



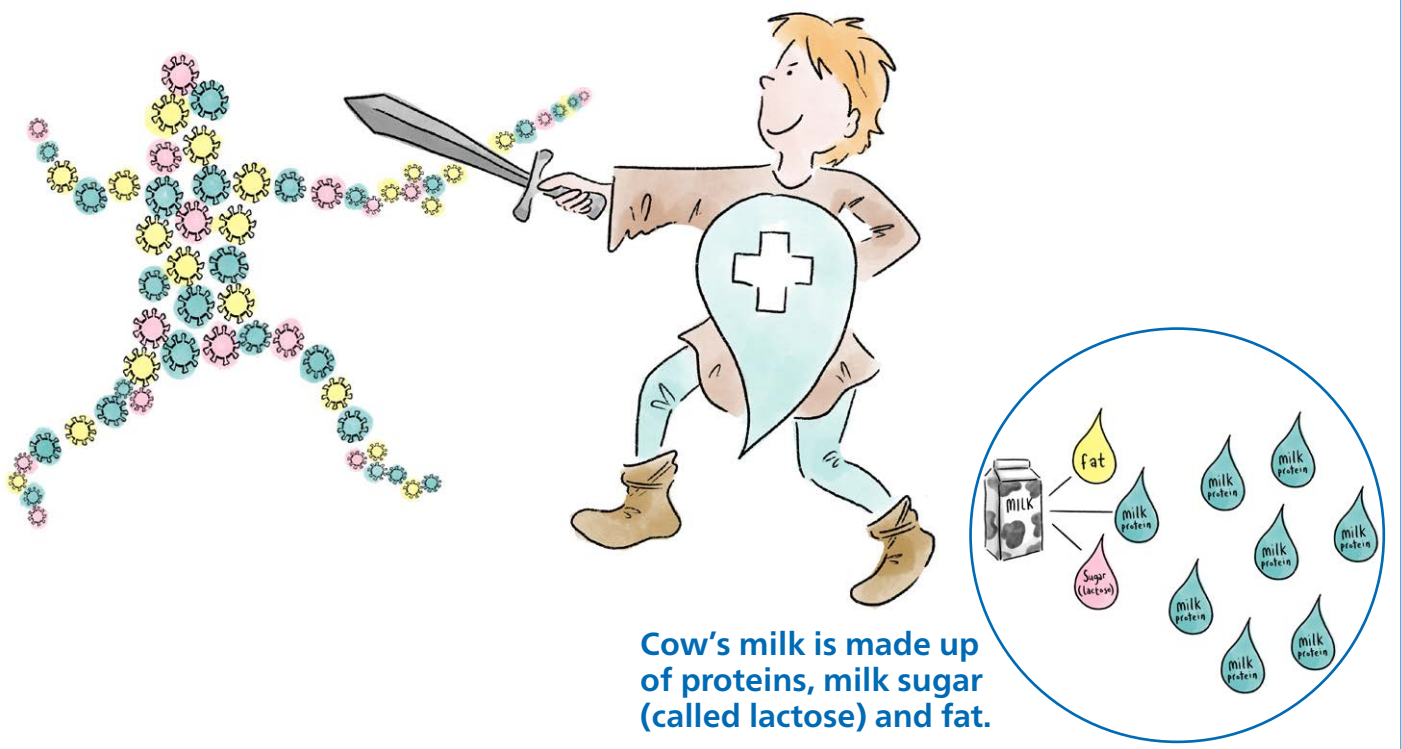
Cow's Milk Protein Allergy

Information for parents and carers

Key facts

Cow's Milk Protein Allergy (or CMPA) is one of the most common food allergies seen in children. It is caused by an abnormal response by the body's immune system in which proteins in a food (in this case cow's milk) are recognised as a potential threat. This can cause the immune system to be 'sensitised'. When this happens, there is the potential that when cow's milk is consumed the immune system remembers this protein and may react to it by producing allergy symptoms.

It can develop in fully or partially breast-fed infants as well as infant's fed with a normal cow's milk based infant formula.



Cow's milk is made up of proteins, milk sugar (called lactose) and fat.

Symptoms of Cow's Milk Protein Allergy

There are two types of cow's milk protein allergy; immediate and delayed.

Immediate CMPA involves the body's allergy antibody known as IgE.

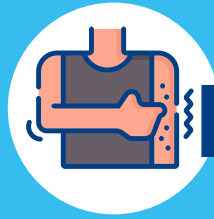
Delayed CMPA does not involve IgE, and is sometimes called non-IgE mediated allergy.



