

their food allergies. That was true when they were babies and it is true now that they're older: they join in virtually all the same activities as their peers at nursery and school. They go to birthday parties, on play dates and on school trips; they eat out at restaurants like everyone else. In fact, it is incredible how quickly it becomes perfectly normal to check labels, quiz staff in restaurants and communicate with school and nursery staff.

Fiona has always been passionate about food and, before her children were born, trained at Leith's School of Food and Wine and ran a successful London-based catering business. When our babies were diagnosed with food allergies we both went about developing nutritious recipes suitable for their set of allergies, and later enjoyed experimenting and creating delicious meals that the whole family could enjoy together – and we'd now like to share some of those recipes with you.

OUR PHILOSOPHY

- Food allergy needn't mean your baby can't eat a broad range of tasty food.
- Food allergy doesn't have to define your baby or dominate your life.
- Any parent can make our simple, allergy-friendly recipes.
- Having a food allergy doesn't mean your baby has to miss out on treats.
- We believe in using ordinary, fresh, easy-to-obtain ingredients.
- Weaning should be just as fun for a baby with a food allergy as one without.
- The more children are exposed to a wide variety of ingredients, flavours and textures, the more likely they are to be adventurous eaters as they grow up.

ORGANIC FOOD

We think it makes sense to use fruit and vegetables that have been treated with as few chemicals as possible. In the case of organic meat, there are also tight restrictions on the use of antibiotics and other medicines. Organically reared animals tend to be treated better too, which we believe is important. While we know it is more expensive, we believe it's worth buying organic if you can.

SUSTAINABLE FISH

If your child is not allergic to fish, we would urge you to buy it from sustainable sources. This means avoiding fish varieties that are overfished, from poorly managed fisheries or caught using methods that can harm other marine life. We hope that by buying fish responsibly we'll help ensure that there is a wide variety of different fish for our children to choose from when they grow up.

ENDORSED BY MEDICAL EXPERTS

This book is based on our personal experience as two mums who manage food allergy on a daily basis. However *The Allergy-Free Baby & Toddler Cookbook* has also been reviewed and endorsed by two medical experts specialising in food allergy: Dr Helen Cox and Dr Rosan Meyer.

Dr Cox is a paediatric allergy and immunology consultant, lecturing all over the world and based at Imperial College NHS Trust. She has reviewed this book, ensuring that all the content is sound and reliable, and she has written a very useful chapter answering many questions parents with newly diagnosed babies often ask. She gives an excellent overview of food allergy and cuts through its complexity.

Dr Meyer, who is a paediatric allergy dietitian, has reviewed this book and all the recipes from a nutritional perspective, so you can be certain that the recipes are balanced, nutritious and free from major allergens.

Both have a wealth of practical experience, having seen hundreds of

children with multiple food allergies in their clinics. We are extremely grateful to them for their support and their valuable contribution to this book.

We'd very much like to thank nutritional therapist Jane Thatcher-Browne who has also reviewed this book and provided invaluable input. She trained at the renowned Institute of Optimum Nutrition, following which she set up her own clinical practice and advised at Sprint Physiotherapy Clinic in London.

In reviewing this book, she has given general nutritional advice, as well as making sure all the recipes are nutritious and form part of a healthy, balanced diet.

This book cannot in any way replace the need for your baby to be seen by an expert in allergy, so please do not use this book unless your child has been assessed by a specialist. It is intended as a practical guide and as a recipe book for those babies and toddlers who have been diagnosed as having a food allergy or intolerance by a doctor.

FOOD ALLERGY

Explained by Dr Helen Cox

WHAT ARE FOOD ALLERGIES AND WHEN DO THEY OCCUR?

The majority of food allergies present within the first two years of life as infants are introduced to new milk formulas and foods. The reactions can occur at any stage with some babies reacting within the first few weeks of life. Food allergic reactions occur when the body recognises a food protein as being 'foreign'. This generates a strong immune response aimed at rejecting that food protein, leading to a range of symptoms affecting different parts of the body. Broadly speaking these immune-mediated reactions can be divided into immediate and delayed reactions.

