

## **Lactose Intolerance**

### **What is lactose intolerance?**

Lactose is the sugar found in milk. In order to use lactose for energy, the body must break it into smaller pieces so that it can be absorbed. The small intestine contains the enzyme lactase, a chemical that breaks down the lactose.

Lactose intolerance occurs when a person's intestine does not make enough lactase to digest the lactose that he or she eats. When lactose reaches the colon (large intestine), it becomes food for the normal bacteria living there. These bacteria break down the lactose, producing gas and a small amount of acid. The gas and acid may cause symptoms of pain, bloating, excess gas, nausea, and diarrhea. These symptoms may start shortly after a meal, or several hours later.

Lactose intolerance can occur at any age and in children of any ethnic background. It is extremely rare to have lactose intolerance from birth. In children, lactose intolerance becomes more common after the age of 5 years.

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

A child can develop lactose intolerance if an infection or an allergic reaction damages the small intestine, causing a shortage of lactase enzyme. Usually this damage 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 an infection with a parasite can also cause transient lactose intolerance. In other cases, lactose intolerance develops on its own over time. As children reach age 3 – 6, 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. Often, the symptoms of lactose intolerance start in the teen years or early adulthood. Certain ethnic populations (in particular Black, Hispanic and Asian) are more likely to develop lactose intolerance.

### **Diagnosis:**

When a child has symptoms of lactose intolerance, taking all milk products out of the diet for 2 weeks can help to sort out the problem. After 2 weeks, milk can be tried in small amounts. Each day, parents can give the child larger amounts of milk while watching for a return of the child's symptoms. It is very important to keep all other foods simple and the same during these tests, as 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, the 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 to 3 hours. The child is given a drink of lactose and water and is asked to breathe into a collection bag every 1/2 hour. The breath samples are analyzed for hydrogen, one of the gases produced in the large intestine, by a special machine. A child is considered lactose intolerant when there is a significant rise of the hydrogen level in the breath. Sometimes lactase deficiency is tested by endoscopy. This test is done while the child is asleep under anesthesia or is sedated. A fiber optic tube is passed through the mouth down into the stomach and small intestine. A tiny sample of cells (a biopsy)

from the small intestine is taken. The cells are tested to see if the enzyme lactase is normally active.

***Treatment:***

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

Other children may be sensitive to very small amounts of lactose. These children will need a 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.

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 your 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 the calcium, vitamin D and riboflavin (a B vitamin). You can add foods enriched in calcium, vitamin D, and riboflavin to the diet or give the child a vitamin that consists of these nutrients.