

Peanut, Tree Nut and Seed Allergy

Peanut and tree nut allergy is most common in infants and young children, but may appear for the first time in adults. Peanut allergy is common (3% of infants have peanut allergy), it can be hard to avoid, and in some cases even trace amounts of peanuts can trigger symptoms.

Food proteins trigger food allergy

Proteins in food can trigger allergic reactions in some people. If a person is allergic to one protein present in one food (such as peanut or egg), then an allergic reaction can only occur if they eat that food. Some people may be allergic to more than one protein in more than one food, so they may be allergic to several foods.

Nut or seed allergy

The meaning of the terms 'nuts, seeds and legumes' can be confusing for people with allergies to these foods (or their carers), when trying to decide what foods to avoid. The terms tree nuts or seeds are rarely useful for predicting allergy to foods of similar appearance or taste.

For example:

- Legume is often used to describe peanut as well as other plants like peas, chickpeas and soy, yet this group of plants also includes wattles and the black bean tree of Queensland.
- Tree nuts has limited meaning, as the foods that we consume from these plants come from a wide variety of different botanical families such as Rosaceae (almonds), Anacardiaceae (cashews), Proteaceae (macadamias), or Lecythidaceae (Brazil nuts).
- Small seeds include sesame seeds, sunflower seeds, poppy seeds and pumpkin seeds. Coconut husk and inner white flesh is also a seed. Many of the foods that we consider to be nuts are part of a seed, often with the outer fruit or coating removed.

Peanuts are legumes, not nuts

Peanuts are legumes, like peas, lentils and chickpeas, and other plants like wattles and the black bean tree of Queensland. The proteins in peanut are very different to those in tree nuts, which include almonds, Brazil nuts, cashews, hazelnut, macadamia nuts, pecans, pistachios and walnuts. Therefore, someone who is allergic to peanut is not automatically going to be allergic to tree nuts.

Cross reactivity is difficult to understand and harder to predict

Cross reactivity means that a similar protein is present in a range of different foods. If the same protein is present in several foods, then that person may have allergic reactions to any food containing that protein. Examples of cross reactivity include people allergic to similar proteins present in hen and duck eggs; cow's and goat's milk; or cashew and pistachio nut.

It may be difficult to predict whether a person will be allergic to one unique protein allergen present in one food only, or several similar cross reactive proteins present in multiple foods. Therefore, it is not possible to reliably predict the likelihood of allergy to seed or nut like foods without allergy testing to that particular food.

Allergic reactions to peanut, tree nuts or seeds can be severe

Symptoms of food allergy typically include hives (urticaria), swelling around the mouth, and vomiting, usually within 30 minutes of eating a food. Other symptoms include stomach pains, or diarrhoea.

Symptoms of severe allergic reactions (anaphylaxis), include any of the following; difficult/noisy breathing, swelling of the tongue, swelling/tightness in the throat, difficulty talking/hoarse voice, wheeze or persistent cough, persistent dizziness and/or collapse. Young children may become pale and floppy.

Deaths from food allergy are rare in Australia, but mild, moderate and severe allergic reactions are common. Peanuts and tree nuts are amongst the most common foods causing life threatening anaphylaxis.

Other allergies may be present

Food allergy is more common in people who have other allergies such as allergic rhinitis (hay fever), asthma or eczema. As many children have allergies to other foods such as cow's milk, egg or other nuts, a doctor may test for these allergies as well.

Reliable diagnosis of food allergy is important

A doctor will ask a series of questions that may help to narrow down the list of likely causes of allergy, such as foods or medicines consumed that day, or exposure to stinging insects. This approach will help to exclude conditions that can sometimes be confused with food allergy.

Skin tests or blood tests for allergen specific IgE help confirm or exclude potential triggers. While the results of allergy tests are a useful guide in determining whether a person is allergic, they are not a reliable guide to how severe a reaction will be.

Unorthodox allergy tests are unproven

There are several methods of unorthodox tests for food allergy. These include cytotoxic food testing, vega testing, kinesiology, allergy elimination techniques, iridology, pulse testing, alcat testing, Rinkel's intradermal skin testing, reflexology, hair analysis and IgG food antibody testing. These tests have no scientific basis, are unreliable, and can't be reproduced. ASCIA advises against the use of these tests. No Medicare rebate is available in Australia for these tests, and their use is not supported in New Zealand.

Adverse consequences may arise from unorthodox tests and treatments. Treatment based on inaccurate, false positive or clinically irrelevant results can lead to ineffective and expensive treatments, and delay more effective therapy. Sometimes harmful therapy may result, such as unnecessary dietary avoidance and risk of malnutrition, particularly in children.

