

## Lactose Intolerance

### What is lactose intolerance?

Lactose Intolerance (LI) is a condition in which you have digestive symptoms after eating or drinking lactose. Lactose is a natural sugar found in milk and milk products. LI occurs in people who do not make enough lactase, an enzyme that helps digest lactose. Without enough of this enzyme, lactose is not well absorbed. This can cause symptoms like nausea, cramping, diarrhea, bloating and gas. Symptoms can occur 30 minutes to 2 or more hours after eating foods with lactose. You can control symptoms of LI by eating fewer foods that contain lactose. LI is not the same thing as a milk allergy.

### What causes LI?

LI may be inherited but is more often a part of our programming. In fact, most adults lactase levels start to decrease after weaning. LI is more common in certain ethnic groups, including African Americans, Asian Americans, Hispanic/Latinos, and American Indians. LI in infants is rare. Most are born with enough lactase enzyme to digest lactose.

LI may occur with injury to the intestinal lining. This could be from stomach flu, chemotherapy, radiation, surgery, or from certain antibiotics. This is called “secondary LI.” These symptoms often decrease if the intestine heals, which allows the person to return to eating more lactose.

### How is LI treated?

Symptoms can be managed with changes to your diet. Most people with LI are able to tolerate small amounts of lactose. Very gradually introducing small amounts of lactose may help some to adapt with fewer symptoms. Over the counter lactase pills (Lactaid<sup>®</sup>, Dairyease<sup>®</sup>) can improve intolerance if diet changes have not helped enough.

### How much lactose can I eat?

People with LI have varying degrees of sensitivity to lactose. For instance, one person with LI may eat a small amount of lactose without digestive symptoms, while another may have several symptoms from the same amount.

### Common sources of lactose

The foods listed below contain lactose. Limit your intake to help reduce symptoms.

- Yogurt
- Buttermilk
- Cheese (some kinds)
- Cottage cheese
- Cream cheese
- Chocolate milk
- Dry powdered milk
- Half and half cream
- Light cream
- Ice cream
- Ice milk
- Milk
- Milk chocolate
- Milk solids
- Sherbet
- Ricotta cheese
- Evaporated milk
- Sour cream
- Sweetened condensed milk
- Whipping cream
- Whey (whey protein is OK)

## Hidden sources of lactose

This is not a complete list of foods with hidden lactose. Be sure to read ingredient lists.

Processed meats, baking mixes, salad dressings, creamy soups, breaded meats, French fries (if pre-blanching in whey), chocolate candies, prepared cakes and sweet rolls, powdered coffee creamers, hot chocolate mix, imitation dairy products, party dips, cream liquors, sauces and gravies, frosting, prescription and over the counter medicines.

## How do I read a food label?

Nutrition Fact labels are not required to say how much lactose is in a food. However, you can check for lactose containing ingredients on the “ingredient list” near the Nutrition Facts label.

Ingredients are listed from the most to the least in weight. So, if the first four ingredients are not milk based, the lactose content in the food is likely to be limited.

As a guide, the food additives listed below are **lactose free and safe to use**.

- lactate
- lactalbumin
- caseinate
- lactic acid
- casein
- lactylate

## Special enzyme products and foods

Reduced lactose and lactose-free milks are available at most grocery stores. Lactaid<sup>®</sup> and Dairyease<sup>®</sup> are two common brands. These milks have the lactase enzyme added to them. Other products, such as lactose free cottage cheese and yogurt can be purchased.

Enzyme tablets can be helpful to some people with LI. Lactaid<sup>®</sup> and Dairyease<sup>®</sup> are common brands. Stores often carry their own brand and these are fine to use. These tablets work by providing you the enzyme lactase to break down lactose in foods. Be sure to read the directions for use. Ask your health professional if you have questions about a certain brand because many contain different levels of the lactase enzyme.

