



## **Lactose Intolerance**

Lactose intolerance is a condition in which the body does not digest lactose. Lactose is the sugar found in dairy products. It is a disaccharide composed of glucose and galactose (2 sugars), the principle sugar found in mammalian milk. It needs to be broken down by an enzyme, so the intestine can absorb it. This enzyme is called lactase and is made by the intestinal lining. Lactase production decreases by 3-6 years of age. Most children can tolerate lactose. For the majority of people with lactose intolerance, symptoms may start in the teen years and adulthood. Some ethnic populations including Hispanics, African-Americans, Asian and Native Americans, are more likely to suffer from symptoms. Complete lactase deficiency can be present at birth but *is extremely rare*.

Certain gastrointestinal diseases and injury to the small bowel (such as viral gastroenteritis) can cause a temporary lactase deficiency. Once the condition is resolved the body begins producing lactase again.

The symptoms of lactose intolerance may include crampy abdominal pain, bloating, diarrhea or gas. The amount of lactose that a person can tolerate before symptoms start is very individual.

### **Diagnosis of Lactose Intolerance**

Diagnosis for lactose intolerance can be achieved by two means.

- A lactose breath test (hydrogen breath test) can be obtained. This test involves drinking a liquid with lactose in it and having your breath tested for hydrogen gas. Hydrogen gas is given off in your breath if the milk sugar remains undigested in the intestine. Another way to test for lactose intolerance is during an endoscopy procedure.
- A small biopsy can be taken and sent for analysis for the lactase enzyme.

### **Treatment of Lactose Intolerance**

Currently there is no treatment available to improve the body's ability to produce lactase. Symptoms can be controlled by diet, the addition of synthetic lactase enzyme to regular milk and or the ingestion of lactase enzyme tablets before eating a meal. The amount of lactose or milk products tolerated is different for everyone.

A lactose free diet includes the elimination of all sources of milk from the diet. Careful label reading is essential for success. Foods containing milk, non-fat milk solids, butter, cream, lactose, whey, dry milk products and curds all contain lactose and should be avoided. Hidden lactose can be found in many processed foods including lunch-meats, salad dressings, and some over the counter medicines such as antacids and multi vitamins. The amount of lactose any individual can tolerate is established on a trial and error basis. Small amounts of lactose are sometimes better tolerated when eaten in intervals throughout the day. Solid foods and foods with a higher fat content slow down digestion therefore small amounts of lactose are more easily handled when eaten with these. Aged cheeses such as Cheddar, Colby, Swiss and Parmesan are particularly low in lactose and are often tolerated.

Dietary supplements such as Lact-Aid and Dairy Ease help to digest lactose that is ingested. These supplements are available as tablet that can be taken prior to meals or as drops that can be added to milk 24 hours prior to drinking for the reduction of lactose in the milk. Lactase supplements increase the cost of dairy foods but people who are lactose intolerant find them helpful and well worth it.

People following lactose free or lactose restricted diet need to be monitored for calcium, Vitamin D and riboflavin; especially children and women.