

# Your quick guide to: What is an egg allergy?

'Egg allergy' means an allergy to bird eggs, most commonly hen's eggs. 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 usually 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.

Egg allergy occurs when the body's immune system reacts to proteins in the egg, most often those in the egg white, although reactions to proteins in egg yolk can also occur. Egg allergy can present in different forms depending on the type of immune response involved:

- **IgE-mediated allergy:** Symptoms typically appear very quickly after egg exposure.
- **Non-IgE-mediated allergy:** Symptoms are delayed, occurring hours to days after egg exposure.
- **Mixed allergy:** Some individuals may experience a mix of both IgE and non-IgE-mediated symptoms.
- **FPIES (Food Protein-Induced Enterocolitis Syndrome):** A rare and potentially severe non-IgE-mediated allergy that causes profuse vomiting and/or diarrhoea typically 1–4 hours after egg ingestion.

IgE-mediated egg allergy is one of the most common food allergies in infants and young children, affecting approximately 2% of children in the UK. Most children grow out of egg allergy within the first few years of life, though it can persist into later childhood or, less commonly, adulthood. It is unusual, but not impossible, for egg allergy to appear for the first time in adulthood. Non-allergic sensitivity to egg may be more common than egg allergy in adults, though it is not clear how common this is.

## Who is at high risk of egg allergy and how can the risk be reduced?

Babies with eczema, especially eczema that is moderate, severe or started early, have a higher risk of developing IgE-mediated allergy to egg and peanut. This is because a damaged skin barrier can allow particles of these foods to enter the skin and trigger the immune system. Other risk factors include already having another food allergy or a family history of allergic conditions such as eczema, hay fever, asthma and food allergies.

In babies with a high risk of allergy, delayed introduction of egg has been linked to a higher risk of egg allergy whereas early introduction, around 4–6 months (once solids have been started), can reduce the risk. For babies with moderate-severe eczema or another food allergy, introducing cooked egg early during weaning is therefore recommended, and egg should continue to be eaten regularly if it is tolerated. Some children may already have developed an egg allergy before weaning begins. When giving a baby egg for the first time, start with small amounts and increase the amount gradually. If a reaction occurs, stop giving egg and seek medical advice. Severe allergic reactions to egg in babies and young children are very rare. Following normal weaning guidelines is usually recommended for babies with mild eczema, though there is no reason to delay introducing egg if they are ready for solids.

[See further advice on early introduction of foods from the British Society for Allergy and Clinical Immunology \(BSACI\) here.](#)

## Symptoms of egg allergy

For the most common type of egg allergy, IgE-mediated allergy, symptoms usually appear soon after eating egg or foods containing egg. Allergic reactions can be mild, moderate or severe (anaphylaxis). Most children with egg allergy have mild to moderate reactions. Common symptoms involving the skin include rash, redness, raised red bumps/hives, triggering of eczema flares, and swelling of the lips, eyes or face. Common symptoms involving the gut include vomiting, stomach-ache or cramps and loose stools (diarrhoea).

## Key facts:

Most children **grow out of egg allergy within the first few years of life**, though it can persist into later childhood or adulthood.

**Babies with eczema, have a higher risk** of developing IgE-mediated allergy to egg and peanut.

The measles, mumps and rubella vaccine (**MMR**) can be **safely given to all children with egg allergy**

## Allergy UK Helpline

Mon–Fri, 9am–5pm:

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Symptoms are severe and called anaphylaxis if they affect the:

- **Airway** - this can be swelling of the tongue or throat. A cough might indicate swelling of the throat
- **Breathing** - this may be a cough, a hoarse voice/cry or noisy breathing (wheeze)
- **Circulation** - babies and younger children can become pale and floppy. Older children and adults may feel dizzy, faint or lose consciousness.

Severe allergic reactions are a medical emergency. If anaphylaxis is suspected, call an ambulance immediately. More information on anaphylaxis can be found in the [Factsheet: Anaphylaxis and Severe Allergic Reactions](#).

Egg does not have to be eaten to cause a reaction. Touching egg or coming into contact with eggshells can sometimes trigger symptoms, usually affecting only the skin. 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.

