CONDITION

Lactose intolerance

Lactose intolerance is difficulty digesting the natural sugar in milk and dairy products.

WHAT IT IS
Difficulty digesting lactose because the small intestine makes too little lactase

BODY SYSTEM
Digestive system

MAIN SYMPTOMS
Bloating, gas, abdominal pain, diarrhea

WHAT CAUSES IT
Reduced lactase, sometimes after small-intestinal injury

HOW IT IS DIAGNOSED
Hydrogen breath testing with symptom assessment

MAIN TREATMENT
Adjusting lactose intake and using lactase products

CAN IT BE CURED?
Sometimes - secondary lactase deficiency can recover

IS IT AN EMERGENCY?
No, except when severe dehydration develops

LONG-TERM OUTLOOK
Usually manageable with tailored food choices

Overview

Lactose intolerance means your body has trouble digesting lactose, the natural sugar in milk. Lactose is also found in foods made with milk and in some processed foods.

The small intestine normally makes an enzyme called lactase. Enzymes are proteins that help chemical reactions happen in the body. Lactase breaks lactose into simpler sugars that can be absorbed into the bloodstream.

If there is not enough lactase, some lactose travels into the large intestine without being digested. Bacteria there break it down, producing gas and drawing in water. This can cause bloating, abdominal pain, gas, and diarrhea.

Lactose intolerance is not the same as a milk allergy. A milk allergy is an immune reaction to milk proteins and can cause hives, swelling, breathing problems, or other allergic symptoms.

Lactose intolerance affects digestion and does not cause anaphylaxis, a severe allergic reaction.

Having trouble with lactose also does not always mean you must avoid all dairy products. The amount that causes symptoms differs from person to person. Some people tolerate small portions, yogurt, or hard cheese without difficulty.

Symptoms

Symptoms usually begin after eating or drinking something containing lactose. They may appear within a few hours, although the timing can differ.

Common symptoms include:

Symptoms are affected by how much lactose you eat, how much lactase your body makes, and whether the food is eaten with other foods. The movement of food through your digestive system and the activity of your gut bacteria also play a part.

Lactose intolerance does not normally cause blood in the stool, fever, ongoing vomiting, unexplained weight loss, or symptoms that repeatedly wake you from sleep. These symptoms may have another cause and should be medically assessed.

Babies with diarrhea, poor feeding, or poor growth should not be assumed to have lactose intolerance. Several conditions can cause these problems, and young children can become dehydrated more quickly than adults.

- Bloating or a swollen feeling in the abdomen
- Increased gas
- Cramping or abdominal pain
- Loose stools or diarrhea
- Rumbling or gurgling sounds
- Nausea, sometimes with vomiting

Causes and risk factors

The most common cause is a gradual reduction in lactase production after childhood. This is called primary lactase non-persistence. It is a normal inherited pattern in many people, rather than damage to the intestine.

Symptoms may not begin as soon as lactase levels fall. They can become noticeable later,

when your usual lactose intake exceeds the amount your body can digest comfortably.

Secondary lactose intolerance happens when another condition injures the lining of the small intestine, where lactase is made. Possible causes include:

In secondary lactose intolerance, lactase production may improve when the intestinal lining heals or the underlying condition is treated.

Babies born prematurely can temporarily have low lactase levels because their small intestine is not fully mature. Congenital lactase deficiency, in which a baby makes almost no lactase from birth, is a rare inherited condition.

Your family background can affect the chance of lactase production decreasing after childhood. However, low lactase levels do not always cause symptoms. Lactose malabsorption means lactose is not fully absorbed; lactose intolerance means that malabsorption produces symptoms.

- A bowel infection
- Coeliac disease, an immune reaction to gluten
- Crohn's disease affecting the small intestine
- Some cancer treatments
- Other illnesses or surgery involving the small intestine

Diagnosis

Digestive symptoms have many possible causes, including irritable bowel syndrome, coeliac disease, inflammatory bowel disease, infections, and reactions to other food carbohydrates. For this reason, symptoms alone cannot always confirm lactose intolerance.

A healthcare professional may ask what you eat, when symptoms appear, whether they improve when lactose is reduced, and whether you have warning signs of another condition. A short, planned reduction in lactose followed by reintroduction may help show whether lactose is linked to your symptoms. Completely removing dairy for a long period without assessment can make it harder to maintain balanced nutrition.

A hydrogen breath test is commonly used to assess lactose malabsorption. After drinking a measured lactose solution, you breathe into a collection device at set intervals. A rise in hydrogen occurs when gut bacteria ferment lactose that was not absorbed. Symptoms during the test are also important because malabsorption does not always cause intolerance.

A lactose tolerance blood test is another option, although it is used less often in some settings.

It checks whether blood glucose rises after lactose is consumed.

Stool acidity testing may sometimes be used for babies or young children. Genetic tests can identify some patterns linked to primary lactase non-persistence, but they do not show whether lactose is causing your current symptoms or detect every cause.

Further tests may be needed if symptoms suggest coeliac disease, bowel inflammation, infection, or another condition.

Treatment and management

Management aims to control symptoms while keeping your diet as varied and nutritious as possible. It does not usually require avoiding every trace of lactose.

You can learn your personal tolerance by adjusting portion sizes and noting when symptoms occur. Many people manage lactose better when it is eaten in smaller amounts, spread through the day, or consumed as part of a meal.