Immediate Reaction
2 hours or less



Delayed Reaction
up to 72 hours



Itchy skin rash



Vomiting



Lip and eye swelling



Loose and/or frequent stools



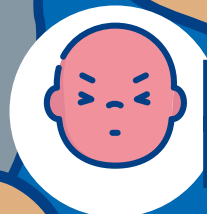
Difficulty breathing



Nappy rash



Flushed face



Straining to pass soft stool



Stomach ache



Blood or mucus in stool



Eczema

How long does CMPA last?

Delayed CMPA usually resolves in childhood. Until that happens, your GP or allergy specialist, often with the support of a dietician, will work with you to ensure your child remains healthy whilst excluding all forms of cow's milk from their diet.

When your child is older than one year, your doctor may recommend that you cautiously start to reintroduce cow's milk back into their diet, following the milk ladder which starts from the least allergenic forms first.



How is CMPA diagnosed?

You will be asked questions about your child's symptoms and general health. Your child's growth will also be reviewed.

Delayed CMPA is based on history and the presence of characteristic symptoms that improve when cow's milk is excluded from the diet and reappear when cow's milk is reintroduced into the diet.



Blood test

Following assessment in the allergy clinic, blood tests measuring IgE antibodies can be helpful in the diagnosis of immediate CMPA. IgE antibodies are not involved in delayed onset CMPA so these tests are not useful.

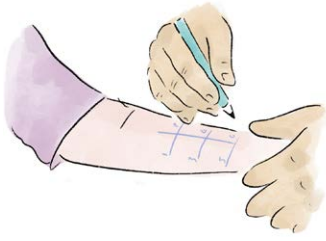


Skin prick test

Skin prick testing is a safe and simple procedure used to assess for an immediate CMPA. After the allergy testing, advice and information will be given based on your child's test results.

Skin prick test

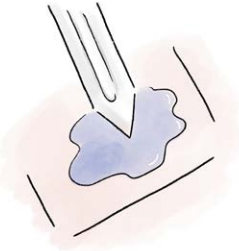
Skin prick testing is a safe and simple procedure used to assess for an immediate allergy.



1 Your child's forearm is marked using a special pen



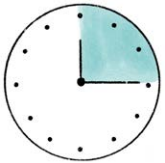
2 A small droplet of each allergen solution is placed next to it.



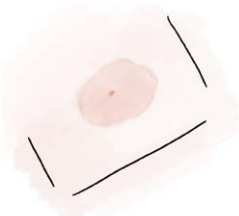
3 The skin is pricked through each droplet using a small pin. This will feel similar to being pressed lightly with a ballpoint pen. It is not painful, but it may cause some itchiness.



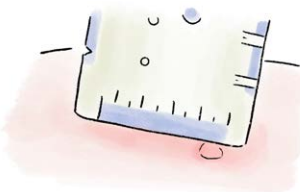
4 When the test is finished, the solutions are wiped from your child's skin.



5 The results are read after 15 minutes.



6 If the test is positive, a white, itchy spot or wheal (a white, raised lump) will appear.



7 The size of the wheal is measured with a special ruler. The size of the wheal does not reflect the severity of the symptoms. The test simply tells us which allergens may be causing your child's symptoms.

After the allergy test, advice and information will be given based on your child's test results.

Treatment



Avoid Cow's Milk

The best treatment is to avoid cow's milk and all cow's milk products, including cheese and yoghurt.



Breastfeeding

If you are breastfeeding and your baby appears to be very sensitive to cow's milk, you may need to remove cow's milk from your own diet so that it is not passed on to your baby through your breast milk.

A vitamin D and calcium supplement will be recommended for the time you are breastfeeding while having a dairy-free diet.



Formula feeding

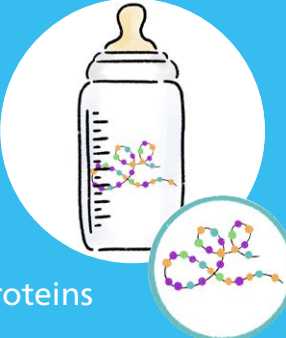
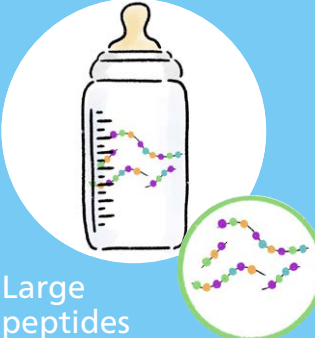
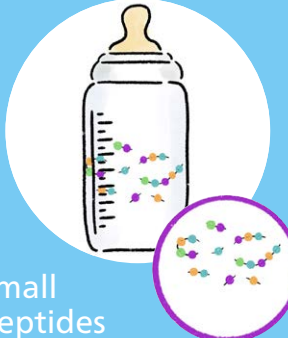

If your baby is formula-fed, there are a number of special hypoallergenic formulas that are suitable. Formula milk should be tried for four to six weeks to see if there is an improvement in your baby's symptoms. Some children who are allergic to cow's milk are also allergic to soya so this should not be used as an alternative.

