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Creating Health & Nutrition

Lactose Intolerance

Nutrition Information

Lactose is the naturally occurring sugar found in milk and milk products. It requires lactase, an enzyme found in the intestine, to break it down into smaller, more easily digested sugars. If this enzyme is absent or the body does not produce enough, lactose cannot be fully broken down and often ends up being fermented by the good bacteria in our colon. When this results in symptoms such as nausea, cramping, bloating, abdominal pain, and gas, the condition is described as lactose intolerance.

Symptoms can occur 15 minutes to several hours after eating lactose-containing foods. The severity of symptoms will vary from person to person based on how much lactose was consumed in relation to other foods. It is important to see a doctor prior to eliminating milk and dairy products from the diet to identify the cause of the symptoms. Intolerance to lactose may produce similar symptoms to other digestive conditions such as irritable bowel syndrome, inflammatory bowel disease, celiac disease, or small bowel bacterial overgrowth. Official diagnosis of lactose intolerance includes a detailed family and medical history, physical exam, and testing. Testing may include a hydrogen breath test or, in children, stool acidity testing. Generally, diagnosis occurs based on symptoms and then elimination of milk and dairy foods with reintroduction to see if symptoms return.

It is important to note that lactose intolerance and a milk allergy are not the same. Lactose intolerance occurs because of the body's inability to digest digest lactose, the naturally occurring sugar in milk. A milk allergy is the body's immune response to milk protein. People with a milk allergy must avoid all milk products to avoid a reaction, whereas a person with lactose intolerance can still consume milk and dairy products, though in limited amounts.

Current research indicates that most individuals with lactose intolerance can still handle the amount of lactose found in one cup of milk (about 12 grams) with minor to no symptoms. Smaller amounts (less than 6 grams per serving) are unlikely to result in any symptoms. The table below lists common foods and the amount of lactose they contain.

Ways to Minimize Symptoms

The National Dairy Council offers these tips to help minimize symptoms:

- Try it: opt for lactose-free products, which provide the same nutrients as dairy foods but without lactose.
- Sip it: introduce dairy slowly; start with a ¼ cup of milk and gradually increase.
- Stir it: mix milk with food; don't consume milk and other dairy foods on their own; always combine with other foods.
- Slice/shred it: choose aged cheeses; add a slice to sandwiches or shred on veggies.
- Spoon it: try Greek yogurt.

Shopping Tips

You may want to consider the following products on your next shopping trip:

- Try reduced-lactose or lactose-free milk, such as Lactaid®, or other lactose-free dairy products.
- Look for yogurt, kefir, and buttermilk with "live and active" cultures, which help digest lactose.
- Choose cheeses that are naturally lower in lactose, like Swiss,

FOOD	GRAMS OF LACTOSE
1 cup milk (whole, 2%, 1%, fat free)	12–13
4–6 ounces Greek yogurt (plain)	2–4
½ cup cottage cheese (low fat, 2%)	2–3
1 ounce aged cheese (cheddar, Swiss, mozzarella)	0.3–1
1 cup Lactaid milk (low fat, lactose free)	0

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Tip

"Do you like milk but think that milk may not like you? Then you may be lactose intolerant—not allergic to milk or other dairy foods. The good news is that milk may be 'friendlier' than you think!"

—American Dietetic Association Complete Food and Nutrition Guide, 5th Edition

Colby, Parmesan, and cheddar. They lose most of their lactose through processing and aging.

- Take lactase enzyme capsules or drops (e.g., Lactaid®, Dairy-Ease®) at the beginning of your meal to aid digestion of lactose-containing foods.
- Try plant-based beverages, such as soy, almond, or rice, that are fortified with calcium and vitamin D.
- Always read the ingredient list on food labels. Look for terms such as milk solids, cream, or whey which can indicate the presence of lactose. While the label may state that it "contains milk," ingredients such as casein, lactalbumin, lactate, and lactic acid come from milk but do not contain lactose.

Tips Affecting Different Age Groups

As we age, our bodies gradually produce less lactase, resulting in some degree of lactose malabsorption or, when symptoms occur, lactose intolerance. African Americans, Hispanics, Asians, and Native Americans are more likely to be lactose intolerant.

Milk and dairy foods are important sources of calcium, protein, riboflavin, vitamins A and D, magnesium, potassium and other nutrients essential for good health and bone health in particular. Therefore, it is important to realize that you do not have to give up these foods even with lactose intolerance. The key is to consume them to your tolerance level; it is really a matter of degree!

Chocolate Strawberry Smoothie

Serving size: 1¾ cup

INGREDIENTS

1 cup frozen unsweetened strawberries
1 container (5.3 ounces) strawberry Greek yogurt (about ½ cup)
½ cup lactose-free milk (skim, 2%, or whole)
2 Tbsp chocolate syrup
½ tsp vanilla
Fresh strawberries (optional)

DIRECTIONS

1. Wash hands with soap and water.
2. In a clean blender container combine frozen strawberries, yogurt, lactose-free milk, chocolate syrup, and vanilla. Cover and blend until nearly smooth.
3. Pour into a large glass. Gently wash strawberries under running water, slice, and use as garnish if desired. Serve immediately.

NUTRITION INFORMATION

350 calories, 18 grams protein, 68 grams carbohydrate, 1gram fat (made with skim milk), approximately 4 grams lactose, 35% daily calcium need

Recipe source: United Dairy Industry of Michigan, https://www.milkmeansmore.org/recipe/chocolate-strawberry-smoothie/

Examine Your Choices

Food	Source	What I buy	What I plan to buy/ change
Milk	Good source of calcium and vitamin D	Juice and iced tea	Lactose-free milk
Cheese	Calcium	White American	Cheddar

My goal: Reintroduce milk in my diet. Start with ¼ cup with supper and gradually include a ¼ cup at breakfast and lunch as well over the next 3 weeks.

Sources

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