Peanuts, tree nuts and seeds are hard to avoid

Peanuts, tree nuts and seeds are widely used in Western and Asian foods. This poses significant problems for people with severe peanut, tree nut or seed allergy. Laws require that any product containing peanut, tree nuts or sesame must be clearly labelled. Therefore, it is important to check the labels of all foods before purchase.

Further information about reading food labels, food selection and allergen avoidance is available on the ASCIA dietary avoidance information sheets.

Eating out with peanut or tree nut allergy

The risk of accidental exposure to food allergic trigger/s can never totally be removed, but some simple precautions will reduce or minimise the risk:

- Contact the restaurant, cafe or home cook that you plan to visit in advance, and let them know of the food allergy.
- On arrival at a restaurant or café ask to talk to the manager about any dishes that should be avoided. Also ask them to let the chef know so they can take extra care in preparing your meal, to reduce the risk of cross contamination.
- Don't rely on the menu descriptions of what is in the food. For example, pesto and dips may have nuts in them, and many salads have nuts or seeds added for texture. Sometimes nuts can be added to gravies and sauces too.
- Think about the cooking methods, possible cross contamination and the likelihood of shared utensils and cookware.
- Teenagers or adults who are eating out can cautiously touch test a small amount of the food on their outer lip before putting it in their mouth. Tell-tale warnings such as a burning, chilli-like reaction, and tingling or swelling should alert you to the possibility that food allergen is present.
- If an adrenaline (epinephrine) autoinjector has been prescribed, always have it and your ASCIA Action Plan for Anaphylaxis with you. For people who are not thought to be at risk of anaphylaxis and therefore have not been prescribed an adrenaline autoinjector, an ASCIA Action Plan for Allergic Reactions should be provided by a medical doctor.

Other foods

Most people with peanut allergy can safely eat other legumes. Some evidence shows that people allergic to peanut may be at increased risk of allergy to lupin, which may be added to baked goods and confectionary.

Other nuts and seeds

People with peanut allergies are at an increased risk of having other food allergies. However, there is little similarity between peanut allergens and those present in tree nuts such as walnut, almond, pecan, pistachio or cashew. Peanut, tree nut and seed avoidance strategies advised will largely be dictated by choking hazards in infants, and the risks of cross contamination or substitution of one nut for another in commercially prepared foods. For some people it may be easier to avoid all nuts and the potential for confusion when trying to tell between one nut type and another.

Highly purified peanut oil contains little allergen

Refined peanut oils (not cold-pressed) have been shown to be safe in small studies. It is difficult to guarantee that an oil is sufficiently refined to remove all traces of peanut protein, which is the trigger for allergic reactions. Some restaurants use peanut oil for cooking, and peanut proteins may leach into the oil. Therefore, avoidance of peanut oil (cold pressed, expelled or extruded) is advised. Little research has been done to prove safety of other nut oils, so avoidance is advised.

Avoidance is the only proven treatment for peanut, tree nut or seed allergy

The only proven treatment for peanut, tree nut or seed allergy is avoidance of the allergen. Omitting peanuts, tree nuts or seeds from the diet has no adverse nutritional consequences for most people. Children with food allergy should take their own food with them to school and be taught not to swap or share food. In common eating and food preparation areas, where there are children with severe peanut or tree nut allergy, nut-containing foods are best avoided.

In early childhood education/care centres, with very young children where the risk of food contamination of common eating areas or toys is higher, it may be requested that parents do not send nut containing foods in lunch boxes to reduce the risk. This is not a policy that is considered necessary when caring for older children, although the use of nut or seed containing foods in cooking classes and science experiments is discouraged if there are students with peanut or tree nut allergy in that class.

Research into food allergy is ongoing

The increased frequency of peanut and tree nut allergy is driving research into areas trying to find out why it has become more common, and how to treat and prevent it. Research has shown that early exposure to peanut reduces the risk of peanut allergy developing in high risk infants. Allergen immunotherapy (desensitisation) studies are trying to see if peanut allergy can be switched off once the allergy has developed.

ASCIA Action Plans are essential

The average nut allergic person will have an accidental exposure every few years. The difficulties of avoiding peanuts, tree nuts or seeds completely make it essential to have an ASCIA Action Plan for Anaphylaxis when an adrenaline autoinjector has been prescribed.

Nut allergy can be effectively managed

Under the supervision of a clinical immunology/allergy specialist and a network of supportive contacts, people with allergy to peanuts, tree nuts or seeds can learn to manage their allergies. Having adrenaline autoinjectors offers reassurance, but it is not a substitute for strategies to minimise the risk of exposure to allergen triggers.

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