IMMEDIATE REACTIONS occur within minutes to two hours of eating the food. They can be provoked by minute quantities of food protein which binds to allergen specific IgE receptors in the body leading to the release of histamine and other inflammatory mediators. These reactions occur each and every time the food is given. Allergy tests (skin prick tests and IgE blood tests) are usually positive. The reactions can trigger a range of responses involving the skin, gut, respiratory and cardiovascular systems. Immediate redness and itching of the skin followed by the development of hives (urticaria) occur commonly. This can be accompanied by swelling of the lips, eyes, face hands and feet (angioedema). Vomiting also occurs frequently as the body attempts to rid itself of the allergen. Skin reactions usually resolve rapidly after

withdrawal of the food allergen and respond well to treatment with antihistamine.

More severe reactions involve either the respiratory or cardiovascular systems. This may lead to the development of breathing difficulties with a persistent cough, wheeze, noisy breathing or voice change due to swelling of the airway. Alternatively, reactions may lead to a drop in blood pressure resulting in extreme pallor, floppiness, drowsiness or even collapse. These severe reactions are called 'anaphylaxis' and require immediate medical attention with the administration of injectable adrenaline.

DELAYED REACTIONS to foods are more insidious in onset and therefore more difficult to diagnose. The reactions typically occur within one to three days of eating the food leading to a range of symptoms affecting either the skin or gut. They usually require larger amounts of allergen to provoke a reaction. Allergy tests are usually negative. Typical symptoms can include one or more of the following: eczema, vomiting, reflux, colic, abdominal pain, constipation, diarrhoea, blood or mucous in the stools or faltering growth. Occasionally the vomiting can occur within minutes of eating and be severe and protracted leading to dehydration and collapse needing urgent medical attention. The term food protein-enterocolitis (FPIES) has been used to describe these reactions, which may be accompanied by bloody stools.

As many of these symptoms can occur in non-allergic infants it is often the co-association of features that makes the diagnosis more likely. Faltering growth is a worrying sign of possible malabsorption and requires urgent review. It is worth pointing out, however, that many babies with delayed food allergy have normal growth parameters.

WHICH FOODS CAUSE REACTIONS?

Any one of the 14 foods listed by the EU are capable of causing an immediate reaction. In the first two years of life the main culprits are cow's milk, eggs and nuts, which account for three-quarters of immediate reactions, followed by sesame, wheat, fish, soya, kiwi and, rarely, shellfish. Allergy to pulses (lentils, chickpeas, peas) occurs more frequently in Asian and vegan populations reflecting their higher consumption of these foods. Sulphites very rarely cause adverse reactions in infants.

The list of foods causing delayed reactions is shorter with four main food proteins causing most reactions. Cow's milk causes the majority of delayed reactions followed by soya, gluten (wheat, barley, rye, oats) and lastly eggs. Approximately half of all infants with delayed reactions to cow's milk also react to soya with similar symptoms.

Certain foods such as tomatoes and berries are high in natural histamines leading to mild rashes around the mouth post ingestion. Acidic foods such as pineapples and oranges can also aggravate the skin of a baby with eczema. These foods cause irritation as opposed to allergic reactions.

WHAT TO DO IF YOU SUSPECT YOUR CHILD IS FOOD ALLERGIC?

It is best to seek medical help early if you suspect that your child is food allergic. This not only ensures that an accurate diagnosis is made but also allows your child to progress with their weaning diet in a safe manner while ensuring that their diet is as nutritious and varied as possible. This usually requires the support of a children's allergy doctor and dietitian. Although these recipes are free from 14 allergens, it would be foolish to avoid allergens if this was not necessary, so add in the appropriate suggested optional extras.

As allergists, once food allergy is diagnosed we would actively promote the early introduction and inclusion of a diverse range of 'permitted foods' while excluding a baby's known allergens. In support of this approach a recent study has found that including peanuts early into the diet of infants with eczema and egg allergy, significantly reduced the risk of having a peanut allergy at five years. In high risk infants with eczema and/or other food allergies, allergy testing prior to introduction is recommended.

WHEN TO ALLERGY TEST?

