

## Egg allergy

Egg allergy commonly affects babies and young children (around 2 in 100) in the UK, often starting before the age of one. Most outgrow it during childhood, though it can persist into teenage years or rarely adulthood. Adult-onset egg allergies are very uncommon.

Reactions range mainly from mild to moderate; skin rashes and vomiting are the most common symptoms. Severe reactions are uncommon; anaphylaxis is rare.

This factsheet aims to help people understand egg allergy, recognise symptoms, learn how to stay safe, guide them on the reintroduction and manage it in everyday life.

### What is egg allergy?

Egg allergy is a type of food allergy. Food allergy occurs when the body's immune system wrongly identifies a food as a threat. When this happens, the body releases chemicals, such as histamine, in response. It is the release of these chemicals that causes the symptoms.

Egg allergy occurs when the body's immune system reacts to proteins in egg, most commonly those in egg white; allergy to yolk can occur but is less common.

Reactions usually happen soon after eating egg or foods containing egg, typically within minutes and up to 2 hours; in non-IgE (delayed) allergy, symptoms may appear 24–48 hours later.

In most people, egg allergy causes mild symptoms; severe reactions are uncommon and anaphylaxis is rare. If you think you or your child may be allergic to egg, speak to your GP — many children can be managed safely in primary care, with referral to specialist services when indicated (for example, severe reactions, diagnostic uncertainty, faltering growth or multiple food allergies).

### What are the types of egg allergy

Egg allergy can present in different forms depending on how the immune system reacts. There are two main types of egg allergy: **immediate** and **delayed**.

#### Immediate egg allergy

Immediate egg allergy is also called 'IgE mediated' egg allergy as it involves IgE antibodies; that trigger an allergic reaction. Reactions usually come on very fast, between minutes and up to two hours after eating egg or foods that contain egg; rapid-onset symptoms like hives, swelling or vomiting.

### Delayed egg allergy

Delayed egg allergy is also called 'non-IgE mediated' as it involves a different part of the immune system, not involve IgE antibodies. Symptoms can vary but mainly affect the digestive system and skin. Symptoms are delayed, occurring hours to days after egg exposure. Delayed reactions to egg are less common than delayed reactions to cow's milk.

### Other allergic conditions

It is possible for some children with egg allergy to experience a combination of immediate (e.g. hives, vomiting) and delayed (e.g. eczema, diarrhoea) symptoms.

*There are other types of delayed allergic conditions that can be triggered by egg such as [Food Protein-Induced Enterocolitis Syndrome \(FPIES\)](#). This condition is not covered in this factsheet.*

### What are the symptoms of egg allergy?

Factors that determine the likelihood and severity of a reaction include the amount eaten, how well the egg is cooked, and whether egg is baked within a food matrix (for example, with flour).

### Immediate egg allergy symptoms

The symptoms of egg allergy usually come on quickly, within minutes of eating the food.

#### **Mild to moderate** symptoms:

- a red raised itchy rash (known as hives or urticaria) anywhere on the body
- swelling of the face, lips and/or eyes
- a tingling or itchy feeling in the mouth
- mild throat tightness
- stomach pain, vomiting or diarrhoea

#### **Severe symptoms:**

More severe symptoms such as anaphylaxis are uncommon but remain a possibility for some people, including children. These may include:

- **AIRWAY** - swelling in the throat, tongue or upper airways, hoarse voice, difficulty swallowing.
- **BREATHING** - sudden onset wheezing, breathing difficulty, noisy breathing, persistent cough.
- **CIRCULATION** - dizziness, feeling faint, sudden sleepiness, confusion, pale clammy skin, loss of consciousness or collapse.

The term for this more severe reaction is **anaphylaxis** (ana-fil-ax-is).

Healthcare professionals consider an allergic reaction to be anaphylaxis when it involves difficulty breathing or affects the heart rhythm or blood pressure. Any one or more of the ABC symptoms above may be present.

In extreme cases there could be a dramatic fall in blood pressure. The person may become weak and floppy and may have a sense of something terrible happening. Any of the ABC symptoms may lead to collapse and unconsciousness and, on rare occasions, can be fatal.

