



Patient Education



St. Joseph's  
Healthcare  Hamilton



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# Eating less lactose

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**Eating less lactose can help improve the symptoms of lactose intolerance. This handout shows you which foods have lactose and gives suggestions for other food choices.**

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## What is lactose?

Lactose is a sugar found in milk and milk products, and can also be added to other food products and medications.

## What is lactose intolerance?

Lactose intolerance is when your intestine cannot properly break down lactose in the food you eat. People with lactose intolerance do not make enough of the enzyme called lactase, which breaks down lactose. When lactose is not broken down, it passes through the intestine to the colon. In the colon, bacteria break down lactose making gas and fluids. This causes:

- bloating
- diarrhea
- abdominal cramping and gas

Everyone is different in the amount of lactose they can tolerate. Some people can eat small amounts of lactose without having symptoms, and other people need to avoid lactose completely. Lactose intolerance can be temporary or permanent depending on the cause.

Lactose intolerance is not a milk allergy.

## Which foods have lactose?

The chart in the insert of this handout "**Common foods with and without lactose**" lists examples of foods that have different amounts of lactose. Foods that are lactose free or low in lactose are in the left side of the chart. Foods higher in lactose are in the right side of the chart.

The foods in the "**Foods you may tolerate**" list are usually well tolerated by people with lactose intolerance. Include these foods only if you can tolerate them without symptoms.

The foods in the "**Foods you may not tolerate**" list have lactose. Once you are symptom free, you can try these foods in small amounts.

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## How do I know if an ingredient has lactose?

You will need to read labels to see if the ingredients have lactose.

Has lactose	Does not have lactose
<ul style="list-style-type: none"><li>• cheese flavour</li><li>• whey</li><li>• curds</li><li>• lactose</li><li>• dry milk solids</li><li>• non-fat milk powder</li><li>• modified milk ingredients</li></ul>	<ul style="list-style-type: none"><li>• lactic acid</li><li>• lactalbumin</li><li>• lactate</li><li>• casein</li></ul>

## What do nutrient claims tell me?

Nutrient claims are statements about certain nutrients in a food product. If you see these claims about lactose listed on a food product, you are getting these amounts:

- **Lactose free** – there is no measurable lactose in the food.
- **Lactose reduced** – the amount of lactose is reduced by at least 25%.

## The amount of lactose in milk and other dairy products

Lactose grams (g)	Milk and Other Dairy Products
20.0	sweetened, condensed milk, ½ cup
12.5	whole, 2%, 1% or skim milk, chocolate, 1 cup
12.0	evaporated milk, ½ cup
12.0	yogurt, plain, ¾ cup
10.8	goat milk, 1 cup
10.0	buttermilk, 1 cup
9.0	ice milk, vanilla, ½ cup
8.0	kefir, ¾ cup
5.0 to 6.0	ice cream, vanilla, ½ cup
4.0 to 9.0	yogurt with probiotics, ¾ cup
3.0	cottage cheese, creamed, ½ cup
2.0	sherbet, orange, ½ cup
1.5	cream cheese, swiss cheese, 1.5 oz
1.2	blue cheese, colby cheese, 1.5 oz
1.1	mozzarella cheese, 1.5 oz
0.9	gouda cheese, 1.5 oz
0.8	cheddar or processed cheese, 1.5 oz
0.6	half and half cream, light cream, 1 tbsp
0.5	sour cream, 1 tbsp
0.5	dry curd cottage cheese, ½ cup
0.4	whipping cream, unwhipped, 1 tbsp
0.2	parmesan, grated, 1 tbsp
0.2	camembert or limburger cheese, 1.5 oz
0.1	Lactaid™ milk, 1 cup
trace	butter, 1 tsp

Source - Manual of Dietetics, 6<sup>th</sup> Edition, American Dietetic Association and Dietitians of Canada, 2000.

The lactose content may vary depending upon the brands and the amounts of milk solids added.

