

ALLERGY

What is an allergy?

Symptoms

Common allergies

Lactose intolerance

Allergy Testing

Allergy

What is an allergy?

- An Allergy is an inappropriate reaction of the body's immune system. It is a group of unpleasant or dangerous symptoms which a few people get from substances which are harmless to most of us.

What kinds of allergy are there?

There are two broad types of allergy as far as most people are concerned. These two groups of allergic illnesses are completely separate, and having one kind does not mean you are more likely to have the other kind.

- The first kind is the common kind of allergy which causes hayfever, allergic asthma, infantile eczema, food allergy, and some drug allergies. This type involves a very quick reaction, typically taking 15 minutes to become really obvious, and is called **immediate hypersensitivity**.
- The second is a peeling eczema-like rash called contact dermatitis, which some people get from metals such as nickel in jewellery, watches or clothing items. It can also be caused by cosmetics, sticking plaster, or a variety of other things which come into contact with the skin. This type of reaction is much slower, typically taking two days to become really obvious, and is called **delayed hypersensitivity**.

What causes an Allergy ?

Allergic reactions are caused by substances in the environment known as allergens. Almost anything can be an allergen for someone.

The most common allergens are:

- pollen from trees and grasses
- moulds
- insect venom
- medicines
- house dust mite
- pets such as cats and dogs
- industrial and household chemicals
- foods

An allergic person's immune system believes allergens to be damaging and so produces a special type of antibody (IgE) to attack the invading material. This leads other blood cells to release further chemicals (including histamine) which together cause the symptoms of an allergic reaction.

The most common symptoms are:

- sneezing
- itchy eyes and ears
- shortness of breath
- sinus problems
- nettle-like rash.
- runny nose
- severe wheezing, coughing
- a sore palate

Is allergy inherited?

- Someone who gets one of these allergic illnesses is more likely to get one of the others, and as a group these problems run in families. Usually it is the tendency to develop allergy which a child inherits, rather than inheriting a specific allergy such as penicillin or kiwi allergy.
- This tendency to develop allergies is called **atopy**. If you have the tendency you are **atopic**. Atopy is the tendency to develop **immediate hypersensitivity** more readily than most people. It is possible to inherit more than one such gene, and some atopic people are more atopic than others. If you are more atopic you are likely to become allergic to a lot of things. If you are only slightly atopic you are likely to become allergic to only a few.

Some Common Allergies in Children



Milk Allergy

Milk allergy is more common in babies with eczema and a reaction can be triggered by tiny amounts of milk. This may be milk ingested by the baby or even milk which has passed to the baby from the mother's breast milk from dairy products she has eaten. Most children have outgrown their milk allergy by the age of three and if the child is allergic to several things, milk allergy is generally the allergy they lose first.

Cows' milk allergy is caused by a reaction to a number of allergens in cows' milk, such as casein and whey. Children can be allergic to either whey or casein, or both. Heat treatment, such as pasteurisation, changes whey, so people who are sensitive to whey might not react to pasteurised milk. But heat treatment doesn't affect casein, so someone who is allergic to casein will probably react to all types of milk and milk products.

Milk from other mammals (such as goats and sheep), and hydrolysed milk and soya formulas, are sometimes used as a substitute for babies who are at risk of developing cows' milk allergy. However, the allergens in milk from goats and sheep are very similar to those in cows' milk. This means that someone with a cows' milk allergy might react to these other types of milk as well, so goat's and sheep milk aren't suitable alternatives for people who are sensitive to cows' milk.

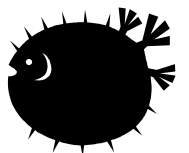
Egg Allergy



Egg allergy is also most common in children and about half the children who have it will grow out of it by the age of five. Egg allergy is mainly caused by three proteins in the egg white called ovomucoid, ovalbumin and conalbumin. Cooking can destroy some of these allergens, but not others. So some people might react to cooked eggs, as well as raw eggs. As the child begins to outgrow their egg allergy, they often become able to tolerate cooked egg in foods such as cakes.

Fish Allergy

Fish allergy can often cause severe reactions. Children are less likely than adults to react to shellfish but frequently react to white fish. Adults are more likely to have an allergic reaction to fish and shellfish than children. Cooking has very little effect upon fish allergens and it is an allergy which is rarely outgrown.



Soy Allergy Soya allergy is a common childhood allergy which most children lose by the age of 2. Some children with soya allergy might also react to milk. Soya can be described in a number of different ways on food labels, for example as hydrolysed vegetable protein, vegetable oil and lecithin.

Peanut Allergy

Peanut allergy is an increasing problem in children. Recent research has identified that up to a third of allergic children will outgrow their allergy by the age of 7. Children are most likely to outgrow peanut allergy if they are male, do not have egg allergy and have not had other allergic diseases. The incidence of peanut allergy may be as high as 1 in 200 children although the exact figure is unknown. It is possible for children to develop peanut allergy but in 99% of cases, children react on their first exposure to peanut.



