

Your quick guide to:

Tree Nut Allergy

How common is tree nut allergy?

Tree nut allergy affects around 2% of children and 0.5% of adults in the UK. In tree nut allergy, the immune system reacts to proteins in the nut.

Tree nut allergy most often develops before the age of 5, but it can also appear later in childhood or adulthood. It is uncommon to outgrow a tree nut allergy.

Who is at risk of tree nut allergy?

People with peanut allergy have an estimated 30% to 40% chance of also having a tree nut allergy because some proteins are similar. Infants with eczema and/or egg allergy are also more likely to develop other food allergies.

More about tree nuts

Tree nuts, as the name suggests, grow on trees. Some people are allergic to one tree nut, while others are allergic to several because some tree nuts contain similar proteins. This is known as cross-reactivity. People with tree nut allergy may also have a higher risk of sesame allergy because of cross-reactivity.

Tree nuts are from a different plant family to peanut, which is a legume. Having a tree nut allergy does not automatically mean you are allergic to peanut.

Tree nuts can also trigger reactions in people with pollen food syndrome, also known as oral allergy syndrome. This happens when the immune system reacts to similar proteins in certain fruits, vegetables, and nuts and in airborne allergens such as birch pollen. Symptoms are usually mild and may include itching of the mouth, lips, and throat when the food is eaten raw. Anaphylaxis can occur, but it is uncommon.

Types of tree nuts

Tree nuts include:

- Almonds
- Brazil nuts
- Cashews
- Hazelnuts
- Macadamia

- Pecan
- Pistachios
- Shea nuts
- Walnuts

Shea nuts are also classed as tree nuts and are increasingly used in confectionery as butter or oil. Because processing greatly reduces the protein content, the risk of reaction is thought to be very low. However, some people with tree nut allergy may still choose to avoid them.

Signs and symptoms of an allergic reaction to tree nuts?

Symptoms usually begin within minutes of contact with tree nuts, but they can appear up to two hours later. Most reactions are mild, but some can be moderate or severe. Anaphylaxis (pronounced ana-fil-axis) is the most severe type of allergic reaction and can be life-threatening.

Please see our factsheet on anaphylaxis and severe allergic reactions for more information and advice on what to do if these symptoms occur.

Diagnosing tree nut allergy

If tree nut allergy is suspected, seek advice from a healthcare professional. This will usually be your GP in the first instance. They may arrange allergy testing or refer you to a specialist allergy service for skin prick testing and/or specific IgE blood tests. These tests can help show whether a food allergy is likely, but a positive result on its own does not confirm a diagnosis. Allergy tests cannot predict how mild or severe a reaction will be, or when it might happen.

Living with tree nut allergy

There is currently no cure for tree nut allergy, so for most people treatment focuses on avoiding tree nuts and managing reactions if they occur. People with tree nut allergy should read food labels carefully and avoid foods that may contain tree nuts. Mild symptoms may be treated with antihistamines, while severe reactions (anaphylaxis) need immediate treatment with an adrenaline autoinjector and urgent medical attention. Patients should always carry their prescribed emergency medication and follow their allergy action plan.

Key facts:

Tree nut allergy most often **develops before** the age of **five years old**.

People with tree nut allergy may also have a **higher risk of sesame allergy** because of cross-reactivity.

Refined nut oils are highly processed and **unlikely to cause an allergic reaction**.

Coconut does not need to be avoided; it **is a fruit (seed)** of a coconut palm tree.

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As tree nut allergy has the potential to cause severe life-threatening reactions and is relatively common, extensive research has been done to look at new forms of treatment. One method that has been available in the NHS and more widely in the private sector is oral immunotherapy (OIT). This is the process of increasing the tolerance of food allergens that are eaten.

The concept is that very small amounts of an allergen (e.g. peanut) are introduced and the amount gradually increased until a target amount of the food is reached and maintained. This should never be tried without medical supervision at a specialist centre, where currently it remains the subject of active research programmes. Research strongly suggests that this approach is safest and most successful in younger children but can be suitable for teenagers and even adults. Please contact your GP or allergy specialist if you would like more information. Over time, more treatments are becoming available such as Omalizumab (an injectable medication which reduces sensitivity to all food allergies), sublingual immunotherapy (where an allergen is squirted in tiny quantities under the tongue to reduce sensitivity). These options are only available through clinical research programmes or in the private sector at this time.

For some people, oral immunotherapy (OIT) may be an option. This treatment involves gradually increasing the amount of tree nut given under specialist medical supervision to reduce sensitivity and lower the risk from accidental exposure. OIT is not suitable or available for everyone and should only be undertaken in a specialist allergy clinic after careful assessment of the potential benefits and risks.