It can be difficult to get a baby to accept a different formula and hypoallergenic formulas have a different taste and smell to ordinary infant formula. Most babies under 3 months will readily accept the change. For older babies and children, it may help to gradually introduce it over a number of days, mixing it with their usual milk until they get used to it or failing that adding a drop of vanilla essence to the bottle.

Understanding hypoallergenic formulas

It is the protein chains in cows milk that cause children with cow's milk protein allergy (CMPA) to experience symptoms



Cow's milk-based	Hydrolysed formula			
 <p>Proteins</p>	 <p>Large peptides</p>	 <p>Small peptides</p>	 <p>Amino acids</p>	
<p>Intact cow's milk proteins</p>	<p>Partially hydrolysed</p>	<p>Extensively hydrolysed</p>	<p>Amino acid-based</p>	
<p>Standard cow's milk formula has protein chains like a necklace. Children with CMPA will react to standard cow's milk formula</p>	<p>Atopic dermatitis risk reduction</p>		<p>Management of cow's milk protein allergy or severe food allergy</p>	
	<p>Partially hydrolysed formula is broken down to slightly shorter chains</p>	<p>Extensively hydrolysed formula (EHF) is broken down to very short chains and some individual beads. Most children with CMPA do not react to EHF</p>	<p>Amino acid formula (AAF) only contains the individual beads, or amino acids.</p>	



Refer to Dietician

Dieticians translate scientific information about nutrition and food into practical dietary advice. A dietitian can play a key role in the CMPA pathway to support diagnosis and management of CMPA, and prevent nutritional deficiency.



Refer to Allergy Service

All children with suspected severe or immediate allergic response to cow's milk will be referred to a children's specialist allergy service.



Weaning

Weaning a baby who has a cow's milk allergy should be the same as weaning a non-allergic baby, except that you must not give any foods that contain cow's milk or dairy products. You will need to read the labels to make sure they do not contain milk.

Start weaning with low allergenic foods and introduce one at a time. As your baby grows, you should keep offering different textures and flavours to help your baby to learn to like a wide variety of foods.



Lactose

In most cases only needs to be avoided if your child has lactose intolerance or is thought to have secondary lactose intolerance as part of a pattern of gastrointestinal-related non-IgE mediated symptoms.



Soya alternatives

If you are undertaking a 4-week exclusion trial we recommend that you don't use soya milk, yoghurts/ desserts, cream and cheese alternatives as there is a chance your child may react to soya as well, thereby confusing the diagnosis.

This also applies to breastfeeding mothers undertaking a cow's milk exclusion trial. We usually recommend trying soya product around 8-10 months. Once a wide range of other foods have been introduced first.



Eating out

You may wish to check the menu on the restaurant's website before you visit. You can also contact a restaurant in advance, as well as speaking to the chef about your child's allergy when choosing dishes from the menu. Don't risk letting your child eat food if you aren't sure it's suitable.

Your child could carry a 'chef card' to give to the restaurant staff.

Cook with Care

Dear Chef, my child has severe food allergies.
In order for them to avoid a **LIFE THREATENING** reaction,
they must **AVOID** everything marked off below:



- | | | | | |
|------------------------------------|-------------------------------|---------------------------------|--------------------------------|------------------------------------|
| <input type="checkbox"/> Peanuts | <input type="checkbox"/> fish | <input type="checkbox"/> Sesame | <input type="checkbox"/> Soy | <input type="checkbox"/> Shellfish |
| <input type="checkbox"/> Tree nuts | <input type="checkbox"/> Egg | <input type="checkbox"/> Wheat | <input type="checkbox"/> Dairy | <input type="checkbox"/> Other |

Please ensure that their food **DOES NOT** contain any of the ingredients marked above and that **ALL** utensils and equipment used to prepare my child's meal are **FULLY** cleaned before preparing my child's food.

Thank you for keeping me safe

Food Labelling

Foods that are known to cause allergies are called allergens. Labelling law requires that labels must clearly state whether milk and egg as well as other common allergens, are ingredients in a food product. These laws apply to all

- Packaged and manufactured food and drink
- Loose items (e.g. from bakery, delicatessen, butcher or café)
- Foods packed for direct sale (e.g. sandwich bar, market stall)

If you travel outside the EU, be aware that labelling laws are different so check ingredients carefully.

