes. Allergic patients often have
a ‘sixth sense’ that nuts are in the food they are offered, where they can ‘smell’ nuts in the food or where they develop a ‘feeling’ of a reaction even before other symptoms are present. This is described as a ‘sense of impending doom’ in older children, or seen as a change in behaviour, irritability or fright in younger children. Patients may also experience symptoms immediately on placing the food in their mouths, such as itch, discomfort or pain. This can often cause them to spit the food out and so prevent greater exposure and possibly a more serious reaction. Younger children often vomit after nut ingestion.

Typically symptoms affect the skin, breathing system, gut and, rarely, the circulation:

- **Skin**: Nettle rash (urticaria), swelling (angioedema), itch, worsening of eczema.

- **Breathing system**: Runny nose and itchy eyes; swelling in throat with hoarse voice and difficulty swallowing and cough, wheeze, tight chest and difficulty breathing.

- **Gut**: Nausea, vomiting (even if nut not swallowed), stomach ache, diarrhoea.

- **Circulation**: Dizziness, feeling faint and rarely fainting or collapse. Child may become floppy.

**Diagnosis and management**

Symptoms suggesting an allergic reaction must be confirmed by allergy testing, either skin prick testing or blood tests, to make the diagnosis and identify the ‘offending’ nut or nuts. If the diagnosis is uncertain a nut challenge will be offered.

There is as yet no treatment available for nut allergy. Recent trials in peanut-allergic children using increasing doses of peanuts to induce tolerance have shown promising results. Until these treatments are studied further our current practice is to advise that patients and families carefully avoid contact with nuts (as advised by our dietitians) and carry emergency treatment (antihistamines and adrenaline injection pens) to treat symptoms of inadvertent contact.

With thanks to the Children’s Allergy Clinic, University Hospitals of Leicester NHS Trust, for permission to reproduce this information.

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