Some dairy foods contain less lactose than others. Hard cheeses generally contain little lactose. Yogurt may be easier to tolerate because its live bacteria help break down lactose, although products differ. Lactose-free milk contains the same main nutrients as regular milk but has had the lactose broken down.

Lactase enzyme products can help digest lactose. They may be taken with lactose-containing food or added to milk, depending on the product. Follow the product instructions; the benefit is not the same for everyone.

If you limit dairy products, pay attention to calcium, protein, vitamin D, and other nutrients. Suitable alternatives may include fortified plant-based drinks and other calcium-rich foods. Check labels because the protein and nutrient content of milk alternatives differs. A dietitian can help if your diet is very restricted, you have several food intolerances, or you are concerned about nutrition.

Lactose may appear in baked goods, sauces, breakfast cereals, instant foods, and processed meats. Ingredients such as milk, milk solids, whey, and milk powder may contain lactose. Butter and some medicines contain only small amounts, which many people tolerate.

Do not stop an important medicine because it may contain lactose. The amount used as a tablet ingredient is usually small, and alternatives can be discussed with a pharmacist if needed.

Secondary lactose intolerance is managed alongside its underlying cause. Lactose may be reintroduced gradually if the intestine recovers.

Complications

Lactose intolerance does not usually damage the bowel. Its main effects are discomfort and changes in bowel movements.

Diarrhea can occasionally contribute to dehydration, especially in a baby, an older adult, or someone who is already unwell. Signs include a very dry mouth, reduced urination, dizziness, unusual sleepiness, or difficulty keeping fluids down.

The more common long-term concern is unnecessary food restriction. Avoiding all dairy without suitable replacements may reduce calcium, vitamin D, protein, or energy intake. Over time, low calcium and vitamin D intake can affect bone health.

Another risk is assuming every digestive symptom is caused by lactose. This can delay recognition of coeliac disease, inflammatory bowel disease, infection, or another problem that needs different care.

Prevention

Primary lactose intolerance cannot usually be prevented because it reflects how lactase production changes with age and inherited traits.

Secondary lactose intolerance may improve when its cause is identified and treated, but it is not always preventable. Routine hygiene and food-safety practices can reduce some intestinal infections, though they cannot prevent every cause of small-intestinal injury.

You do not need to avoid lactose to prevent intolerance. Avoidance does not make the small intestine produce more lactase and may unnecessarily narrow your diet.

Living with it and what to expect

Primary lactose intolerance is often long term. Your lactase level may remain low, but your symptoms can change with portion size, food combinations, gut health, and eating patterns. Most people can build a routine that limits symptoms without giving up every dairy food.

It may take some trial and observation to find a comfortable amount. Food and symptom notes can help, especially when you record portion sizes rather than simply writing "dairy." Symptoms after a large milk drink do not necessarily mean a small amount of cheese or yogurt will cause the same reaction.

Secondary lactose intolerance may last for weeks or months while the small intestine heals. In

some cases it lasts longer because the underlying condition continues. Any return to lactose is usually guided by symptoms and the course of that condition.

Children and teenagers need enough energy and nutrients for growth. If a child is avoiding milk or several food groups, nutritional review is important. Adults who are pregnant, older, underweight, or at risk of weak bones may also benefit from dietary advice.

Lactose intolerance does not normally shorten life or become a medical emergency. Its day-to-day effect mainly depends on symptom control, nutrition, and whether there is another digestive condition.

When to get medical help

Arrange a routine medical appointment if symptoms keep returning, interfere with eating, or continue despite reducing lactose. Assessment is also appropriate if you are unsure whether lactose is the trigger or need to remove major food groups.

Seek prompt medical advice for:

Get urgent help if there are signs of severe dehydration, such as very little urine, marked drowsiness, confusion, fainting, or an inability to keep fluids down.

Call emergency services for breathing difficulty, swelling of the lips, tongue, or throat, collapse, or widespread hives after milk exposure. These symptoms suggest an allergic reaction, not lactose intolerance.

- Unexplained weight loss
- Blood or black material in the stool
- Persistent or severe abdominal pain
- Fever, repeated vomiting, or diarrhea that does not settle
- Symptoms that regularly wake you from sleep
- Poor growth, feeding difficulty, or ongoing diarrhea in a child

Common questions

Can lactose intolerance suddenly start?

Yes. Primary lactose intolerance may become noticeable in adolescence or adulthood as lactase production gradually decreases. It can also start after an intestinal infection or another condition damages the small-intestinal lining.

Can I still eat cheese or yogurt?

Often, yes. Hard cheeses tend to contain little lactose, and some people digest yogurt more comfortably than milk. Tolerance is individual, so the type and portion both matter.

Is lactose-free milk as nutritious as regular milk?

It generally contains similar protein, calcium, and other main nutrients. The lactose has been broken into simpler sugars, which may make it taste slightly sweeter. Check the label because products can differ.

Does lactose intolerance mean I am allergic to milk?

No. Lactose intolerance is a digestive problem involving milk sugar. Milk allergy is an immune reaction to milk protein and can cause skin, breathing, digestive, or circulatory symptoms.

Will taking lactase cure lactose intolerance?

No. Lactase products help digest lactose in a particular food or meal, but they do not permanently change how much lactase your small intestine makes.

Can probiotics get rid of lactose intolerance?

Some yogurt cultures may help digest lactose in that food, but probiotic supplements have not been shown to provide a reliable cure. Products contain different organisms, and their effects are not interchangeable.

Sources

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