Where are tree nuts found?

Tree nuts are widely used in many foods and are common in cuisines such as Asian, Chinese, Indian, Thai, and Vietnamese cooking. They may also be found in baked goods, cereals, ice cream, and desserts.

- Nut butters (such as almond or cashew)
- Nut milks (such as almond, hazelnut, cashew)
- Biscuits, pastries, and cakes with nuts

as ingredients (e.g., chocolate brownies, amaretto biscuits, macaroons, almond croissants, Bakewell tart, carrot cake)

- Nutella (hazelnut)
- Confectionary and chocolate (e.g. nougat, Ferrero Rocher, Toblerone, Snickers, Topic, Picnic, selection sweets such as Quality Street, Roses, Celebrations)
- Ice cream (e.g., nut flavoured like pistachio as well as nut toppings)
- Gluten free foods often contain almond meal
- Marzipan
- Food flavourings (almond)
- Pesto (may contain other tree nuts as well as pine nuts)
- Breakfast cereals such as muesli or honey nut cornflakes
- Bread and crackers (speciality breads topped or containing nuts, e.g walnut bread)
- Cereal bars
- Vegetarian food (veggie burgers, nut roasts)
- Mixed nuts and raisins
- Salads with added nuts or nut oils

Nut oils

Some oils contain nut proteins and may pose a risk for people with tree nut allergy. They can be divided into two categories:

- Refined: These oils are highly processed, which reduces the chance that nut proteins remain. They are therefore unlikely to cause an allergic reaction.
- Unrefined: This includes cold-pressed or unprocessed oils such as almond and walnut oil. These may contain enough tree nut protein to trigger an allergic reaction and should be avoided by people allergic to those specific nuts.

It is also important to check the ingredients of vegetable oils, as they may occasionally contain traces of tree nuts. If they do, this must be highlighted in the ingredients list.

Cross-contamination

Cross-contamination happens when nut-free food accidentally comes into contact with nut proteins during manufacturing, storage, or preparation. Even very small traces of tree nut protein can trigger an allergic reaction in highly sensitive people. At home, clean work surfaces and chopping boards thoroughly with hot, soapy water. Use separate containers for foods such as jam and butter, especially if peanut butter is also used, and always serve them with clean utensils.

Foods with misleading nut names

Despite having the word 'nut' in their name, many foods are not part of the tree nut family and do not usually need to be avoided. The list below explains whether they are relevant for people with tree nut allergy.

- Coconut: Coconut does not need to be avoided; it is a fruit (seed) of a coconut palm tree.
- Nutmeg: Nutmeg does not need to be avoided as it is a seed from the nutmeg tree.
- Water chestnut: Water chestnuts do not need to be avoided as they are an aquatic vegetable
- Chestnuts: Chestnut allergy is considered rare. They are in a different botanical category to tree nuts and peanuts. Most people with a chestnut allergy can tolerate tree nuts and peanuts. Speak with your allergy team if you are unsure. Chestnuts are more commonly seen at Christmas time when roasted at markets
- Butternut squash: Butternut squash does not need to be avoided as it is technically a fruit.
- Pine nut: Pine nuts are edible seeds from pine trees. Most people with nut allergy do not need to avoid pine nuts.

Tree nuts and nut-named ingredients in skincare products and cosmetics

Tree nuts, peanuts, and ingredients with the word 'nut' in the name can appear in cosmetics such as moisturisers, soaps, and shampoos. They may also be listed under Latin names. The

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table below explains some of the alternative names you may see.

- Sweet/bitter almond – *Prunus dulcis/ Prunus amara*
- Brazil – *Bertholletia excelsa*
- Cashew – *Anacardium occidentale*
- Hazelnut – *Corylus rostrata*
- Macadamia – *Macadamia ternifolia*
- Pecan – *Carya Illinoensis*
- Pistachio – *Pistacia vera*
- Walnut – *Juglans regia / nigra*
- Shea nut – *Butyrospermum Parkii*

Nut oils such as peanut or almond oil can be used in cosmetics and toiletries and may be a problem for people allergic to those foods. The amount of allergenic protein left after processing can vary depending on how the product is made.

The risk of becoming sensitised to a food through the skin or hair from oils or cosmetics that contain nut ingredients is not fully understood. Shea nut, argan, and coconut are commonly used in skin and hair products. Products that come into contact with the skin and contain a food allergen should generally be avoided by people allergic to that food.

Shea nuts are also tree nuts and are used in cosmetics as well as in confectionery in the form of butter or oil. Because processing reduces the protein content, the risk of reaction is thought to be very low. However, some people with tree nut allergy may still choose to avoid them.

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