Non-IgE-mediated allergy usually causes reactions involving the gut and/or skin hours or days after egg is eaten. FPIES can cause severe vomiting and/or diarrhoea, typically 1-4 hours after egg is eaten. See the [Factsheet on FPIES here](#).

How much egg is eaten, whether the egg is raw, loosely cooked or well-cooked, and what other ingredients (such as flour) it was cooked with, can affect the likelihood of a reaction occurring. Babies and children may sometimes refuse or show reluctance to eat foods they are allergic to.

## Breast feeding and egg allergy

Very tiny amounts of egg protein may be passed through a mother's milk during breast feeding. Most infants with egg allergy will not react to this and the mother does not need to remove egg from her diet if there are no symptoms from breast feeding. In rare cases, when reactions via breast milk are suspected, a mother may be recommended to avoid egg from her diet

for 2-4 weeks before reintroducing egg and monitoring for symptoms. A health professional should provide support with this.

## Diagnosing and testing for egg allergy

If you suspect that you or your child may have an egg allergy, it is important to discuss this with a health professional. This is usually your GP, or sometimes a health visitor, who can provide advice and let you know if further assessment is needed.

In many cases, a diagnosis can be made based on a clear clinical history alone. A clinical history is the full details of any reactions and the food(s) eaten, including the amount eaten, how it was cooked, the timing and type of symptoms, and other relevant factors. Allergy testing is not always necessary, particularly for mild reactions. If the history is unclear or if reactions are more moderate to severe, allergy testing may be recommended. This can include skin prick testing or blood tests. A positive test alone does not always confirm allergy, and a negative test does not always rule it out. The results must be interpreted alongside the clinical history.

Access to testing can vary depending on local services and sometimes a referral to a specialist allergy clinic is needed, particularly for complex cases, infants with multiple food allergies or children who have had severe reactions.

## Egg allergy and vaccinations

Many vaccines may contain small amounts of egg protein. Here is guidance for the MMR (mumps, measles, rubella), influenza (flu), yellow fever, and rabies vaccines for people with egg allergy:

**MMR vaccine:** Research has shown that MMR is very safe for all children with egg allergy, even severe allergy. Current guidance is that all children with egg allergy should receive the MMR vaccine in primary care, with no special precautions needed.

**Influenza (flu) vaccine:** Most adults and children with egg allergy can safely receive the flu vaccine. The preferred

vaccine for children is the nasal spray (live-attenuated influenza vaccine, LAIV), which is very safe, even for children with severe allergy, as long as the child is not immunocompromised (children who are immunocompromised, for example because they are taking medications like biologics, should not receive live vaccines). The only exception is children who have had such a severe reaction to egg that they required ventilation in intensive care. These cases are very rare, and there isn't enough safety data for them. Most adults with an egg allergy should be given flu vaccines that contain very small amounts of egg protein (usually less than 0.12 micrograms per ml) with the exception of adults who have had a severe allergic reaction to egg that required intensive care who should see an allergy specialist first (the vaccine may need to be given in hospital).

**Yellow fever vaccine:** This vaccine is only needed for travel to countries where yellow fever is found. Anyone with egg allergy should see an allergy specialist before receiving it as it may contain higher amounts of egg protein (though still very small) than other vaccines.

**Rabies vaccine:** The most common rabies vaccine (Purified Chick Embryo Cell, PCEC; Rubipur®) also contains small amounts of egg protein. For pre-exposure rabies vaccination (for example, before travel or work in high-risk areas), people with severe egg allergy may be offered a different vaccine. For post-exposure vaccination (after a bite), it is safe for everyone with egg allergy (even severe allergy) to receive this vaccine.

## Egg allergy and the diet

Not all people with an egg allergy need to avoid all forms of egg. A GP or allergy specialist should provide information on which forms of egg need to be avoided and which can be included. Many people with an egg allergy can tolerate egg that has been baked or well-cooked (e.g. egg baked into cake) and will only develop allergic symptoms if they eat lightly or loosely cooked egg (e.g. boiled or scrambled) or raw egg (e.g. in mayonnaise, chocolate mousse or cake batter). This is because heat from cooking or baking changes the

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structure of egg proteins, making them less likely to trigger an allergic reaction, and other food ingredients (such as flour) can make the egg protein less available to the immune system. Around 80% of people with an egg allergy can tolerate well-baked egg in cake. However, the most sensitive individuals will need to strictly avoid all forms of egg to protect against potentially serious allergic reactions.