Testing food allergens can be carried out in infants from the age of three to four months and to inhalant allergens from the age of 12 months. Both skin prick tests and blood specific IgE tests are able to detect the presence of allergen specific IgE antibodies and this does not rely upon a prior history of food ingestion. The tests are very useful to diagnose or exclude immediate food allergy. They are also able to assess a child's risk of reacting to a food not yet introduced. They are particularly useful in infants with moderate to severe eczema where the tests

can help guide decisions regarding dietary elimination and inclusions. They do however require a skilled practitioner to interpret the tests in the light of the clinical history, as the tests are fraught with difficulty with both false positive and false negative reactions occurring. Food challenge tests are often needed where the diagnosis is still uncertain based on borderline test results.

There are no validated tests to diagnose delayed food allergy. Food Intolerance tests measuring IgE antibodies and other alternative tests have no role in the diagnosis of either immediate or delayed food allergy. The diagnosis of delayed allergy is made based on pattern recognition of symptoms followed by the implementation of a trial period of dietary elimination followed by challenge tests.

In formula-fed infants with suspected cow's milk allergy, a prescribed hypo-allergenic milk formula may be offered for a trial period. In breastfed infants, a trial period of removing cow's milk and soya from the maternal diet for four weeks may be suggested. Dietetic support and maternal calcium supplementation during such dietary implementation is important. Formula milks that are **unsuitable** for treating cow's milk allergy in young infants include goat's milk, lactose-free milk and soya milk in addition to most anti-reflux formulas which are based on cow's milk protein.

WHICH INFANTS ARE AT HIGHER RISK OF BEING FOOD ALLERGIC?

Having one or both parents with either asthma, hayfever or eczema or a sibling with food allergy will increase an infant's risk of food allergy. Being allergic to one food will also increase an infant's chance of reacting to other foods, with two-thirds

of those children being allergic to more than one food. Another high risk group are infants who develop persistent eczema within the first few months of life despite treatment with topical steroids and emollients. The risk rises with increasing eczema severity ranging between 30–60 per cent. These infants are also at greater risk of developing either asthma or hayfever in a progression known as '*the atopic march*'.

Ideally these infants should be referred early for an allergy assessment and testing to inform on the weaning diet. If your baby is deemed to be high risk and is still waiting to be seen by a doctor, then it would be advisable to introduce foods of low allergenic potential first. When introducing foods that are capable of causing an allergic reaction, this needs to be done cautiously starting with a tiny amount of food touched to the inside of the lip, followed by small amounts of the food given at least an hour apart, in increasing incremental amounts over three days.

I am often struck by how varied and healthy the diets are of children with food allergy who I see in clinic. Dietary restrictions inevitably mean less junk food and more home cooking using fresh ingredients. This recipe book is brimming with creative ideas and delicious recipes to wean and feed your allergic baby.



DAIRY

Dairy allergy is very common among babies, but the good news is that the majority of children outgrow their allergy in childhood – often quite quickly. Milk and dairy products make up a whole food group that is an essential part of everyone’s diet, so it can be particularly daunting if this is an allergen you need to cut out. It contains protein and also key nutrients – most notably calcium (crucial for strong bones and teeth) – that are important in all diets but especially so in those of babies and children. If you are still breastfeeding, a dietitian will advise whether you should cut dairy out of your own diet, and what foods and supplements (such as calcium and vitamin D) you’ll need to take to ensure you are getting sufficient nutrients for you and your baby. Your baby’s dietitian can also advise on and prescribe a hypoallergenic formula that contains key nutrients your baby would otherwise get from a dairy-based formula. As your baby gets older, your dietitian will be able to offer advice on other foods your baby should have to ensure they are getting enough calcium, protein and other nutrients from alternative sources, and they can also advise on supplements.

After the age of one some babies will be ready to move on to an alternative milk to breast milk or hypoallergenic formula. This will very much depend on individual circumstances based on the child’s current diet, feeding behaviour and growth. Others will be advised to continue with their hypoallergenic formula in order to meet all of their nutritional requirements. With the exception of soya milk, all of the fortified non-formula milk alternatives (rice, oat, almond, coconut), while having similar amounts of calcium to cow’s milk

(120mg per 100ml), have far lower levels of protein and fat. They are therefore not suitable for a baby under 12 months old or for infants over the age of one with suboptimal growth or those on highly restricted diets.