Tree Nut Allergy

Tree nuts are not related to peanuts although many children who are allergic to peanuts are also allergic to other nuts.

Fruit Allergy

Allergic reactions to fruits and vegetables are usually mild and often they just affect the mouth, causing itching or a rash where the food touches the lips and mouth. This is called oral allergy syndrome. This happens because some fruits contain 'histamine', the chemical which the body releases during an allergic reaction. This type of reaction is not reaction and large quantities could be eaten without incident.

Cooking often destroys histamine so cooked fruits present little of a problem and usually the child can tolerate fruit juices without any reaction. Riper fruits tend to be more problematic than ripening fruits.



Food Intolerance

There is another type of reaction to foods which does not involve the immune system. Food intolerance is not life-threatening but can be unpleasant.

Lactose Intolerance

Lactose is a sugar found naturally in milk. It's important to distinguish between lactose intolerance and milk allergy, because milk allergy can cause severe reactions.

Lactose intolerance is caused by a shortage of the enzyme lactase, which is needed to break down lactose so it can be absorbed into the bloodstream. When someone doesn't have enough of this enzyme, lactose isn't absorbed properly from the gut, which can cause symptoms such as bloating and diarrhoea. Milk from mammals including cows, goats, sheep and humans contain lactose. This means that goats' milk and sheep milk aren't suitable alternatives to cows' milk for people who are intolerant to lactose. There is no medical treatment for lactose intolerance, but symptoms can be avoided by controlling the milk intake.



Allergy Testing

There are ONLY two forms of reliable and accurate allergy testing:

Blood Testing

Blood testing measures the amount of Specific IgE circulating in the blood that the immune system has produced against a suspected allergen. It is particularly useful:

- When extensive eczema makes skin prick testing impractical.
- When antihistamine medication cannot be stopped because of the severity of the symptoms.
- Where unusual and rare allergens are suspected.

Results are available in around 7 to 14 days and are reported in Classes of 0 - 6, which indicate increasing sensitivity to an allergen. Class 0 indicates a negative result and Class 6 extremely high sensitivity.

Skin Testing

This test measures specific IgE attached to cells in the skin. Skin prick testing is usually the first test recommended when an allergy is suspected. It is safe, simple and quick and provides results within 15-20 minutes. It can be used for all types of immediate hypersensitivity. The skin prick test introduces such a tiny amount of allergen into the skin that testing is quite safe, and can be carried out on all age groups.

- It is usually carried out on the forearm but can be done on the child's back
- Ideally the allergens to be selected should be in accordance with the patient's history
- The arm is coded with a marker pen for the allergens to be tested
- A drop of the allergen (extract) solution is placed by each code
- The skin is then pricked through the drop using the tip of a lancet which can be uncomfortable but is not painful.
- If the child is allergic to any substance, a weal develops on the site, which looks very much like a nettle sting.
- The size of the weal does not indicate the severity of symptoms.

Children must not take antihistamines prior to skin testing as it prevents a response. Long acting antihistamines (Clarityn, Zirtek) should be stopped two weeks prior to testing, and short acting ones (Piriton) should be stopped 48 hours before testing.

ANAPHYLAXIS

What is Anaphylaxis?

Treatment

Anaphylaxis

Anaphylaxis is an acute, life-threatening reaction. Severe symptoms occur suddenly after contact with the allergen and progress rapidly.

Symptoms include:

(not all of these will be present)

- An itchy nettle rash
- Faintness and unconsciousness due to very low blood pressure. Unlike an ordinary fainting attack, this does not improve so dramatically on lying down. The heart rate will be fast.
- Facial swelling
- Throat swelling, causing difficulty in swallowing or breathing
- Asthma symptoms
- Vomiting
- Stomach cramps
- Diarrhoea
- A tingling feeling in the lips or mouth if the cause was a food

Children who are allergic to foods often notice the effect in seconds, and their life may be in jeopardy within a few minutes. Improvement can also happen quickly, especially with the right treatment.



There is a treatment which children can carry in case of an acute allergic reaction. This is called Adrenaline, and the most common preparation is the Epipen Autoinjector. This is simple and easy to use and highly effective. If your doctor thinks your child needs it, then you will be shown how to give it. The company who manufacture the Epipen will sell you a trainer pen for around #3.00, if you would find it useful to have one to demonstrate to family and teaches. If you are prescribed an Epipen, your child must carry it wherever they go and it is useful to have a second pen at school. A MedAlert bracelet may also be helpful.

It is also a good idea for your child to have an Anaphylaxis Action Plan at school in case of any reaction. Your doctor or nurse can provide you with this (see example overleaf). The format of the plan will depend upon the severity of your child's reaction and whether or not they also have asthma.

Adrenaline cannot help you if you do not have it with you.