

Lactose Intolerance

What is lactose intolerance?

Lactose is the sugar in milk and milk products. The intestinal enzyme lactase is needed for lactose digestion. Some people have a lactase deficiency and cannot tolerate food with lactose. Intolerance is not “all or none.” Depending on individual differences, people may be able to digest different amounts of lactose.

What if I was not lactose intolerant before treatment?

The ability to digest lactose can decrease during certain chemotherapy treatments, radiation (especially around the gut) and with active gastrointestinal inflammation. Lactose intolerance symptoms may change with types of treatment, so the amount you tolerate may vary depending on the type and timing of treatment.

What are the symptoms of lactose intolerance?

Symptoms of lactose intolerance usually begin 30 minutes to 2 hours after eating lactose-containing foods. Severity of symptoms varies with personal tolerance and amount you eat. Symptoms include:

- Gastrointestinal cramps
- Bloating/gas
- Diarrhea
- Nausea (this is less common)

How can I improve lactose tolerance after treatment?

- Try foods which may be better tolerated:
 - Yogurts with “Live Active Cultures.”
 - Aged cheeses, such as cheddar, Colby, Swiss, and parmesan.
 - Fermented dairy foods, such as acidophilus milk, yogurt, and kefir.
 - Use lactose-free or lactose-reduced products.
- Eat lactose containing foods with a meal, rather than alone.
- Start with small servings: $\frac{1}{4}$ cup milk or 1 ounce cheese.



Should I include milk in my low lactose diet?

- Milk is a good source of calcium and vitamin D but is a high lactose food. To include milk in your diet, use milk pretreated with lactase enzyme, such as Lactaid® or DairyEase®. Look for 100% lactose-free milks as opposed to 70% lactose-free milks.
- To pretreat your own milk, use 8-10 drops of liquid lactase (such as Phamax® or Lacteeze®) per quart of milk. Milk can be kept in the refrigerator for 24 hours.
- If pretreated milk is not available, take three Lactaid® tablets for every 1 cup of milk.
- See the Guide for “Using Lactaid® Tablets” on the following page.

What are common lactose-free alternatives to milk products?

If you can no longer tolerate milk-based products, try the following:

- Lactaid® milk or Fairlife® milk.
- Soy, rice, almond, oat, hemp, or coconut milk (look for calcium and vitamin D fortified).
- Tofutti®, Rice Dream®, Coconut Bliss®, or Ben & Jerry’s® non-dairy ice cream.
- Fruit sorbet.

Amount of lactose in common dairy foods

Symptoms of lactose intolerance can be affected by the amount of lactose eaten. A person who cannot tolerate milk may be able to tolerate cheese, a much lower lactose food. Use the following information to determine lower lactose foods that may be better tolerated.

Food	Amount	Lactose (grams)
Sweetened condensed milk	½ cup	15
Evaporated milk	½ cup	12
Milk: nonfat, 2%, whole	1 cup	11
Buttermilk	1 cup	10
Light cream (half & half)	½ cup	5
Whipping (heavy) cream, fluid	½ cup	3
Ice cream: low fat	½ cup	9
Ice cream	½ cup	6
Sherbet	½ cup	2
Yogurt (varies by brand)	1 cup	5
Sour cream	2 tablespoons	2
Cottage cheese	½ cup	3

Food	Amount	Lactose (grams)
American cheese	1 ounce	2
Cheddar cheese	1 ounce	1
Cream cheese	1 ounce	1
Parmesan cheese	1 ounce	1
Swiss cheese	1 ounce	1
Butter	1 teaspoon	Trace
Margarine	1 teaspoon	Trace

Guide for using Lactaid® tablets

Lactaid® tablets or capsules contain the lactase enzyme that is needed to digest lactose. By taking them at the beginning of lactose containing meals or snacks, you can prevent the symptoms of lactose intolerance. Look for Lactaid® or comparable products labeled as “lactase enzymes.”

The following table lists food items containing lactose and the recommended dose of Lactaid® tablets to take with the corresponding food.

Food	Amount	Number of Lactaid® tablets
Coffee creamer, cream cheese, sour cream and whipped cream	Up to 4 tablespoons	1 tablet
Hard cheeses (cheddar, parmesan, American, Swiss)	Up to 4 ounces (4 slices)	
Macaroni and cheese	½ cup	
Sauces and gravies (milk-based)	¼ cup	
Butter	2 tablespoons	
Sherbet	½ cup	
Cottage cheese	½ cup	2 tablets
Yogurt	½ cup	
Soups (milk & cream-based)	1 cup	
Ice cream/frozen yogurt	½ cup	
Desserts (made with milk)	½ cup	
Puddings (canned)	½ cup	
Milk	1 cup	3 tablets
Milk-based supplements	1 cup	
Instant Breakfast w/ low-lactose milk	1 cup	

Please note: Individual tolerance to lactose-containing products varies. The above specified doses of Lactaid® tablets are general amounts based on the lactose content of various foods. If you experience symptoms of intolerance (diarrhea, cramping, bloating, gas) while following this guide, please notify your dietitian.

What other items may contain lactose?

Some non-dairy items may contain lactose. Look for whey, lactose, non-fat milk solids, buttermilk, malted milk, sweet cream, or sour cream. Some breads, dry cereal, cookies, instant soups, breakfast drinks, and milk chocolate contain small amounts of lactose. Lactose is widely used as a filler in tablets and capsules. Ask your pharmacist if medications you take contain lactose.

Resources

International Foundation for Gastrointestinal Disorders: ifgd.org

This education resource was intended to be given as a part of a nutrition consult by a Fred Hutchinson Cancer Center dietitian. Questions? Ask a Fred Hutch dietitian at nutrition@seattlecca.org.