

Peanut and Tree Nut Allergy

Allergy to peanut and tree nuts is the most common food allergy in adults and children. However, since most children start eating other foods first, allergies to other foods such as egg and cows' milk protein typically present before nut allergies. While children often grow out of other allergies, only around 20% of children with nut allergies resolve. This means that 4 out of 5 children with nut allergies will continue to have these allergies as an adult. In some people, the allergy may become less severe with age, but in 20%, it can become worse with time.

Peanut allergy is becoming ever more commonplace, with recent studies showing that the rate of peanut allergy has doubled over a 5 year period both here in Europe and in the United States. Peanut allergy is estimated now to affect 1 in 50 young infants, and tree nut allergy also seems more common. The reason for this increase is not fully understood, but is in line with the general increase in all forms of allergy including asthma, eczema and hayfever.

The majority of allergic reactions to peanut and tree nuts are mild. Hives (nettle rash), eczema and vomiting are the most common complaints in children. However, some allergic reactions to peanut or tree nuts can be severe, causing difficulty in breathing due to asthma or throat swelling, or a drop in blood pressure. This is known as anaphylaxis, and allergy to peanut or tree nuts is one of the most common triggers.

In any case where an allergic reaction to a nut is suspected, the patient should be referred by their General Practitioner to an NHS allergy clinic for testing to confirm the diagnosis. Testing can be done by Skin Prick Tests or blood tests.

A food challenge test may be performed if the diagnosis of nut allergy is in doubt. This is a safe procedure provided it is undertaken in a specialist allergy centre with experienced medical staff. Not only will this procedure confirm an allergic reaction, but it will also provide an opportunity to assess how severe an allergic reaction could occur if one accidentally came in contact with peanuts.

What are peanuts?

Peanut (*Arachis hypogaea*) is a member of the legume (bean) family. Other members of this family include soya beans, lentils and garden peas. It is rare for a peanut allergic person to react to soya or other beans and legumes, but many peanut allergic people will also be allergic to other tree nuts, for example brazil or hazel nuts, which are genetically unrelated. Peanuts grow from the ground rather than on trees, and are sometimes referred to as **ground nuts**.



Many commonly used foods contain peanut extracts, but although **hydrogenated vegetable oil** may occasionally have a peanut source, it is unlikely to cause an allergic reaction. **Hydrogenated vegetable protein** may rarely have a peanut source, and this may cause an allergic reaction in an extremely sensitive individual.



What are tree nuts?

Tree nuts are actually a type of seed from plants, and come from a wide variety of different botanical families such as Rosaceae (almonds), Anacardiaceae (cashews), Proteaceae (macadamia nuts) or Lecythidaceae (Brazil nuts).

The distinction between tree nut and seed is not always clear. We often think of seeds as small seeds - like sesame seed, sunflower seed, poppy seed or pumpkin seed. In fact, coconut (including the husk and inner white flesh that we eat) is also a seed, albeit a very large one! This may explain why coconut is considered to be a tree nut in USA but a seed elsewhere.

Cross reactions to different nuts

Cross reactivity is a term used to describe when the protein allergen to which a person is sensitive is present in several foods, resulting in that person being allergic to those different foods.

Some people react only to one type of nut, for example peanut. Others are known to react to different types of nuts. Even though peanut and tree nuts may look and taste similar, the proteins present in peanuts are scientifically very different to those in tree nuts. That means that one can be allergic to peanut only, a tree nut only, several tree nuts or any combination of peanut and a few tree nuts. Studies have shown that children allergic to peanut are more at risk of other food allergies, including to tree nuts.

While certain cross reactivities are common (for example, cashew nut and pistachio), in general cross reactivity is difficult to understand and harder to predict. Unless you know that you do not react to certain nuts, it is best to avoid all nuts, especially because foods containing one nut are more at risk of contamination with another nut.

Most people with peanut or tree nut allergies are able to eat seeds without problem. Both coconut and pine nuts are seeds rather than nuts, and the majority of nut-allergic people can eat them. See our factsheet on Sesame and seed allergy for more information.