For **packaged products** allergens must be listed in one place on the product label and highlighted (e.g. **in bold**, *italics*, **highlighted** or underlined)

There are many ways in which cow's milk can be labelled, so carefully check the ingredients list on food items and **avoid foods which contain:**

Cow's milk (fresh, UHT)	Ghee
Evaporated milk	Cream
Yoghurt	Milk solids
Fromage frais	Lactoglobulin
Margarine	Casein (curds)
Ice cream	Caseinates
Milk powder	Calcium caseinate
Skimmed milk powder	Sodium caseinate
Milk protein	Hydrolysed casein
Modified milk	Hydrolysed whey protein
Butter milk	Whey
Butter oil	Whey solids
Condensed milk	Whey protein
Cheese	Lactoalbumin
Butter	

By law you must be able to clearly identify that a product contains milk or a milk derivative. For example, if casein is listed, it should tell you in brackets afterwards that this is 'from milk'.

For **unpacked products** allergen information has to be provided either in writing or verbally. If provided verbally, the business must be able to provide further written information if requested. Be aware that these regulations do not cover allergens present following accidental contamination.

'May contain' and 'Made in a factory' labels

Some companies use the term 'may contain' on their food labels. This means that even though an ingredient has not been deliberately included in the food, the manufacturer cannot be sure that the product doesn't accidentally contain small amounts of allergen.

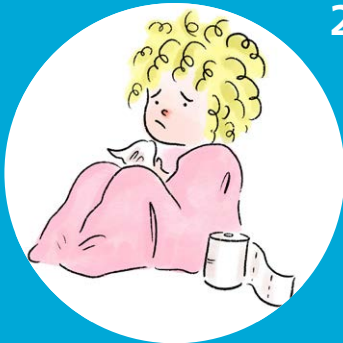
These warnings should always be taken seriously but do not tell you anything about the level of risk for that food.

Some people with food allergies only eat food that has been prepared in an entirely allergen free environment. Many families do this successfully. However, so many foods are labelled 'may contain' that this can be very restrictive. Some families choose to manage 'may contain' products by carefully assessing the risk and following the four rules below:



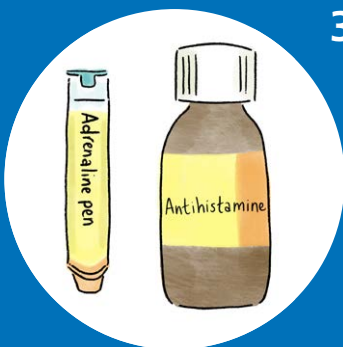
1 Check the product every time

Just because your child has eaten a particular food in the past and not had an allergic reaction does not mean that the food will always be safe to eat. Recipes change and it may be the next batch that is contaminated.



2 Don't let your child eat 'may contain' products when they are unwell

The amount of a food that needs to be eaten to cause an allergic reaction is called the threshold. This varies, as does the severity of a reaction a person may have to the same amount of food. Things that can lower your child's threshold include strenuous exercise, being unwell with an infection (even a cold), or symptoms of asthma or hay fever. At these times it is advisable to avoid food labelled 'may contain'



3 Make sure your child has their rescue medication with them

Your child should carry their oral antihistamine. If they have been prescribed an adrenaline auto-injector (pen device) they should also carry this with them at all times.



4 Make sure that you are in a place where you can get help

Make sure that you are in a place where an ambulance can be called and can arrive promptly. For this reason, some families choose to let their child eat foods which may contain traces of allergens only at home, and avoid all 'may contain' products when they are elsewhere.

Re-introducing Cow's Milk

Many babies/children with a cow's milk protein allergy will grow out of this reaction between the ages of one and three years. Your dietician or doctor will decide when you should try to reintroduce cow's milk into your child's diet. One of the ways this can be done is by using a step by step process, often called the 'Milk Ladder'. Usually re-introduction to milk can be done at home, however, occasionally the doctor may decide to introduce milk in a hospital setting.

Although most children will outgrow their cow's milk allergy, there is still a small possibility that your child will react to fresh cow's milk or foods containing cow's milk.

We therefore recommend that you:

- Only start the Milk Ladder when your child is well. If they have eczema, a rash, upset tummy, cough, wheeze, spots or have just had a chest infection or bronchiolitis, wait until they are completely better.
- Don't start the Milk Ladder when you are very busy. It is better to start in the morning or lunchtime, rather than in the evening, so you can monitor tolerance during the day.
- The Milk Ladder starts with food which is highly processed. Ensure that these foods are being tolerated before moving to the next step.
- You may find your child can only tolerate foods where the milk is processed. For example, they may be okay when they eat biscuits and cakes containing milk, but get symptoms when you give them fresh cow's milk. If this happens, talk to your doctor or dietitian about it at your next appointment.

Milk Ladder

Start at the bottom of the ladder and gradually increase the amount taken to reach the target. Continue on each step of the ladder for 7 consecutive days before moving onto the next step.



Do not proceed to the next step of the ladder before day 7. Simply repeat this same amount on the remaining days before moving to the next step.