

Lactose intolerance (or milk sugar intolerance) is a food intolerance.

Lactose is a natural component of milk and dairy products. Chemically speaking, lactose is a disaccharide, meaning it contains two sugars, galactose und glucose.

Lactose is separated into these two components by the **enzyme lactase**, which allows the two different sugar molecules to be utilized by our metabolism.

The enzyme lactase resides in the small colon. If there is little or no lactase in the mucose layer of the colon, lactose cannot be digested or absorbed.

Lactose intolerance is therefore caused by a lack of the enzyme needed to process lactose.

Lactase enzyme deficiency causes lactose molecules to be insufficiently or not at all digested in the upper colon and instead transported into the large colon. Here, the lactose molecules undergo anaerobic fermentation, which means they are decomposed without oxygen.

This creates short chain fatty acids (lactic acid, acetic or vinegar acid) and gases (such as carbon dioxide, methane and hydrogen).

Impact of Lactose Intolerance on the Body:

1. The acids created in the large colon stimulate peristalsis, which can result in diarrhea.
2. Lactose can bind with water, which can also cause diarrhea.
3. Bacterial decomposition of lactose causes gases, which can cause flatulence. Some of these gases diffuse through the intestinal wall into the blood and are exhaled through the lungs.
4. These processes damage the protective mucus membranes of the colon and in the long run, increase its permeability. This allows other food particles that “normally” could not pass through the protective colon wall to get into the body.
5. Chronic digestive problems further damage the mucus membranes of the colon and thereby further reduce the availability of enzymes. This in turn increases digestive problems.

Symptoms of Lactose Intolerance:

- Soft or runny stool (bowel movements)
- Flatulence
- Diarrhea or diarrhea symptoms or constipation
- Increased abdominal gas (meteorism)
- Abdominal sounds and abdominal pain
- Feeling of fullness or nausea after consumption of milk or dairy products



Information about lactose intolerance

Lactose intolerance is **diagnosed** using **Applied Kinesiology tests** and or the **H 2 breath test**. The breath test measures gases that are created by bacterial decomposition and transported through the blood to the lungs and then exhaled. Other diagnostic methods include **blood tests** following lactose consumption and **small intestine biopsy**.

What creates Lactase Enzyme Deficiency?

Enzymes become **less active** as we **age**. Enzyme activity is highest during the first few months of our life. In adults, it is only about 1/10th of that in infancy.

Lactase deficiency can also be a **symptom of diseases of the digestive tract**. **Hereditary enzyme efficiency** is rare but possible and causes severe diarrhea and developmental disorders in infants. Lactose intolerance is less common in the North than in the South: For example, only 5% of all people in Sweden are lactose intolerant, compared to 75% of all people in Greece.

You've been Diagnosed Lactose Intolerant - Now What?

Depending on the severity of your symptoms, you need to observe dietary restrictions and **avoid lactose**.

Please note the following important points:

- Processed foods frequently contain lactose - even in places we would least suspect (like in sausages!). Please always read the list of **ingredients** and look for the following **key words**: whey, whey powder, milk powder, non fat dry milk, lactose.
- Please note that many **medications contain lactose** as a carrier for the active ingredient.
- The extent of your physical symptoms depends on the amount consumed, the time of day, temperature and manner of consumption.
- It is not always necessary to completely avoid dairy products. Some dairy products are more tolerable, such as yogurt, quark and sour (fermented) milk products.
- When considering lactase enzyme replacement products, please remember that these offer symptomatic treatment, but do not address the cause of your lactose intolerance.

Further Reading:

Stossier Harald, Treating Allergies with the FX Mayr Cure, Thieme, Stuttgart / Thieme, New York ISBN: 1588901653



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