We offer some suggestions for calcium-rich foods that you may like to consider adding to your child’s diet as an *extra* source of calcium. However, it is important to note that this must be in addition to a hypoallergenic formula or breast milk when your baby is still having these, and in addition to your dietitian’s recommended alternative milk for your toddler or older child. Babies and toddlers rely mainly on breast milk or formula for their daily calcium intake and calcium from vegetable sources is much harder for the body to absorb so these need to be seen as supplementary sources of calcium to your child’s diet. We try to include many of the foods listed on the page opposite in Isabelle and Casper’s diets whenever we can, so we have included some of them in our recipes, and we also make suggestions at the bottom of recipes for adding some of the allergens from the second list if your child is not allergic to them.

On food labels dairy will usually be highlighted on the ingredients list as **milk**, although it is worth noting that some products may list butter, yoghurt or cream instead, as these are considered to be clearly derived from milk.

Other animal milks such as sheep’s, goat’s, buffalo’s or camel’s milk are not suitable for those with dairy allergy, as the proteins that cause allergic reactions are very similar in all animal milks. Similarly, lactose-free milks are not suitable for dairy allergy sufferers (see box opposite).

CALCIUM BOOSTS

- Seaweed, dried nori
- Fresh figs
- Spinach
- Watercress
- Curly kale
- Dried pineapple
- Purple sprouting broccoli
- Sunflower seeds
- Red kidney beans
- Broccoli, steamed
- Okra

If your child is not allergic, you can also add:

- Tahini (sesame paste found in hummus)
- Sesame seeds
- Tinned sardines (mashed)
- Tofu
- Tinned salmon (mashed)
- Almonds, hazelnuts, walnuts (crushed) or nut butters
- Tinned mackerel (mashed)
- Soya puddings
- Soya milk

ALLERGIC TO DAIRY OR LACTOSE INTOLERANT – WHAT’S THE DIFFERENCE?

The immune systems of those allergic to dairy react to the proteins in the milk, which their bodies mistakenly interpret as harmful. Lactose intolerance is related to the carbohydrate in cow’s milk – lactose – and occurs due to a deficiency in the enzyme lactase which is needed to process lactose. There are two types of lactose intolerance: primary and secondary. With primary lactose intolerance a reduction in the enzyme lactase occurs over time. Primary lactose intolerance is more common in African and Asian populations. Typically those with primary lactose intolerance cannot tolerate large amounts of normal pasteurised milk, but are able to tolerate cheese and yoghurt. Primary lactose intolerance presenting in infancy is rare and most infants having issues with dairy are likely to be diagnosed as being cow’s milk allergic, not lactose intolerant. Secondary lactose intolerance, is transient and occurs when a child has had diarrhoea for example after a gastro bug which may result in the temporary reduction of the enzyme lactase. This leads to the poor absorption of lactose when consumed. This is usually resolved after a couple of weeks of a low-lactose diet. Both forms of lactose intolerance are different from being allergic to dairy and do not involve the immune system.

Most products that are lactose-free still contain cow’s milk protein and are therefore not suitable for dairy allergy sufferers.

Dr Helen Cox



IF YOUR BABY IS NOT ALLERGIC TO DAIRY

Dairy is a key food group that should form part of your child's diet if your child's doctor has not told you to eliminate it. It is important to give your baby plenty of dairy products in addition to their formula or breast milk. It is full of protein, calcium and good fats and is an important part of your baby's and, later, toddler's diet. Good sources of dairy products for babies are yoghurt and cheese. Skimmed or semi-skimmed milk or low-fat yoghurts and cheese aren't a good idea, as your baby

needs all the fat and nutrients found in the full-fat varieties.

Until babies are over one year old they should not have cow's milk as their main milk, and should stick to formula or breast milk instead. Cow's milk doesn't contain the right balance of nutrients your baby needs, though it is fine to use in cooking. At the bottom of many of our recipes we recommend adding milk, cheese, natural yoghurt, soured cream, crème fraîche, butter or cream for those babies and children who can have dairy products.