What about peanut oil (arachis oil) and other nut oils?

The allergic component of the peanut is the protein, which the body identifies as an alien substance and thus overreacts to. On the other hand, oils contain fats rather than proteins.

Researchers have concluded that **refined peanut oil will not cause allergic reactions for the overwhelming majority of peanut allergic individuals**, and if anyone does suffer a reaction it is likely to be mild. Refined peanut oil appears to carry a low or no risk. But it is up to individuals themselves or their parents to weigh the evidence and make up their own minds.

Unrefined (crude) peanut oil should be avoided by peanut allergic people, as the process by which the oil is made means that low levels of protein can contaminate the oil. Most other nut oils are unrefined and should therefore be avoided by people allergic to tree nuts.

Some skin preparations may contain arachis (peanut oil). While some researchers have investigated whether there is a link between the use of these creams and the development of peanut allergy in some children, there is no actual evidence that this occurs. However, it seems reasonable for people allergic to peanut to avoid skin preparations and cosmetics known to contain arachis/peanut oil, if they choose to.

Management

There are 3 stages to managing a food allergy:

1. Identify and avoid the cause (if possible)
2. Recognize the symptoms of an allergic reaction
3. Know what to do if it happens again

All people identified as having (or suspected of having) food allergy should therefore be referred to an allergy specialist, in order to achieve this.

Many people with an allergy to peanut or tree nut will be prescribed an Adrenaline auto-injector device. This is because nut allergy is the most common food to cause severe anaphylactic reactions (although most reactions to nuts are not severe). Doctors usually prescribe the adrenaline pens for nut allergies because there is no test which can predict who is at risk of anaphylaxis. Since adrenaline when giving for food allergy is very safe and effective, they are used as a crucial step in management.

Always carry your auto-injector(s). If you have to use your Adrenaline injection then you must go to hospital for observation.

Additional strategies include:

- ▶ Wear a 'Medic Alert' or similar bracelet or medallion
- ▶ Inform work colleagues, catering staff, occupational health staff, teachers and first-aiders about your allergy.



- ▶ Avoid the foods that cause your allergy totally - do NOT risk testing for the presence of your allergen in food by eating a small amount - remember that tiny quantities of the allergen can cause a severe reaction.
- ▶ Make sure you have an Allergy Management Plan, and tell others where it is. Keep a copy of it with any medications you have been given for an allergic reaction.
- ▶ Take any medication prescribed for your reaction promptly if symptoms begin. Then call an ambulance or go to hospital immediately (do not travel alone).



Avoiding peanut and tree nuts

Reactions to peanuts or nuts can be life threatening. Once diagnosed it is important that nuts and all sources of nuts are excluded from the diet at all times, unless an Allergy Specialist has told you otherwise.

Manufacturers are definitely improving labelling, but you still have to find out a lot about the content of foods yourself. Some foods obviously contain nuts while in others, nuts may be a hidden ingredient. Peanut is a member of the LEGUME family and is classified as a VEGETABLE. Your doctor may occasionally tell you to avoid foods such as peas, beans, lentils and other legumes. High risk foods should only be introduced with the supervision of a Doctor or Dietician. Never reintroduce peanuts into the diet without medical supervision.

Peanuts are a very popular food and often included in confectionery, biscuits and Indian/Chinese/Asian/Thai food. Even with the most strenuous efforts it may not be possible to avoid them. Contaminations through the use of some production lines or the same utensils can occur. The food industry takes these issues seriously and many voluntarily label food as **“contains peanuts” or “may contain trace of peanuts”**. The second statement is not always very helpful.

In restaurants and “take-aways” inclusion of peanuts is a potential hazard particularly where peanuts are a staple, but peanut butter has been found to be the “secret ingredient” in some dishes. No one can guarantee complete avoidance of any food allergen. All food which you do not prepare yourself must be considered somewhat suspect, but with the correct medication (Adrenaline or antihistamines), the risk incurred is minimal provided you use it immediately and then go straight to hospital.