## Tips to help you eat less lactose

- ✓ Choose lactose free or foods low in lactose – see the chart in this handout, “**Common foods with and without lactose**”.
- ✓ Buy yogurts and kefir with probiotics (also listed as live bacterial cultures) as these are usually well tolerated. Buy lactose-reduced yogurts.
- ✓ Drink lactose reduced milk or calcium fortified soy beverage or rice milk. Use them in cooking and baking, and as a substitute for milk in foods such as scrambled eggs and omelettes.
- ✓ Try eating or drinking milk and milk products that are not lactose reduced in small amounts as tolerated. Spread your intake throughout the day. Milk and milk products may be better tolerated if they are eaten with a meal.
- ✓ Try casein or soy-based products in place of cheese.
- ✓ Use lactase enzyme preparations. These products contain the enzyme lactase which is needed to break down the lactose in food. They come in capsules and liquid (Lactaid, DairyEase). Take the capsules at the same time you eat foods that have lactose. Add the liquid drops to milk 24 hours ahead to reduce the lactose content. Read the instructions before taking them.
- ✓ Read the labels on foods for hidden sources of lactose:
  - Some margarines have lactose unless labelled, "non-dairy".
  - Some commercial salad dressings contain lactose or ingredients with lactose (listed on page 3). Try making your own homemade oil and vinegar dressings for salads or vegetables.
- ✓ Ask your pharmacist if your medications have lactose because it may not be listed on the label.



## Lactose Intolerance and Bone Health . . .

### What about calcium?

Calcium is a mineral needed for strong teeth and the growth and repair of your bones. A lack of calcium in the diet over time can lead to thin and fragile bones that break easily. This condition is called osteoporosis.

Milk and milk products are an excellent source of dietary calcium. Since lactose intolerance may limit your intake of dairy products, make sure you get enough calcium from other sources. The chart on page 7 shows you amounts of calcium in some common foods.

If you are concerned about not getting enough calcium, you may want to consider taking a calcium supplement. Talk to your health care provider about calcium supplementation. Do not take more than 2,000 mg of calcium a day from calcium supplements.

### How much calcium do I need?

Age group	Calcium milligrams (mg)
0 to 6 months	200
7 to 12 months	260
1 to 3 years	700
4 to 8 years	1,000
9 to 18 years	1,300
19 to 50 years	1,000
51 to 70 years	men – 1,000 women -1,200
over 70 years	1,200
<b>Pregnant or breastfeeding:</b>	
14 to 18 years	1,300
19 to 50 years	1,000

Source: Dietary Reference Intakes (DRIs), National Academy of Sciences, November 2010.

## Calcium content of some common foods

Food	Serving Size	Calcium (mg)
<b>Vegetables and Fruit</b>		
Orange juice - fortified with calcium	½ cup	154-172
Spinach (cooked)	½ cup	129
Chinese cabbage or bok choy (cooked)	½ cup	84
Beet, turnip or collard greens (cooked)	½ cup	80
Orange	1 medium	52
Kale, swiss chard (cooked)	½ cup	49-54
Broccoli (cooked)	½ cup	32-50
Raisins	¼ cup	21
<b>Milk and Alternatives</b>		
Milk (homogenized, 2%, 1%, skim and buttermilk)	1 cup	300-325
Rice beverage - fortified with calcium	1 cup	315
Soy beverage - fortified with calcium	1 cup	315
Cheese - ricotta	½ cup	356
- firm or hard, such as cheddar, brick, mozzarella or gouda	1 ½ oz (50 g)	265
- feta	1 ½ oz (50 g)	247
- processed	2 slices (50 g)	230
- parmesan	1 tbsp	55-70
Yogurt (plain)	¾ cup	250-300
Cottage cheese 1%	1 cup	146
Pudding, instant, vanilla, made with 2% milk	½ cup	115-140
Ice cream or ice milk	½ cup	80-125
<b>Meat and Alternatives</b>		
Salmon with bones, canned (pink or red)	½ cup	187-208
Soy beans, cooked	1 cup	185
Sardines with bones	4 small	183
Navy beans/white beans	1 cup	130-200
Tofu - processed with calcium, firm	½ cup	117-130
Almonds	¼ cup	100
Scallops or shrimp, canned	3 oz	90-123
Brazil nuts	¼ cup	55
<b>Other</b>		
Molasses, blackstrap or cooking	2 tbsp	288

Source: Nutrient Value of Common Foods, Health Canada, 2008; Manual of Clinical Dietetics, 6<sup>th</sup> Edition, American Dietetic Association, Dietitians of Canada, 2000; and USDA National Nutrient Database, 2012.

### Measurement Conversion

250 ml = 1 cup      125 ml = ½ cup      60 ml = ¼ cup      15 ml = 1 tablespoon      30 g = 1 ounce

## What about Vitamin D?

Vitamin D helps the body absorb the calcium in food. You can get vitamin D from sunlight, food or a supplement. Milk and milk products fortified with vitamin D are a good source of vitamin D. Since lactose intolerance may limit your intake of dairy products, make sure you get enough Vitamin D from other sources.