A NOTE ON SOYA

At least half of children with delayed reactions (non-IgE-mediated allergy, see page 12 for more information) to dairy will also react to soya milk and therefore soya milk is not a suitable milk replacement in this group of children. Conversely, the majority of children with immediate dairy allergy, like Ellie's daughter Isabelle, will tolerate soya milk and soya products, which can be a very useful addition to their diets after the age of six months. Your doctor or dietitian will be able to guide you as to whether soya milk can be tried.

Unlike most of the other dairy-free, non-formula milks, soya has similar levels of protein to cow's milk and relatively high levels of fat, which makes it a good replacement for cow's milk provided your child is free of tummy problems. The fortified varieties make a valuable contribution to your child's calcium intake but it's worth being aware that organic varieties are not fortified (as any supplements affect their organic status) so are not suitable.

Dr Helen Cox

EGGS

Eggs, like gluten, play a key role in baking, and can be found in a surprising number of foods where they aren't immediately obvious (see the chart on page 20). If your child is only allergic to egg, it is possible to make ordinary cakes using an egg replacement, and generally you can achieve good results. If your child has multiple food allergies, have a look at our Birthdays section and our Puddings and Sweet Treats chapter for delicious cake and biscuit recipes that are free from major allergens.

Egg allergy is very common among children and, as with dairy allergy, many outgrow their allergy to egg in childhood. All birds' eggs from hens, ducks, geese or quails, for example, should be avoided by children with egg allergy. Raw egg is the most allergenic form of egg, followed by cooked egg and finally processed egg within foods such as cakes. There are many babies who are allergic to eggs in any form, including Isabelle and Casper, so all our recipes completely exclude eggs.

IF YOUR CHILD IS NOT ALLERGIC TO EGGS

Eggs are a useful source of both protein and iron. Until your baby reaches the age of one, eggs need to be well cooked to reduce the risk of food poisoning. Hard-boiled eggs, well-cooked scrambled eggs (both the white and yolk should be set) or well-cooked omelettes make a quick and easy meal. You can also use them for baking, of course.

PEANUTS AND TREE NUTS

Allergies to peanuts and tree nuts are distinct. Peanuts are often called ground-nuts as they grow underground and are part of the legume family. Brazil nuts, hazelnuts, pistachios, cashew nuts, pecan nuts, walnuts, macadamia (Queensland) nuts and almonds are all tree nuts. It is possible to be allergic to peanuts and not tree nuts, and vice versa. It is also possible to be allergic to just some tree nuts and not others. If this is the case for your child you need to carefully manage the risk of cross-contamination, as different types of nut are often processed in the same factory.

Many products carry warnings about traces of nuts – more so than other allergens.

It is worth noting that baby massage, which can be a popular activity for a mum with a small baby, often uses oils which are nut-based (sweet almond oil or macadamia nut oil, for example).

IF YOUR BABY IS NOT ALLERGIC TO NUTS

No child should eat whole nuts before the age of five due to the risk of choking, but if your doctor advises that your baby can eat tree nuts, peanuts or both, it is possible to offer nut butters such as peanut butter, almond butter or cashew butter on bread or toast. It is also possible to grind nuts up in a food processor or with a pestle and mortar to a powder, and mix the ground-up nuts into suitable yoghurts or puddings.

SOYA

Soya is relatively easy to avoid in day-to-day cooking but is commonly found in ready-made foods, as Fiona discovered when Casper had to cut soya out of his diet. Bread often contains soya so do check labels to find a brand that doesn't. Many other ready-made products and oriental foods (see the chart on page 20) contain either soya, or soya lecithin, or both.

Soya lecithin is a fat that is often used as an emulsifier and contains only trace amounts of the protein that causes allergic reactions. Many people with soya allergy are able to tolerate soya lecithin and, if so, there will be many processed and manufactured foods that they will be able to eat. You need to establish with your baby's doctor or dietitian if your baby (and you, if you are breastfeeding) can have foods containing soya lecithin.