[Read more about anaphylaxis.](#)

### What are the symptoms of delayed egg allergy?

Egg allergy can also cause symptoms that come on hours or even days later. When symptoms are delayed, they may include:

- worsening of eczema
- reflux caused by inflammation in the stomach
- trouble swallowing
- diarrhoea, constipation, abdominal (tummy) pain and bloating

### Airborne and contact reactions

Touching egg or contact with eggshells can sometimes trigger symptoms, usually affecting only the skin. Severe reactions from touching or breathing in egg are rare and usually limited to local irritation; severe reactions typically occur after eating egg.

Processed eggshells (thoroughly cleaned and the inner membrane removed) do not contain proteins that cause allergy, but everyday eggshells are often contaminated with traces of egg. Skin contact is not a concern for non-IgE-mediated allergy.

Egg protein can rarely become airborne when cooking (e.g. whisking, frying), potentially

causing mild eye/nose/throat irritation in very sensitive people. Anaphylaxis from airborne egg is extremely rare, but people with poorly controlled asthma may be at higher risk of respiratory symptoms that could worsen into something more serious.

**Always ensure asthma is well controlled**—discuss with your GP or allergy specialist, as this reduces the risk of severe reactions from any allergen exposure, including indirect contact.

### Getting a diagnosis

If you think you or your child may be allergic to egg, see your GP. If symptoms are mild, your GP may manage this type of allergy in primary care. The GP can refer you to the general paediatric or allergy clinic if needed, or if a supervised food challenge is needed. They can find a clinic in your area from [British Society for Allergy and Clinical Immunology \(BSACI\)](#).

[Read more about allergy testing.](#)

### What can mean you're at higher risk?

Some clues that your child might be at higher risk of more severe reactions are:

- they have already had a severe reaction, with any of the **'ABC'** symptoms
- they have asthma, especially if it is not well controlled
- they have reacted to a tiny amount of egg (even cooked egg).

If your child has asthma, and it is not well controlled, this could make an allergic reaction worse. Make sure you discuss this with their GP or allergy specialist and take any prescribed medicines.

Symptoms can be confusing because children can often eat egg when it's baked, in cakes for example, without having a reaction, but can't eat egg when it is lightly cooked or raw. When a child reacts to lightly cooked or raw egg but not baked egg, it might not be obvious that egg is the allergen. It's helpful to keep this in mind if you are not sure what's causing the allergic reactions. Children who have had a severe reaction to egg should not be given egg at home in any form until advised by a healthcare professional.

## Treating symptoms

If you experience mild allergic symptoms, you may be prescribed antihistamine medicine that you take by mouth. Adrenaline auto-injectors are not routinely prescribed for egg allergy; they are reserved for people at higher risk (for example, previous anaphylaxis, poorly controlled asthma, or reactions to small amounts).

Adrenaline is now available in different forms (auto injectors or nasal spray) that are designed to be easy to use. It's important to know exactly how and when to use your prescribed adrenaline device. Healthcare professionals can show you how to use it, and there are also resources such as practice devices and videos on manufacturer websites.

Options currently available on prescription in the UK include:

- **Adrenaline auto-injectors (AAIs)** – such as EpiPen and Jext.
- **Intranasal adrenaline** – EURneffy, a needle-free nasal spray (not available for children under 30kg at present).

You must carry two in-date forms of prescribed adrenaline at all times as a second dose may be needed if symptoms do not improve after five minutes or get worse.

[Find out more about what to do in an emergency.](#)

[Find out more about adrenaline.](#)

## Egg allergy and breastfeeding

Very small amounts of egg protein can be found in the breast milk, but the majority of infants with egg allergy do not react and the mother should be encouraged to continue with a normal diet that includes egg.

If reactions to egg are suspected via breast milk (a rare occurrence):

- A healthcare professional may suggest an egg-free diet for 2–4 weeks as a trial
- Monitor your baby's symptoms closely during this time
- Reintroduce egg gradually under guidance
- Seek dietitian support to ensure nutritional balance

Always discuss dietary changes with your GP or allergy specialist first.

## Egg allergy and related allergic conditions

### Eczema

Children with eczema (severe/early-onset) are more likely to develop egg allergy. If your child has severe eczema and you think they may be allergic to egg, cutting egg out of their diet may help their eczema get better. If there is no improvement after a short trial, egg products should be reintroduced and further advice should be sought. However, it is important to note that removing egg from the diet for long periods of time should only be done with advice and advice from an allergy specialist or dietitian.