Lactose free food sources of Vitamin D include:

- fatty fish such as mackerel, herring, salmon and sardines
- egg yolks
- liver
- vitamin D fortified foods such as soy and rice beverages, non-hydrogenated, lactose free margarines
- orange juice fortified with calcium

Children and adults need 600 IU or 15 mcg of vitamin D every day. Health Canada recommends that in addition to following “**Eating Well with Canada’s Food Guide**” ([www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)), everyone over 50 years of age should take a daily vitamin D supplement (400 IU). Talk with your health care provider about vitamin D supplementation.

Do not take more than 4,000 IU of vitamin D a day from vitamin D supplements unless advised by your doctor.

## Dietitian’s suggestions

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Websites

- National Digestive Diseases Information Clearing House: [www.digestive.niddk.nih.gov/](http://www.digestive.niddk.nih.gov/)
- Mayo Clinic: [www.mayoclinic.com/](http://www.mayoclinic.com/)
- Dairy Farmers of Ontario: [www.milk.org/corporate/view.aspx](http://www.milk.org/corporate/view.aspx)
- Lactose Intolerance: [www.lactose.net/](http://www.lactose.net/)
- The Ultimate Lactose Intolerance Information Resource: [www.lactoseintolerant.org/](http://www.lactoseintolerant.org/)



# Common foods with and without lactose

For items marked with an \* you will need to read the list of ingredients to see if the product you use contains lactose. See page 4 in the handout for a list of these ingredients.

## Milk and Other Dairy Products

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• lactose-hydrolyzed milk such as Lactaid, Lacteeze, Natrel (lactose free), Organic Meadows</li> <li>• soy-based infant formulas</li> <li>• soy beverages such as Darifree, Edensoy, Natura, Silk, So Good, Soy Delight, So Nice, Vitasoy, Organics Blue Menu, Yu</li> <li>• rice milk such as Rice Dream, Ryza, Yu</li> <li>• coconut milk such as So Delicious</li> <li>• almond milk such as Almond Fresh, Almond Breeze, Almond Dream</li> <li>• hemp milk such as Hemp Bliss</li> <li>• oat milk such as Oat Dream</li> <li>• cheese such as dry curd cottage cheese, camembert, cream cheese, gouda, colby, blue, cheddar, processed, parmesan, limburger, mozzarella, swiss</li> <li>• cheese alternatives such as NuTofu, Yves - The Good Slice</li> <li>• lactose free cheese such as Lappi</li> <li>• creams such as half &amp; half, light and whipping cream. Use 1 tbsp or less a serving</li> <li>• lactose reduced yogurt such as Lacteeze, Soya Dessert, Solgurt Yoso, Soygo</li> <li>• yogurt with probiotics/live bacterial cultures</li> <li>• lactose-free ice cream such as Lacteeze, Chapmans (no added sugar, lactose free) sorbet</li> <li>• sour cream, PC 99% lactose free</li> </ul>	<ul style="list-style-type: none"> <li>• milk (skim, 1%, 2%, homogenized, chocolate)</li> <li>• milk-based infant formulas</li> <li>• goat milk or goat milk products</li> <li>• condensed milk</li> <li>• powdered milk</li> <li>• evaporated milk</li> <li>• buttermilk (regular and cultured)</li> <li>• yogurt and yogurt-based drinks</li> <li>• ricotta and creamed cottage cheese</li> <li>• sour cream</li> <li>• all creams if more than 1 tbsp</li> <li>• cheese sauce</li> </ul>

## Grain Products

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• all breads, crackers, bagels or croissants made without milk</li> <li>• cereals, cooked and dry without added milk solids</li> <li>• granola bars* made without milk</li> <li>• pasta</li> <li>• rice</li> <li>• rice crackers</li> <li>• tortilla shells and taco shells</li> <li>• barley, oats, cornmeal or bulgar</li> </ul>	<ul style="list-style-type: none"> <li>• cereals made with skim milk powder such as Alpen, Special K, granola</li> <li>• commercial baked products such as muffins, biscuits</li> <li>• waffle, pancake and crepe mixes</li> <li>• packaged pasta or rice with sauce mix</li> <li>• rice cakes</li> <li>• some processed breakfast cereals</li> </ul>