## Tips for living with LI

- If you choose to eat lactose containing foods, you may tolerate eating small amounts throughout the day better than large amounts at one time.
- Combine foods that contain lactose with non-lactose foods to help reduce LI symptoms.
- You may tolerate yogurt and kefir well even though they have lactose in them. Choose one with ‘live active cultures’ (seen on label) because this helps to break down the lactose.
- You may tolerate aged cheeses better than fresh or soft cheeses. Examples of low lactose cheeses are parmesan, swiss, cheddar, hard mozzarella, brie, and feta.
- Try lactose-free dairy products or lactase enzyme tablets.

## Substitutes for Dairy Products (good for recipes)

Instead of this	Use this
1 cup cow's milk	½ cup non-dairy cream + ½ cup water or 1 cup lactose-free milk
1 cup evaporated milk	1 cup non-dairy cream or soy milk
1 cup buttermilk	½ cup non-dairy cream + ½ cup water + 1 Tbsp lemon juice or vinegar
1 cup whipped cream	1 cup non-dairy whipped cream
1 Tbsp cream cheese	1 Tbsp mayonnaise
½ cup cottage cheese	½ cup soft or silken tofu (may also find lactose-free cottage cheese)
1 cup sour cream	¼ cup corn starch in ¾ cup water + ¼ cup vinegar

°People concerned about dietary fat intake should choose a low-fat type of non-dairy creamer.

## Getting Enough Calcium

### Food Sources

Dairy foods are rich in calcium. Your diet may be low in calcium if you eat little or no dairy. Non-dairy sources of calcium include canned fish with bones (salmon and sardines), clams, oysters, shrimp, certain tofus (check the food label), dark leafy green vegetables, rhubarb, broccoli, sesame seeds, almonds, black strap molasses and dried beans. Milks made from soy, coconut, almonds, and rice often have calcium added to them. Other calcium-fortified foods and drinks are available including certain juices, cereals and breakfast bars.

Supplements like Boost<sup>®</sup>, Ensure<sup>®</sup>, and Pediasure<sup>®</sup> are lactose-free and provide good calcium. Ask your health provider if it would be a good idea for you to try one of these products.

### Supplements

If you cannot get enough calcium from your diet, your health provider may recommend a calcium supplement. These are sold commonly as calcium carbonate and calcium citrate. Tums<sup>®</sup> or Rolaids<sup>®</sup> are chewable antacids that also have calcium carbonate in them. In most cases you should not take calcium in amounts greater than 1200mg per day. High amounts of calcium can cause urinary tract stones in some people.

## Teach Back

What is the most important thing you learned from this handout?

What changes will you make in your diet/lifestyle, based on what you learned today?

## **Resources and References**

**The Everything Lactose-Free Cookbook**, by Jan McCracken, FW Media, 2011.

*Go Dairy Free*, by Alysa Fleming, by Fleming Ink, 2008.

### **International Foundation for Functional Gastrointestinal Disorders**

[www.iffgd.org](http://www.iffgd.org)

### **National Digestive Diseases Information Clearinghouse (NDDIC)**

<http://digestive.niddk.nih.gov/ddiseases/pubs/lactoseintolerance/>

### **Additional materials available on calcium include:**

**Vitamins and Minerals: Calcium** (Health Facts for You #178) booklet from University of Wisconsin Hospital and Clinics Food and Nutrition Services Department, Nutrition Clinics (see below).

If you are a UW Health patient and have more questions please contact UW Health at one of the phone numbers listed below. You can also visit our website at [www.uwhealth.org/nutrition](http://www.uwhealth.org/nutrition).

Nutrition clinics for UW Hospital and Clinics (UWHC) and American Family Children's Hospital (AFCH) can be reached at: **(608) 890-5500**

Nutrition clinics for UW Medical Foundation (UWMF) can be reached at: **(608) 287-2770**

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright 2/2016 University of Wisconsin Hospital and Clinics Authority. All rights reserved. Produced by the Clinical Nutrition Services Department and the Department of Nursing HF#177.