All of the major supermarket chains in this country provide “Free From” lists. It is possible to get a list of own brand foods which do not contain peanuts, but companies do change the ingredients in processed foods, sometimes without stating that this has occurred. It is best to read the list of ingredients on processed foods, even if you have eaten it without problems before.

If in doubt of the contents of any product, contact the manufacturer before trying it.

What you can do?

- ▶ Write to your local supermarket for a list of products which they consider to be nut free.
- ▶ Keep to brands which are either labelled as nut free on the packet or are guaranteed as nut free by the manufacturers' lists.
- ▶ Do not eat anything you are not sure about. Check directly with the manufacturer.
- ▶ Make your own cakes & biscuits, using a known and safe source of oil or fat e.g., Corn oil, Sunflower oil or Olive oil.
- ▶ If you use Adrenaline ALWAYS take it with you.



Eating out

- ▶ Take 'safe' foods to parties.
- ▶ Give the people who will be providing your meals notice of the foods you can or cannot eat, i.e. restaurants, friends, relatives.
- ▶ People cannot help prevent your Allergic reaction if they are not aware you are allergic to nuts or peanuts.
- ▶ Never take a waitress's word that a food is safe, ALWAYS talk directly to the Chef, and ascertain what type of cooking oil has been used.
- ▶ Plain foods are safer. Check NO nut products have been used.
- ▶ Try and use the same restaurants so you can build up some trust with the staff.
- ▶ Always carry your rescue medication, antihistamines, adrenaline autoinjector pens with you.

Be prepared to be firm when discussing your allergy in restaurants/bars etc.. This is called being aggressively polite! For many people, an allergy just means a rash, not a potentially life threatening condition. Use your Medic Alert emblem to get peoples attention if necessary. State that you wear this because your reaction can be very severe. If you do have a reaction in a public place, you must inject yourself first and delegate someone to call an ambulance. If you must go to the toilet because of vomiting or diarrhoea, do not go alone, take someone with you. **DO NOT GO OFF QUIETLY BY YOURSELF BECAUSE YOU ARE EMBARRASSED.**

Foods to avoid:

Oils

Blended Oils, Unrefined / Gourmet Peanut, Arachis and Groundnut oils.

Biscuits

All Biscuits, Almonds, Coconut biscuits, Macaroons, or Nut Oils.

Preserves

Peanut Butter, Chestnut Puree, Chocolate and Hazel Spread, Praline Spread, Sweet Mincemeat.

Cakes

Christmas Cake, Fruit Cake, Stollen, Marzipan containing cakes, Carrot Cake, Passion Cake, Cakes bought in Delicatessen, Cakes containing vegetable oil.

Cereals

Crunchy Nut Cornflakes, Fruit & Fibre, Muesli, Shreddies, Fruitful, etc.,

Dips & Sauces

Pesto Sauce, Waldorf Salad.

Vegetarian Food

Nut Loaf, Vegeburgers, Sausages. (Some products may be OK - Check Labels).

Desserts

Nut Yoghurt, Nut Ice-creams, Cakes, Puddings containing nuts.

Sweets

Nuts, Nougat, Nut Brittle, Halva, Snickers, Topic, Fruit & Nut, Bounty, Toblerone, Liquorice Allsorts, Pralines, Florentines. Always Check Labels.

Others

Some Chinese Foods e.g. Satay.

It is also advisable to avoid Creams and Shampoos containing nut extracts.

Always check the labels on all food purchased

Foods allowed:

Oils

Sunflower Oil, Olive Oil, Safflower Oil.

Biscuits

Home made biscuits made with known source of oil.

Preserves

Jam, Marmalade, Honey.



Cakes

Home made cakes containing known ingredients. Cakes guaranteed to be Nut free by manufacturers.

Cereals

Weetabix, Shredded Wheat, Wheat, Cornflakes, Rice, Krispies etc.



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