Children usually grow out of egg allergy. For those who have had mild to moderate reactions to egg (but not anaphylaxis or significant breathing problems), a health professional may advise that egg can be gradually reintroduced at home in a stepwise way, using an 'egg ladder'. An egg ladder is a structured guide that starts with foods with well-cooked egg and present in smaller amounts (usually fairy cakes). As foods are tolerated, parents can move up the ladder to foods with less cooked or more concentrated egg. At each step, a small amount is tried first, and if no reaction occurs, the portion can be gradually increased. Children who can eat well-baked egg have a higher chance of growing out of the allergy, and eating egg regularly in forms tolerated seems to help tolerance to egg develop. The ladder helps parents and clinicians check if tolerance is developing and expand the child's diet safely. Egg reintroduction, such as following an 'egg ladder', should be done with guidance from a healthcare professional.

Children who have had a severe reaction to egg in the past should not be given egg at home unless advised by a health professional. For these children, reintroduction of egg is usually done in hospital under supervision with staff that are trained to recognise and treat symptoms of allergic reaction. This is called an oral food challenge.

## Examples of egg containing foods (from BSACI, 2021)

Note: There is a broad range of foods with different amounts of egg and levels of cooking in each category below. When following an egg reintroduction protocol, it is essential to follow guidance from healthcare professionals for more detailed instructions about which foods can be tried first and so on.

Baked and well-cooked egg	Loosely cooked egg	Raw egg
<ul style="list-style-type: none"> <li>• Hard biscuits, cookies and crackers with egg, e.g. Tuc crackers</li> <li>• Cake, scones and muffins, including Jaffa Cakes and sponge fingers</li> <li>• Bread containing egg e.g. brioche, croissant, buns, panettone, naan</li> <li>• Shop-bought Scotch pancakes, waffles, blinis and Welsh cakes</li> <li>• Mini frozen Yorkshire pudding</li> <li>• Pastry containing egg (sausage rolls, pie, choux)</li> <li>• Cooked egg glaze</li> <li>• Breadcrumb coating with egg e.g. fish finger, nuggets</li> <li>• Egg as a binder in meatballs/burgers or vegetarian options e.g. Quorn – must be well-cooked</li> <li>• Wheat/gluten-free bread/bread sticks with egg</li> <li>• Egg pasta</li> <li>• Prawn crackers and waffle cones – if containing egg</li> </ul>	<p>Many options can be cooked more lightly or more thoroughly. Some people may only tolerate options when more well-cooked.</p> <ul style="list-style-type: none"> <li>• Homemade pancakes, crepes and waffles</li> <li>• Homemade Yorkshire puddings</li> <li>• Egg noodles</li> <li>• Scrambled egg (firm to start with, more loosely cooked, if tolerated)</li> <li>• Hard-boiled egg, well-cooked fried and poached egg (no undercooked egg remaining)</li> <li>• Egg fried rice</li> <li>• French toast and Welsh rarebit (well-cooked all the way through)</li> <li>• Omelette, frittata</li> <li>• Scotch egg</li> <li>• Quiche and flans</li> <li>• Duchess potato</li> <li>• Heated sauces e.g. Hollandaise, carbonara sauce</li> <li>• Egg custard, crème broulee, crème caramel</li> <li>• Nougat and chocolate with nougat e.g. Mars/Snickers/Double Decker</li> <li>• Hard meringue/pavlova</li> </ul>	<ul style="list-style-type: none"> <li>• Mayonnaise and mayonnaise-based sauces e.g. dressings, tartar sauce, horseradish sauce</li> <li>• Salad cream, coleslaw</li> <li>• Boiled, fried and poached egg with a runny yolk</li> <li>• Eggs Benedict/Florentine, Florentine pizza</li> <li>• Souffle (cold or hot)</li> <li>• Ice cream with egg, (usually luxury and fresh ice creams) e.g. Ben &amp; Jerry's, Haagen-Dazs, supermarket "best" options, many organic ice creams</li> <li>• Sorbets with egg (most sorbets so not contain egg)</li> <li>• Fresh mousse and other uncooked desserts with egg</li> <li>• Sushi</li> <li>• Steak tartare</li> <li>• Confit egg</li> <li>• Soft meringue and mallow e.g. lemon meringue pie, snowball, chocolate teacake, chocolate whips</li> <li>• Royal and fondant icing</li> <li>• Chocolate and confectionary with fondant e.g. Creme Eggs</li> <li>• Uncooked (but pasteurised) egg white powder</li> <li>• Eggnog e.g. Advocaat</li> <li>• Cocktails with egg white froth (may not be listed as an ingredient in the cocktail description – always inform staff of an egg allergy)</li> <li>• Raw egg in cake mixes and other dishes awaiting cooking</li> </ul>



