



australasian society of clinical immunology and allergy inc.

Cow's milk (dairy) allergy

**ASCIA Education Resources
patient information**

Cow's milk is a common cause of food allergy in infants, but most grow out of this condition and ongoing symptoms in adults is very rare.

In Australia and New Zealand 1 in 50 babies are allergic to cow's milk and dairy products. Although most children out-grow cow's milk allergy by the age of 4 years, persistent cow's milk allergy may sometimes occur.

Allergic reactions can occur within minutes or up to several days after having cow's milk or other dairy products

If your child has milk allergy, these symptoms may occur:

- 1. within minutes or up to one hour after having a small amount of cow's milk.**
Symptoms may include hives, eczema, face swelling, vomiting, diarrhoea, noisy breathing or wheeze. Severe reactions may cause floppiness in babies and a serious allergic reaction called anaphylaxis.
- 2. several hours after having moderate amounts of cow's milk.**
Symptoms can include vomiting and diarrhoea and sometimes blotchy rashes or worsening eczema.
- 3. after a day or up to several days after having normal amounts of cow's milk.**
Symptoms can include eczema, vomiting, diarrhoea or asthma.

Reliable diagnosis is important

In people with immediate (within minutes or up to 1 hour) allergic reactions to milk, diagnosis is usually obvious. This can be confirmed by your doctor using allergy tests (skin prick tests or RAST blood tests). There is no place in the diagnosis of milk allergy for unproven tests such as Vega, kinesiology and Alcat tests.

When symptoms occur several hours or days after having milk, diagnosis of cow's milk allergy is usually not as obvious and allergy tests are often not useful in these cases. Confirmation of the diagnosis usually requires a referral to an allergy specialist.

Treatment involves avoidance of dairy products

Treatment of cow's milk allergy involves elimination of cow's milk and its products from the diet and substitution with an appropriate formula in babies. However, avoiding dairy products in children is not easy. Most children allergic to cow's milk will be allergic to goat's milk, so products made from goat's milk not only inadequate substitutes, but usually trigger similar symptoms. It is therefore important to read all labels of prepared foods and avoid any food which contains cow's or goat's milk, cheese, butter, ghee, butter milk cream, cream fraiche, milk powder, whey, casein, caseinate and margarine which contain milk products.

Dietary restrictions should be supervised

It is important to note that elimination and re-introduction of cow's milk and dairy products should only be undertaken with specialist advice, particularly in cases with severe symptoms. Elimination of cow's milk entirely from the diet is usually difficult and needs to be done in consultation with a specialist dietician. If long term exclusion is required, patients require an alternative source of calcium and protein, and advice from a dietitian should be sought. This applies to the affected child, and to their mother if dietary exclusion during breast feeding is required. After confirming milk allergy, your doctor will usually recommend replacing dairy products with alternative formulae, which may include:

- 1. Soy protein formula**

Around 50-80 per cent of children with cow's milk allergy can tolerate soy-based formulae. In children allergic to soy as well, it is not a suitable substitute.

2. Extensively hydrolyzed formula (EHF)

This is cow's milk-based formula that has been treated with enzymes to break down most of the proteins that cause symptoms in infants who are allergic to cow's milk (eg. Alfare, Pepti-Junior). These are usually supplements of first choice in milk allergic children. Since some children will still react to this formula, sometimes an amino acid based formula is advised.

Extensively hydrolyzed formula is different to partially hydrolyzed formula and the latter is not suitable for treatment of milk allergic children.

3. Amino acid based formula

This formula is necessary in around 1 in 10 children with cow's milk allergy (eg. Neocate, Elecare). This formula will be tolerated by almost all children with soy or cow's milk allergies.

Some formulae are unsuitable for children with cow's milk allergy

Children allergic to cow's milk are usually allergic to a number of proteins present in dairy products. Since similar proteins are present in other animal milks such as goat milk and horse milk, these products can also trigger allergic reactions, and should be avoided. So-called "A2 milk" (from specially bred cows) is claimed to have a number of health promoting properties, but is also unsuitable for cow's milk allergic children. Partially enzyme-treated cow's milk formula such as Nan-HA may be used to help prevent infants from developing allergies but they are not suitable to be used as treatment for cow's milk allergic children.

There may be other food allergies, as well as milk

Cow's milk allergy may occur together with other food allergies such as egg, soy, peanut or other nuts. This is referred to as multiple food allergy. Confirmation of this usually requires a referral to an allergy specialist.

Cows milk (dairy) allergy usually resolves.

Around 80% of infants will grow out of their allergy by the age of 3 years. Assessment of this likelihood and reintroduction of dairy products should be done in association with an allergy specialist. Depending on the history and severity of the original reactions, this may require further allergy testing and deliberate challenge, sometimes in a hospital setting.

Not all reactions to milk are due to allergy

Lactose intolerance is caused by the lack of the enzyme lactase, which helps to digest the milk sugar lactose. The symptoms are diarrhoea, vomiting, stomach pain and gas, which are similar to some of the symptoms of milk allergy. This condition is uncomfortable but not dangerous, and does not cause rashes or anaphylaxis. Small amounts of cow's milk are usually tolerated, and yogurts and hard cheeses are usually tolerated better than milk, as they contain less or easier to digest lactose than cow's milk. Skin or blood allergy tests are negative, but if necessary the diagnosis can be confirmed by a breath hydrogen test. Treatment may involve reducing or avoiding consumption of dairy products containing lactose and substituting these with a lactose-free formula or milk.

Milk and mucus

Respiratory allergy (such as asthma and hay fever) are normally triggered by what we inhale, rather than what we eat. Some people complain that they have a short-lived sensation of thick mucus in the throat after drinking milk. This feeling poses no risk and is not an allergic reaction. Indeed in very young infants, runny noses are most commonly due to infection. If you wish to avoid it, however, you should still ensure a nutritionally adequate intake of calcium by selecting suitable substitutes. Consult your doctor or a dietitian if unsure.

References and further reading

1. Allergy prevention in children http://www.allergy.org.au/aer/infobulletins/allergy_prevention.htm
2. Milk, mucus and cough http://www.allergy.org.au/aer/infobulletins/milk_mucus.htm

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For further information visit www.allergy.org.au

the website of the Australasian Society of Clinical Immunology and Allergy (ASCIA)

ASCIA is the peak professional body of Clinical Allergists and Immunologists in Australia and New Zealand.

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