IF YOUR BABY IS NOT ALLERGIC TO SOYA

Many children who are allergic to dairy are also allergic to soya; there is a high level of cross-reactivity, as the proteins found in both are similar (see page 25 for more information). However, if your child is allergic to dairy but can have soya, it can be a very useful part of your child's diet. There are many soya products available in supermarkets such as 'yoghurts', puddings, 'milk' and tofu, and they contain protein, energy and fat. All babies should have breast milk or formula for the first year of life, and after this many with dairy allergy continue on with hypoallergenic formula or breast milk for some time. However, if your child needs to move on to an alternative to cow's milk, fortified soya milk is a good option if there is no soya allergy. It has similar levels of protein to cow's milk, relatively high levels of fat, and those varieties fortified with calcium offer similar calcium levels to cow's milk (unfortified soya milk contains just a quarter of the calcium). We have several recipes that suggest adding soya if your child is not allergic.

GLUTEN

Gluten is found in cereals such as wheat, barley, rye, spelt and kamut. In addition, oats, because of the way they are produced, are generally cross-contaminated with gluten. Gluten is present in so many everyday foods, such as bread and pasta and plays a key role in baking cakes and biscuits. It can therefore be daunting when you need to cut it out of your baby's diet.

However, as Fiona found, once you get into the swing of things, it is straightforward to cook without gluten and there are also many off-the-shelf gluten-free products such as pasta and bread to make your life easier. Many gluten-free options do contain other allergens such as egg and dairy. Lupin flour is sometimes used to replace the wheat flour, so you will need to check labels carefully if your baby has multiple food allergies.

IF YOUR BABY IS NOT ALLERGIC TO GLUTEN

You can introduce bread into your baby's diet from six months. Be aware that there is often a lot of salt and sugar in bread, so check labels carefully. The same is true of breakfast cereals (even those aimed at children), but it is possible to find low-salt and sugar versions, and both bread and cereals are commonly fortified with nutrients such as iron and calcium and a range of vitamins so are an excellent part of a balanced diet. See page 37 for guidance on wholegrains.

According to European labelling guidelines, for a product to call itself 'gluten-free' it must contain no more than 20 parts of gluten per million. If a product states it is 'very low gluten' it can contain no more than 100 parts of gluten per million.

COELIAC DISEASE

This is not a food allergy but a genetic autoimmune disorder in which the protein gluten triggers an abnormal response by the body's immune system. The friendly fire from the immune system can damage the lining of the small intestine, affecting the absorption of food and potentially causing a range of problems including abdominal pain, diarrhoea, poor growth, poor weight gain, anaemia and malnutrition. Removing gluten from the diet allows the intestinal lining to repair and the gut to function normally. Coeliac disease needs to be managed with a strict gluten-free diet for life.

Dr Helen Cox

SESAME

Sesame is used fairly extensively in a variety of foods, especially in Indian, Greek, Chinese, Japanese and South East Asian cuisines. Something you come across all the time is hummus, which contains tahini – a paste made from sesame seeds. We have found that people seem to be less aware of sesame allergy. As Izzy is allergic to it, we find it invaluable that it needs to be highlighted on labels and in restaurants alongside the other major allergens.

We have a recipe for a delicious Red Pepper and Chickpea dip (see page 114) that is free from sesame and similar to hummus, which goes well with cucumber, carrots, peppers and other raw or cooked vegetables.

IF YOUR BABY IS NOT ALLERGIC TO SESAME

Sesame and tahini contain calcium, so hummus can be a useful addition to your child's diet, especially if your child is allergic to dairy. Hummus is also really nice for dipping carrots and other vegetables into. If your child can have sesame, you can add tahini to our Red Pepper and Chickpea recipe (see page 114). Sesame seeds can easily be sprinkled on almost any of our Flavour Combinations and can add an interesting new texture when your baby is ready for it. You can also add them to any Early Meals and Mini Meals that you like. They are particularly good on Asparagus Spears (see page 61), Vegetables in Coconut Cream (see page 146), Herby Chicken Dippers (see page 152) and Orange and Lemon Pork (see page 168).