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## What about lysozyme in cheese?

Lysozyme is a protein from egg white that is sometimes added to medicines and foods to help preserve them. Certain hard cheeses, e.g. Grana Padano, Parmesan, Pecorino and Manchego, often contain egg lysozyme. Foods made with these cheeses (such as pesto or pasta dishes) may also contain it. Although it is uncommon, lysozyme can cause allergic reactions. People with egg allergies should avoid lysozyme and ask a healthcare professional for individual advice, if needed.

## Guidance on salmonella

It used to be recommended that vulnerable people, including babies, pregnant women and older adults, should avoid raw or lightly cooked eggs because of the risk of salmonella. However, the Food Standards Agency updated its advice in October 2017. Eggs produced under the British Lion Code of Practice (marked with the British Lion stamp) are considered safe from salmonella risk, including in raw or lightly cooked form. A person with egg allergy should only eat eggs in the form they can tolerate, or strictly avoid, if necessary.

## Egg-free diet information: Labelling

### Reading a food label

UK and European Union (EU) law considers egg as a common food allergen that must be clearly emphasised (e.g. in bold, highlighted or in a different colour) in the ingredients lists of pre-packed foods. Allergen information must be available for loose foods or when eating out, on request. Outside of the UK and EU, food labelling laws will be different. It is important to check ingredients carefully when food has been imported from outside of the UK and EU or when out of the country.

Products labelled as 'vegan' or 'plant-based' should not contain egg as an ingredient, but this does not guarantee they are completely free-from egg (e.g. from cross-contamination). Always read the ingredient list and allergy information carefully.

'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.

Products labelled 'egg-free' by law must not contain egg. If you have other food allergies, **ALWAYS** check the labels in case they contain other ingredients you are allergic to.

### Examples of a food labels:

*Mayonnaise ingredients:* Rapeseed Oil (78%), Water, Pasteurised Free-Range **Egg & Egg Yolk** (7.9%), Spirit Vinegar, Salt, Sugar, Sunflower Oil, Lemon Juice Concentrate, Antioxidant (Calcium Disodium EDTA), Flavourings, Paprika Extract.

*Grana Padano PDO cheese ingredients:* **Milk**, salt, rennet, preservative: lysozyme from **egg**.

*Plant-based ice cream ingredients:* Water, sugar, coconut oil, cocoa powder, emulsifier (E471), stabilisers (locust bean gum, guar gum), vanilla extract. May contain **Milk** and **Egg**.

## Eating out

Businesses selling food in the UK are required to provide information on allergens and must only sell safe food. This includes taking all reasonable precautions to avoid an ingredient that a customer is allergic to. If they cannot provide food that is safe for a person with food allergy, they must let you know. Always inform food businesses about food allergies before ordering foods. Carrying a card with details of the allergy can be helpful. Even if the meal you are ordering does not contain egg (e.g. a vegan dish), it is important to highlight an egg allergy to make sure that the people cooking and handling the food are cautious to avoid contamination with egg. It is helpful to telephone places you are planning to visit before you go to make sure they can cater for your dietary needs.

**Allergy medication should always be carried with you** or your child in case of an accidental exposure. Even if you are not

planning to eat you should always have allergy rescue medications available.

