

Lactose Intolerance

Lactose intolerance is a condition in which the body has difficulty handling lactose. People with this condition may get diarrhoea, stomach pains and bloating if they drink milk or eat dairy products. Some people are born with a tendency to develop lactose intolerance; others get it as a result of gastroenteritis or chemotherapy. The treatment is mainly to avoid lactose.

What is lactose intolerance?

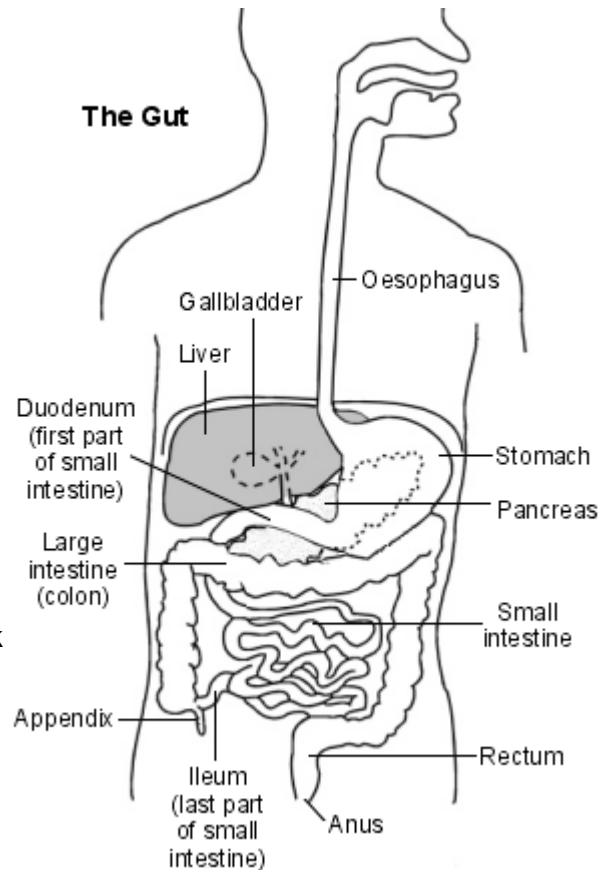
Lactose is a sugar found in milk. It cannot become absorbed by the body unless it gets changed into glucose and galactose. This change happens when the lactose passes through the stomach into the upper part of the small intestine and comes into contact with a chemical called lactase.

Lactase is made by cells that line the upper part of the small intestine.

If there is not enough lactase in the upper bowel, lactose cannot be broken down and cannot get absorbed. This leads to lactose intolerance.

Some people confuse lactose intolerance with allergy to cow's milk. With milk *allergy*, your immune system reacts to proteins found in milk which can cause symptoms.

Lactose *intolerance* is not an allergy. Symptoms are caused by the undigested lactose in the gut.



What causes lactose intolerance?

There can be a number of causes:

- **Inherited forms:** these are passed on through families.
 - *Primary lactase deficiency:* this causes low levels of lactase. Symptoms can develop at any age but rarely before the age of six.
 - *Congenital lactase deficiency:* this causes a complete lack of lactase from birth. Symptoms develop as soon as the baby is given milk or lactose formula.
- **Secondary lactase deficiency:** this happens when something damages the cells in the lining of the upper small intestine which produce lactase. It is common in children and often occurs after a stomach infection (such as viral or bacterial gastroenteritis). It can also be a complication of chemotherapy.
- **Developmental lactase deficiency:** when a baby is born, it takes time for a reasonable amount of lactase to build up in the digestive system. Babies more than six weeks premature may be born with very low levels of lactase, leading to temporary lactose intolerance. The condition disappears as the baby gets older.

How common is lactose intolerance?

It varies according to ethnic group and how much dairy products are commonly used in diets. Two in 100 people in Northern Europe have the inherited form, whereas this figure can be up to 80 in 100 people in Hispanic communities.

Lactose intolerance is very common in adults.

What are the symptoms of lactose intolerance?

You may get bloating, or stomach pains. Excessive burping or passing a lot of wind can occur. You may also get watery diarrhoea, and itching around the anus. These symptoms tend to develop from one to several hours after milk, dairy products or any food containing lactose.

The severity of the symptoms depend on how much lactose you take into the bowel. Many people who have lactose intolerance can eat some lactose without developing symptoms. In general, the more lactose you eat, the more likely that symptoms will develop. The inherited condition tends to cause less severe symptoms than the intolerance which develops after gastroenteritis or chemotherapy.

Babies and toddlers may have signs of malnutrition and poor growth (failure to thrive) but this is unusual.

How is lactose intolerance diagnosed?

If you get symptoms after drinking milk or eating dairy products or other lactose-containing foods, it is fairly clear that you have lactose intolerance. Tests are not usually needed.

If there is any doubt, a special test can be performed which involves measuring the amount of hydrogen you breath after taking a test dose of lactose. Rarely, you may need an intestinal biopsy (a procedure which takes a sample of lining of the small intestine) to make the diagnosis.

Are there any complications from lactose intolerance?

Most people do not have any long-term problems. Babies with severe deficiency of lactase may develop dehydration and malnutrition if the condition is not diagnosed early enough.

What is the treatment of lactose intolerance?

Babies and young children with primary lactose intolerance (the inherited form) should be tested to find out how much lactose they can handle. Sometimes the amount can be increased by giving milk or dairy products little and often. Lactase from yeast can be added to improve absorption even more. Thicker foods such as yoghurts and curds are likely to be better tolerated because they move through the bowel at a slower rate. Lactose-free milks are available but they are less nutritious than cow's milk.

Secondary lactose intolerance (due to damage to the lining of the small intestine) may need treatment by fluid through a drip if the diarrhoea is very severe. Most doctors advise parents of babies and children with gastroenteritis to carry on with breast milk, formula milk or cow's milk but, if the diarrhoea is very prolonged, some doctors recommend withdrawing lactose for three weeks after the infection.

The chance of premature babies getting lactose intolerance due to developmental lactase deficiency can be reduced by feeding them half-strength lactose formula or breast milk.

What can I do to help with symptoms?

If you have lactose intolerance you should read the labels of foods and drinks very carefully. Foods containing 'hidden' lactose may include:

- Bread
- Cakes
- Cereals
- Margarine
- Dressings
- Sweets
- Snacks

Also remember that many tablets contain lactose so you should check the leaflet that comes with any medication you are taking.

References

- [Congenital lactase deficiency](#), Online Mendelian Inheritance in Man (OMIM)
- [Shaukat A, Levitt MD, Taylor BC, et al](#); Systematic Review: Effective Management Strategies for Lactose Intolerance. *Ann Intern Med.* 2010 Apr 19. [abstract]
- [Yuan DT](#); Management of lactose intolerance in infants. *Am Fam Physician.* 2010 Apr 15;81(8):933; author reply 933-4.

Comprehensive patient resources are available at www.patient.co.uk

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