## Meat and Alternatives

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• all plain meat, fish and poultry</li> <li>• eggs</li> <li>• nuts, seeds, peanut butter and other nut butter</li> <li>• legumes such as dried beans, peas, lentils</li> <li>• tofu</li> <li>• Kosher luncheon meats</li> </ul>	<ul style="list-style-type: none"> <li>• commercially prepared meats, fish, and poultry (hot dogs, hamburger or sausage patties, processed luncheon meats)</li> <li>• breaded, battered or creamed egg, meat, fish or poultry dishes</li> <li>• commercial egg substitutes</li> </ul>

## Vegetables and Fruit

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• all fresh, frozen, canned or dried fruits, vegetables and their juices (without added milk or milk products)</li> <li>• commercial fruit pie fillings</li> <li>• tomato paste</li> <li>• tomato and spaghetti sauces without cheese</li> </ul>	<ul style="list-style-type: none"> <li>• instant potatoes*, commercially processed or prepared potato and vegetable products such as scalloped potatoes, vegetables in cream sauce, breaded or battered vegetables, vegetables in pastry</li> </ul>

## Soups

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• soups made without milk or cream</li> <li>• consommé</li> <li>• broth</li> <li>• bouillon</li> </ul>	<ul style="list-style-type: none"> <li>• soups made with milk or cream</li> <li>• canned and dehydrated soup mixes containing milk products</li> </ul>

## Fats and Oils

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• butter</li> <li>• milk-free margarine or lactose-free margarine</li> <li>• gravy made without milk products</li> <li>• lard, bacon</li> <li>• shortening</li> <li>• vegetable oils</li> <li>• mayonnaise*</li> <li>• olives</li> <li>• salad dressing* without cheese or milk</li> <li>• vinaigrette</li> <li>• most non-dairy creamers</li> </ul>	<ul style="list-style-type: none"> <li>• salad dressings with cheese or milk products</li> <li>• commercial gravy or gravy mixes</li> <li>• margarine with milk or whey powder</li> <li>• party dips</li> </ul>

## Desserts

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• angel cake</li> <li>• gelatin</li> <li>• plain meringue</li> <li>• fruit popsicles, fruit ice</li> <li>• dairy-free pudding such as Imagine, lemon pudding</li> <li>• fruit pie filling</li> </ul>	<ul style="list-style-type: none"> <li>• puddings, custards, mousse</li> <li>• commercially prepared desserts such as cakes, pies, cookies</li> <li>• commercial mixes for cakes and cookies</li> <li>• chocolate popsicles</li> <li>• ice cream, ice milk, sherbet made with milk ingredients</li> </ul>

## Beverages

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• coffee</li> <li>• tea</li> <li>• soft drinks</li> <li>• fruit flavored drinks</li> <li>• lactose free nutritional supplements</li> <li>• carbonated beverages</li> </ul>	<ul style="list-style-type: none"> <li>• Ovaltine</li> <li>• chocolate drink mixes</li> <li>• cream based liqueurs such as Bailey's Irish Cream</li> <li>• instant iced tea</li> <li>• instant coffee</li> <li>• milk-based nutritional supplement</li> <li>• powdered meal replacement supplements</li> </ul>

## Sweets

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• pure sugar candy such as jelly beans, gum drops, hard candy</li> <li>• licorice</li> <li>• sugar</li> <li>• jams, jellies, marmalade</li> <li>• honey, syrups such as corn, maple</li> <li>• chewing gum</li> <li>• marshmallows</li> <li>• fruit roll-ups</li> <li>• molasses</li> </ul>	<ul style="list-style-type: none"> <li>• milk chocolate</li> <li>• toffee and caramel candies</li> <li>• butterscotch</li> </ul>

## Other

Foods you may tolerate	Foods you may not tolerate
<ul style="list-style-type: none"> <li>• herbs, spices</li> <li>• cocoa powder</li> <li>• condiments such as ketchup, relish, salsa, mustard</li> <li>• plain popcorn</li> <li>• potato and corn chips (plain)</li> <li>• pretzels, Bugles</li> <li>• corn tortilla chips</li> <li>• pickles, uncreamed horseradish</li> </ul>	<ul style="list-style-type: none"> <li>• hot and cold liquid or powdered chocolate drink mixes*</li> <li>• artificial whipped topping (frozen or powdered)</li> <li>• ranch or cheese flavoured snack foods such as Doritos, Cheetos, Bits and Bites</li> <li>• sugar substitutes made with lactose such as Equal</li> <li>• vitamin or mineral supplements, medications with lactose added</li> <li>• whey powder</li> </ul>

All brand names listed in this handout have registered trademarks.