### Respiratory allergies and asthma

Infants and children with egg allergy are at much higher risk of developing respiratory allergies such as hay fever, pet or dust mite allergies, or asthma. As many as 8 out of 10 will go on to develop a respiratory allergy or asthma by the age of 4-5. If your child with egg allergy develops respiratory symptoms such as wheeze or breathlessness, discuss this with their doctor or specialist as they might require treatment (such as inhalers) and an asthma action plan.

### Peanut allergy

Infants with egg allergy are more likely to develop peanut allergy than other babies, therefore, introducing peanut into your baby's diet early (from around 6 months) may help prevent allergy in high-risk infants (egg allergy and eczema).

[Read more about weaning babies with food allergies here](#)

## Outgrowing egg allergy

Most children outgrow egg allergy, but the timeline for outgrowing the allergy differs from child to child. Some studies suggest that about half outgrow the allergy within a year of diagnosis, while for others, this process takes longer and can happen at different ages.

Tolerance often develops first to well-cooked egg (such as in baked goods like cakes) products before less cooked or raw ones. This stepwise introduction is called the "egg ladder." This can help speed up tolerance. It starts with foods containing thoroughly baked egg and moves gradually toward less cooked forms. You can read more about it below.

**Never use the egg ladder at home for a child with immediate (IgE-mediated) egg allergy on your own, without the advice and recommendation of a healthcare professional.**

## Avoiding egg

### Who needs to avoid which forms of egg?

Not everyone with an egg allergy needs to avoid all forms of egg. A healthcare professional (paediatrician, dietitian or GP) should advise you which types of egg are safe for you and which must be avoided.

Many people with egg allergy can tolerate egg that is well-baked or well-cooked (for example, egg baked into cake or boiled for around 30 minutes) and only develop allergic symptoms if they eat lightly cooked egg (for example, boiled for few minutes or scrambled) or raw/pasteurised egg (for example, in mayonnaise, chocolate mousse, ice cream or cake batter). Heat from cooking changes the structure of egg proteins and combining egg with other ingredients (such as wheat flour) can make the egg protein less available to the immune system, so it is less likely to trigger a reaction. Around 8 in 10 people with egg allergy can tolerate egg baked into a plain cake, but the most sensitive individuals (very few) will need to strictly avoid all forms of egg.

You should only try introducing baked or well-cooked egg if this has been recommended by your healthcare professional.

### Food labelling and egg

UK and EU law class egg as one of the main food allergens that must be clearly emphasised (for example, in bold, highlighted or in a different colour) in the ingredients lists of pre-packed foods. Allergen information must also be available for foods sold loose or when eating out, usually on menus or on request.

Outside the UK and EU, labelling rules may be different. Always check ingredients carefully when buying imported foods or travelling abroad and ask about egg if you are unsure.

## When you're shopping

Egg can appear in many foods. The lists below show examples, not everything. Always read the ingredients list every time you shop.

Level of Cooking	What this means	Examples of foods
<b>Well-cooked / baked egg</b>	Egg is fully cooked at high temperatures	Biscuits, crackers, cookies; cakes, muffins, sponge cakes; brioche, croissants, enriched breads; shop-bought pancakes and waffles; pastries (pies, sausage rolls); foods with egg glaze; breaded items (fish fingers, nuggets); burgers or meat alternatives with egg (well cooked); egg pasta; some prawn crackers or cones
<b>Lightly cooked egg</b>	Egg is cooked but softer or less heated	Homemade pancakes and waffles; Yorkshire puddings; scrambled egg; hard boiled, fried or poached eggs (no undercooked parts); omelette, frittata; quiche; egg fried rice; French toast; custard, crème brûlée; hard meringue; sauces like carbonara or Hollandaise (well heated)
<b>Raw or pasteurised egg</b>	Egg is uncooked or only lightly cooked	Mayonnaise, dressings, coleslaw; runny eggs; eggs Benedict; mousse; some ice creams; soft meringue (e.g. lemon meringue pie); royal icing, fondant; crème-filled chocolates; eggnog, advocaat; cocktails with egg white; raw cake batter; foods like steak tartare or some sushi

This list is not complete so, to avoid egg, read the ingredient lists on food packets carefully every time you shop.