Travelling - Allergy UK provide a [Translation Card service](#) which can be helpful when eating out or travelling abroad. See Allergy UK's [Food Allergies and travel Factsheet](#).

## Cooking and baking without egg

When cooking or baking without egg, there are many alternatives that can give similar results depending on whether the egg's role is to help bind, help the mixture rise or add moisture.

**Commercial egg replacer powders** work well in cakes, muffins and biscuits, mainly to help the mixture rise and bind.

**Aquafaba** (the liquid from a tin of soaked chickpeas) can be whisked into a foam like egg white, making it useful for meringues or mousses.

**Silken tofu or chickpea flour** can provide structure and act as a binder in brownies, quiches or pancakes, or be used to make alternatives to scrambled egg and frittatas.

**Yogurt, fruit or vegetable purées**, such as mashed banana, apple or cooked sweet potato, add moisture and help bind ingredients in cakes, muffins and quick breads.

**Ground linseed (flaxseed), chia seeds or psyllium husk** mixed with water form a gel that acts as a binder; this is sometimes called a "flaxegg".

**Additional baking powder or bicarbonate of soda** (alongside an acidic ingredient such as vinegar, lemon juice or buttermilk) creates a leavening effect for recipes where eggs help the batter rise.

Many people have also had good results from adding carbonated drink to cake mixes, e.g. a can of soda or pop added to a cake mix powder. Using the right replacer for the role of the egg helps achieve good texture, rise and moisture in egg-free baking. Following tried and tested recipes can be helpful if you'd prefer to skip the trial and error! There are plenty of egg-free and vegan recipes available on the internet and in cookery books.

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## Egg-free substitute foods

Egg-free versions of mayonnaise, salad dressing, coleslaw and other products are now widely available in supermarkets, health food shops and online.

### Common foods:

#### Do they contain egg or not?

*It's not always clear –  
always check the label!*

**Pasta:** Most dried pasta does not contain egg. Exceptions are egg noodles and dried lasagne sheets with egg. Fresh pasta usually contains egg, although some vegan/plant-based options are available. Tinned pasta (e.g. ravioli, soup with noodles) or pasta in pouches and baby food often contain egg.

**Bread:** Standard bread does not tend to contain egg; brioche, croissant, buns and scones often do.

**Custard:** Custard powder, instant custard and standard custard in tins and pots are often egg-free. It is more common for luxury versions of custard to contain egg. Set custard in bakery items will usually always contain egg.

**Cheese:** Most cheeses are egg-free, but some contain egg lysozyme as a preservative, e.g. certain Grana Padano, Pecorino, Parmesan or Manchego cheeses.

**Ice cream:** Most standard ice creams do not contain egg whereas luxury, artisanal and organic versions usually do. Always check the label and ask when ordering ice cream from an ice cream van or shop!

### Sausage roll, sweet buns, pies and pastries:

These may or may not contain egg in the dough/pastry, filling or glaze.

**Gravy:** Most gravy granules do not contain egg, but some do!

**Breaded and battered foods:** Standard versions often don't, but premium and homemade versions often do contain egg.

**Chocolate and sweet treats:** Marshmallow, chewy sweets, nougat, fondants, marzipan and some chocolates may contain egg.

**Cocktails:** May include egg white foam or egg nog – always ask before ordering.

**Quorn™:** Traditional Quorn™ contains egg white; plant-based versions do not.

## Non-food items containing egg

Non-food products such as cosmetics, toiletries, perfumes, medications and supplements may contain egg proteins, including albumin/albumen or lysozyme, and sometimes egg lecithin, a fatty substance from egg yolk. Ingredient lists are often found on product packaging, and egg-derived ingredients may appear

in Latin or scientific terms, such as OVUM or OVO, either as a standalone term or as a prefix (e.g. lysozyme (ovo), ovoalbumin, ovum extract).

Allergic reactions from non-food products are uncommon because the amount of egg protein is usually very small. However, highly sensitive individuals may need to avoid products containing egg-derived ingredients and should check this with their healthcare professional. Read labels carefully and contact the manufacturer if you are unsure. Avoid using skincare products containing any food-derived ingredients for babies and young children as it can increase the risk of allergy.

## Clinical contributions:

### Allergy UK Clinical Team

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