

Lactose Intolerance

What is lactose intolerance?

Lactose is a milk sugar that is found in all types of milk products, including yogurt, cheese, ice cream, and baked goods that contain milk. Lactase (spelled with an “a”, not an “o”) is a type of protein (called an enzyme) in your intestines that helps break down lactose.

Lactose intolerance is a condition in which a person’s body does not make enough lactase enzyme to break down lactose (the milk sugar). If lactose is not broken down in the body, then bacteria living in the intestines turn lactose into gas. The combination of undigested lactose and gas can also cause abdominal pain, bloating, and sometimes diarrhea.

How common is lactose intolerance?

Lactose intolerance is a fairly common condition. Although it can occur at any age, lactose intolerance typically starts in school age children or during the teenage years.

It is more common in Asian, Native American, African American, and Latino populations. Approximately

20% of white adults, compared to more than 80% of African American and Asian adults, have lactose intolerance.

Why are some children lactose intolerant?

Most children have lactase when they are born and can digest lactose as babies. Lactose is the main sugar in breast milk.

A child can develop lactose intolerance after an infection or allergic reaction, which can cause a temporary shortage of lactase enzyme. Usually this is temporary, but it may be weeks or even months before the child can tolerate milk products again. Other more chronic illnesses, such as celiac disease, Crohn’s disease, or infection with a parasite, can also cause lactose intolerance.

In most cases, lactose intolerance develops on its own as children get older. As children reach 3 - 6 years of age, their bodies naturally make less lactase than they did in the first year or two of life. For some children, production continues to slow down or may stop altogether.

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Often, the symptoms of lactose intolerance start in the teen years or early adulthood.

How is lactose intolerance diagnosed?

When a school-age child has symptoms of abdominal pain that might be associated with milk products, your pediatrician might suggest dietary restriction of lactose. Removing all milk products from the diet for 2 weeks may improve pain, gas, and diarrhea, if lactose intolerance is contributing to the symptoms.

After 2 weeks, milk can be added to your child's diet in small amounts. Each day, you can give your child larger amounts of milk while watching for any symptoms to return. It is important to keep all other foods simple and the same during these tests because other foods can also cause symptoms similar to lactose intolerance. If the child's symptoms improve during the milk-free diet and come back within 4 hours of ingesting milk, a diagnosis of lactose intolerance can be considered.

Another way to diagnose lactose intolerance is by a lactose breath test (hydrogen breath test). This test is done at an office or hospital and takes 2–3 hours. Your child will be given a drink of lactose and water and will be asked to breathe into a collection bag every half hour.

The breath samples are analyzed by a special machine for hydrogen, one of the gases produced in the large intestine. A child is considered lactose intolerant if there is a large increase in hydrogen in the breath during the test. The hydrogen increases because bacteria in the intestine are turning the lactose into gas. For this reason, the test cannot be done if your child has been taking antibiotics.

Sometimes lactase deficiency is tested with an endoscopy test. This test is done while your child is asleep under anesthesia or is sedated. A fiber optic tube is passed through the mouth and down into the stomach and small intestine. A tiny sample of cells (a biopsy) from the small intestine is collected. The cells are tested to see if the enzyme lactase is normally active.

How is lactose intolerance treated?

Your child's doctor or nurse will help decide on the best treatment based on your child's symptoms. Most children with lactose intolerance are able to tolerate some lactose. These children do well on a low-lactose diet (a diet with few milk products).

There are also over-the-counter lactase pills or drops that help digest lactose. Pills can be taken when milk products are eaten to stop symptoms. Drops can be added to milk to break down the lactose overnight, and then the milk can be taken without symptoms.

Whether a food causes symptoms in a child with lactose intolerance often depends on how much lactose is in a food. For example, a cup of milk has about 12 grams of lactose, while an ounce of cheddar cheese has less than 0.1 gram of lactose. This means that the cheddar cheese has 1/100 the amount of lactose that is in a glass of milk. For this reason, some children who may get belly pain after drinking milk might be able to eat cheddar cheese without difficulty.

Other children may be sensitive to very small amounts of lactose. These children will need a strict lactose-free diet, meaning that no milk products at all are allowed. All food and food labels must be checked carefully to make sure they do not contain milk. Each child is different, so you can work with your healthcare team to figure out the best long-term diet for your child.

Some lactose-free products such as cheese, milk, and ice cream are available in the grocery store. It is also possible to find substitutes for milk. If the milk substitute is going to be a large portion of the child's diet, read the label to make sure it has calories and protein that are similar to regular milk.

Milk is a good source of nutrients. If your child is placed on a lactose-restricted diet, it will be important to replace calcium, vitamin D, and riboflavin (a B vitamin) in your child's diet. You can add foods enriched in calcium, vitamin D, and riboflavin to the

diet or give your child a vitamin that contains these nutrients.

What happens to children with lactose intolerance over time?

If your toddler or child has lactose intolerance caused by an infection or other illness, intestinal function often returns to normal after the infection goes away.

However, it may take weeks or months for your child to return to normal.

However, if the lactose intolerance occurs in childhood or adolescence, it is usually a long-term condition that will not improve and is treated with long-term dietary restriction of lactose.

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