

Cow's milk (dairy) allergy

Cow's milk is a common cause of food allergy in infants. In Australia and New Zealand around 2 per cent (1 in 50) infants are allergic to cow's milk and other dairy products. Although most children outgrow cow's milk allergy by the age of 3-5 years, in some people cow's milk allergy may not resolve.

Reactions can occur within minutes or up to several days after having cow's milk (dairy) products

- 1. Rapid onset reactions** usually occur within 15 minutes and sometimes up to 2 hours after exposure to cow's milk or other dairy products. Symptoms can include any one or more of the following: hives (urticaria), swelling of the lips, face or eyes, abdominal pain, vomiting, diarrhoea, noisy breathing or wheeze, swelling of the tongue, swelling or tightness in the throat, hoarse voice, change in consciousness or floppiness in infants or young children. Allergy tests to cow's milk are usually positive for these reactions.
- 2. Delayed reactions** are uncommon. Symptoms may include an increase in eczema or delayed vomiting and/or diarrhoea 2-8 hours after consumption of cow's milk or other dairy products. If isolated stomach upset is seen, the explanation may be coincidence. In some cases there may be an enzyme deficiency called lactose intolerance or a delayed inflammatory reaction in the gut. Allergy tests to cow's milk may be negative for these reactions.
- 3. Very delayed reactions** are very uncommon. Symptoms occur 1-3 days after regular consumption of cow's milk or other dairy products. Allergy tests to cow's milk are almost always negative for these reactions.

Reliable diagnosis is important

Diagnosis of rapid onset allergic reactions to cow's milk is usually obvious. This can be confirmed by your doctor after taking a history and using allergy tests (skin prick tests or blood allergen specific IgE tests).

When symptoms occur several hours or days after having cow's milk, diagnosis of cow's milk allergy is usually not as obvious and allergy tests to cow's milk are often not useful in these cases. Confirmation of the diagnosis may require a referral to a specialist paediatrician and/or clinical immunology/allergy specialist. If you suspect a delayed reaction, cow's milk should only be excluded for a short time, until you seek advice from your doctor.

There is no place in the diagnosis of cow's milk allergy for unproven tests such as Vega, kinesiology, Alcat or allergy elimination tests.

Not all reactions to cow's milk are due to allergy

Lactose intolerance: This is caused by the lack of the enzyme lactase, which helps to digest the milk sugar called lactose. The symptoms include diarrhoea, vomiting, stomach pain and gas. This condition is uncomfortable but not dangerous, and does not cause rashes or anaphylaxis. Allergy tests to cow's milk are negative for lactose intolerance.

Milk, mucus and cough: Some people complain that when they drink cow's milk or other dairy products, their throat feels coated and mucus is thicker and harder to swallow. Research has shown that these sensations occur with similar liquids of the same thickness, and are not due to increased production of mucus.

Respiratory allergy such as asthma and allergic rhinitis (hay fever) is almost always triggered by what we inhale, rather than what we eat, including cow's milk and other dairy products.

Management of cow's milk allergy involves avoidance of dairy products

Management of cow's milk allergy involves removal of cow's milk and other dairy products from the diet, unless otherwise recommended by your doctor. Most people who are allergic to cow's milk will be allergic to other animal milks (goat, sheep or horse/mare) and products that are made from these milks. To avoid cow's milk and other dairy products it is therefore important to read all ingredient labels and avoid any food which contains these milks, unless otherwise advised by your doctor. Coconut milk products (especially imported products) may contain undeclared cow's milk and should be approached with caution.

Cooked or baked cow's milk in muffins, cakes or biscuits are tolerated by most people with cow's milk allergy. However, unless you are already certain that cooked or baked cow's milk is tolerated you should discuss this issue with your clinical immunology/allergy specialist before introducing these foods at home.

All food allergic individuals should have an action plan in order to best manage an allergic reaction. Some people with cow's milk allergy may be prescribed an adrenaline (epinephrine) autoinjector by a specialist.

Dietary restrictions for cow's milk allergy should be supervised

Avoidance and reintroduction of cow's milk and other dairy products should only be undertaken with advice from a medical specialist (and in many cases, a dietitian), particularly in cases with severe allergic reactions (anaphylaxis). If long-term exclusion is required, patients require an alternative source of calcium and protein to ensure adequate nutrition and growth. Dietary exclusion during breastfeeding is rarely required but if recommended, maternal nutritional intake should also be supervised. Assessment and review by a dietitian is recommended for infants and breastfeeding mothers who may need to exclude cow's milk and other dairy products.

Alternative milks for infants (up to 1 year of age)

1. Soy protein formula

- Most infants with cow's milk allergy can tolerate soy-based formula.
- However, in infants allergic to soy, it is not a suitable substitute.

2. Extensively hydrolysed formula (EHF)

- EHF has been treated with enzymes to break down most of the cow's milk proteins and it is usually the formula of first choice in cow's milk allergic infants.
- However, some infants will react to EHF, so sometimes an amino acid based formula (AAF) is advised.
- Partially hydrolysed formula (commonly labelled 'HA') is not a suitable formula for infants with cow's milk allergy as sufficient allergenic protein is usually present to trigger an allergic reaction.

3. Rice protein based EHF (rEHF) is also available

- rEHF may be used as a short-term alternative formula when infants with suspected cow's milk allergy have been seen by a GP and are waiting to see a clinical immunology/allergy specialist for advice.
- rEHF may be continued or changed based on specialist advice.
- rEHF should not be used in infants with food protein induced enterocolitis syndrome (FPIES) to rice.

4. Amino acid based formula (AAF)

- AAF is necessary in around 1 in 10 infants with cow's milk allergy.
- AAF will be tolerated by almost all infants with cow's milk and soy allergies.

Alternative milks in children over 1 year of age

- Soy milk, calcium enriched rice, oat or nut milks may be recommended by your doctor and/or dietitian, depending on your child's condition.
- Rice, oat and nut milks may not be an adequate milk replacement for some young children as they generally contain low levels of protein and fat.
- Children with multiple food allergies may need to continue on formula to meet their nutritional requirements and a review with a dietitian around 12 months of age is recommended.

Some types of formula are unsuitable for people with cow's milk allergy

Cow's milk derived formula, goat's milk formula, sheep milk formula, HA formula, A2 milk and lactose free formula are NOT suitable for people with cow's milk allergy and may cause severe allergic reactions.

It is also important that the alternative formula or milk is fortified with calcium to at least 100mg/100ml to help meet the recommended daily intakes of calcium.

Cow's milk allergy usually resolves

Around 8 in 10 children will grow out of their cow's milk allergy by the age of 3-5 years. Depending on the history and severity of the original reactions, this may require further allergy testing and food challenges, which are usually performed in hospital clinics and requires assessment by a clinical immunology/allergy specialist.

Further information

ASCIA Dietary avoidance information sheets:

www.allergy.org.au/patients/food-allergy/ascia-dietary-avoidance-for-food-allergy

ASCIA Guidelines for infant feeding and allergy prevention:

www.allergy.org.au/patients/allergy-prevention

ASCIA Patient information - milk, mucus and cough:

www.allergy.org.au/patients/food-other-adverse-reactions/milk-mucus-and-cough

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