[Read about shopping and preparing food.](#)

### Vegan and free-from products

Products labelled '*vegan*' or '*plant-based*' should not contain egg as an intentional ingredient. However, cross-contamination risks remain, and the same legal protections as '*free-from*' claims don't apply, so always check the full ingredient list and allergy warnings. **The Food Standards Agency notes that vegan labelling does not guarantee allergen-free safety - find out more [here](#).**

*'Free-from'* or *'made without'* products may contain egg as an ingredient as the product may

only be free from a different allergen, such as wheat/gluten. However, products labelled 'egg-free' by law must **not** contain egg.

**Always check the labels in case they contain other ingredients you are allergic to.**

### Ingredient names to look for

Egg can be present in foods in many forms. It should always be highlighted on the label, but it may appear under names such as:

- Egg, whole egg, egg yolk, egg white
- Dried egg, powdered egg, egg protein
- Albumen / egg albumin
- Egg lecithin (usually listed as "egg lecithin"; note that soy lecithin is different)
- Egg lysozyme or E1105 (an egg white enzyme) is sometimes used as a preservative in cheeses (e.g. Grana Padano, Parmigiano), wine (finings) and occasionally other foods/medicines.

### Egg substitutes in cooking and baking

If you need egg for a particular recipe, you can often use:

- Commercial egg replacer products
- Chia or ground flax seed "egg" (mixed with water)
- Aquafaba (chickpea water) for meringues and some baking
- Silken tofu or chickpea flour
- Yoghurt, fruit or vegetable purees

Ask your dietitian for recipe ideas and advice on which substitutes are most suitable for your child's age and nutritional needs.

### When eating out

When you eat out (restaurants, cafés, takeaways, school meals):

- Always tell staff clearly that you or your child has an egg allergy.
- Ask whether egg is an ingredient and whether there is a risk of cross-contamination.
- If staff are unsure, ask them to check with the chef or manager.
- Be cautious of foods with sauces, glazes or batters, or where the ingredients are not obvious (e.g. burgers, meatballs, desserts, cocktails).

If you are ever in doubt, choose something else.

### What else might I react to?

People with allergy to hen's eggs are at risk of reacting to eggs from other birds such as duck, turkey, quail, goose, gull or guinea fowl. In egg allergy, all bird eggs should be avoided, unless a particular type is known to be tolerated.

Egg allergy is different from meat allergy - most people with egg allergy can still eat chicken, other poultry and game birds. It also does not include allergy to fish eggs (roe) or shellfish eggs, which come under fish or shellfish allergies. Very rarely, people who are allergic to hen's egg may not be able to eat chicken.

### Finings

In some wines, a product made from egg called 'fining' is used to make the wine look clear. For most people with egg allergy, the amount of egg is so tiny it won't cause an allergic reaction. However, any wine using egg as a fining agent will have an allergen warning that says 'Contains Egg' on the label if the amount is more than 0.25 milligrams per litre which is the legal threshold.

### Vaccines and egg allergy

#### The Measles, Mumps and Rubella (MMR) vaccine

All children with egg allergy, even those with severe egg allergy can safely be given their MMR vaccination in any setting. The MMR vaccine is grown on cells from chick embryos, not from hen's eggs themselves, and it does not contain enough egg protein to cause an allergic reaction.

#### The influenza (flu) vaccine

Some flu vaccines are made using hen's eggs and may contain tiny amounts of egg protein, but egg-free flu vaccines are also available.

Adults with egg allergy can safely be given a flu vaccine in any setting as long as it has less than 0.06 micrograms of the egg protein (called ovalbumin) per 0.5ml dose of vaccine. You can find this information in the patient information leaflet for the vaccine.

Adults who have had anaphylaxis due to egg allergy that required intensive care should be offered an egg-free vaccine.

Children with egg allergy can safely have the Live Attenuated Influenza Vaccine (LAIV) nasal spray. Even though it contains minute quantities of egg protein, it's not enough to cause

an allergic reaction. The only exception is for children with a history of anaphylaxis to egg; so severe that it has required intensive care. They should be referred to an allergy clinic for immunisation in hospital as a precaution.

### The yellow fever vaccine

If you are allergic to egg and need a yellow fever vaccination, ask for a referral to an allergy clinic. The vaccine contains small amounts of egg protein but sometimes it can be given successfully by splitting the doses.

### Rabies vaccine

The most commonly used rabies vaccine (called the Purified Chick Embryo Cell vaccine, brand name Rabipur®) is made using chicken eggs and contains very small amounts of egg protein.

When the vaccine is given before possible exposure to rabies, such as before travel or working in high-risk environments, people with a severe egg allergy may be offered an alternative rabies vaccine that does not contain egg.

When the vaccine is needed after possible exposure to rabies, for example following an animal bite or scratch, it is considered safe for everyone with an egg allergy, including those who have had severe reactions in the past. In these situations, the benefit of protection against rabies far outweighs the very small risk from the trace amounts of egg protein in the vaccine.

If there are any concerns, the vaccine can be given under appropriate medical supervision.

For the most up-to-date UK guidance on egg allergy and vaccines, see the [Green Book](#).

### Introducing egg back into the diet

Most children outgrow egg allergy, especially if reactions have been mild-moderate (not severe/anaphylaxis). A healthcare professional may recommend **gradual reintroduction** to check if tolerance is developing and safely expand your child's diet.

### The egg ladder

The **“egg ladder”** is a step-by-step way to reintroduce egg into the diet for those

diagnosed with mild to moderate egg allergy.

It typically involves:

- starting with foods that contain very small amounts of well-cooked egg (such as highly baked products like fairy cakes).
- gradually increasing the amount of egg given.
- eventually progressing to foods containing less processed or uncooked egg.

Children who tolerate well-baked egg have higher outgrowing rates (~80%) and eating egg regularly helps build tolerance.

**Never start at home without advice from a healthcare professional, especially for those with IgE-mediated allergy.**

#### Oral Immunotherapy for egg allergy

Oral immunotherapy (OIT) is a desensitisation treatment where children are given tiny amounts, gradually increasing doses of egg under medical supervision to build tolerance.

OIT is not widely available across the NHS, but some specialist allergy clinics now offer it for children with more severe or persistent egg allergy. This treatment is generally considered for older children—typically those over five years of age—who have not outgrown their allergy.

OIT must always be carried out under the supervision of an allergy specialist. Dose increases take place in a clinic or hospital to ensure that emergency treatment is available in the event of a significant reaction. **Not all children with more persistent allergies will be suitable for OIT; studies show that those who react to very small amounts of egg may have lower success rates and a higher likelihood of side effects.**

Choosing between the egg ladder and OIT depends on the type of allergy and the expected course of the allergy. The egg ladder is designed for children who are low-risk where tolerance is gradually developing. In contrast, OIT is reserved for children whose allergy is more likely to persist, such as older children and those with a history of severe reactions.

**Your specialist will advise whether egg ladder or (where available) OIT is most suitable based on reaction history, age, and allergy persistence risk. If you're wondering about OIT, ask your GP about availability through your NHS allergy service.**

## Key Messages

- If you think you or your child may be allergic to egg, visit your GP.
- If you are prescribed adrenaline, carry **two** devices with you **at all times**.
- Always be guided by your health professional on which foods to avoid.
- Ensure that asthma is well managed; see your GP if needed.

## Feedback

Please help us to improve our information resources by sending us your feedback at:

<https://www.anaphylaxis.org.uk/information-resources-feedback/>

## Sources

All the information we produce is evidence-based or follows expert opinion and is checked by our clinical and research reviewers. If you would like to know the sources we used in producing any of our information, please contact [info@anaphylaxis.org.uk](mailto:info@anaphylaxis.org.uk) and we will gladly supply details.

## Reviewer

The content of this Factsheet has been Peer Reviewed by Dr George Raptis, a consultant in paediatric allergy at Royal Hospital for Children and an honorary senior clinical lecturer at the University of Glasgow.

## Disclosures

We are not aware of any conflicts of interest in relation to the review of this factsheet.

### Disclaimer

The information in this Factsheet is given in good faith. Every effort has been made to ensure accuracy. Everyone is different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

### About Anaphylaxis UK

Anaphylaxis UK is the only UK-wide charity solely focused on supporting people at risk of serious, life-threatening allergic reactions. We provide information and support to people living with allergies through our free national helpline and local support groups. We also fundraise to achieve our ultimate aim, to create a safer environment for all people at risk of serious allergies. Visit our website [www.anaphylaxis.org.uk](http://www.anaphylaxis.org.uk) and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, and you can find our podcast [here](#).