

Dairy foods such as milk, cheese and yogurt are an integral part of healthy eating patterns in the U.S. They include 3 out of the 4 nutrients of concern including calcium, potassium and vitamin D, as well as other essential nutrients. Dairy foods are vital for bone growth and maintenance, and have been associated with reduced risk of chronic diseases including hypertension, metabolic syndrome, Type 2 diabetes and osteoporosis. Some people are unable to fully digest lactose in dairy due to too little of the enzyme lactase. This is lactose intolerance.

Daily Dairy Recommendations

Toddlers	12-23 months	1 ½ to 2 cups
Children/ Teens	2-3 years	2 to 2 ½ cups
	4-8 years	2 ½ cups
	9-18 years	3 cups
Adults	19+	3 cups

WHAT IS LACTOSE INTOLERANCE?

Lactose intolerance (LI) is characterized by a group of symptoms, including abdominal pain, bloating, gas and/or diarrhea, that occur in some people after they consume dairy foods. The inability to break down the natural carbohydrate, lactose, is due to deficient levels of lactase, the enzyme that breaks down lactose. Normally, lactase turns milk sugar into two simple sugars – glucose and galactose – which are absorbed into the bloodstream through the intestinal lining. If your patient is lactase deficient, lactose in their food moves into the colon instead of being processed and absorbed. In the colon, normal bacteria interact with undigested lactose, causing the signs and symptoms of lactose intolerance.

LI is a highly individualized condition; the types and severity of symptoms, and the amount of lactose that triggers symptoms, varies among and within individuals.

LI may cause some individuals to avoid or reduce dairy food consumption, which can result in missing out on many essential nutrients found in dairy foods.

DIAGNOSING LACTOSE INTOLERANCE

Obtaining a proper diagnosis is an important step when it comes to managing LI. Without testing, it's impossible to know if the symptoms of your patient are caused by lactose or a different gastrointestinal issue. LI can be diagnosed using one of these three methods:

- **Lactose tolerance test:** measuring glucose in the blood after drinking a high-lactose beverage
- **Hydrogen breath test:** measuring hydrogen levels in the breath after drinking a high-lactose beverage
- **Stool acidity test:** only used if unable to tolerate either of the above tests

LACTOSE INTOLERANCE VS. DAIRY ALLERGY

	Lactose Intolerance	Dairy Allergy
Cause	Gastrointestinal response from inadequate ability to digest lactose (milk sugar)	Immune system reaction to the protein in dairy (whey and/or casein)
Severity	Causes temporary discomfort	Can be life threatening (anaphylaxis)
Onset	Primarily affects adults	Primarily affects children
Symptoms	<ul style="list-style-type: none"> • Diarrhea, nausea, abdominal cramping • Bloating, fullness, gas 	<ul style="list-style-type: none"> • Diarrhea, vomiting, abdominal cramping • Angioedema or swelling • Hives or red, itchy skin • Stuffy or itchy nose; sneezing or itchy, teary eyes
Dairy Consumption	Can enjoy milk and milk products with simple management strategies	Should avoid milk and milk products (unless allergy is outgrown)

MANAGING LACTOSE INTOLERANCE

Personalized solutions may help those experiencing LI symptoms to enjoy dairy foods and meet nutrient needs. Here are some suggestions to provide patients:

- Start by eating small amounts of lactose and gradually increase.
 - This slows digestion, making tolerance easier
- Purchase lactose-free products and foods naturally lower in lactose that may be easier to digest such as:
 - Lactose-free milk
 - Natural cheeses – cheddar, colby, mozzarella, Swiss, Monterey Jack, queso blanco, queso fresco and paneer
 - Yogurt – look for “live and active cultures” on the label
 - Fermented dairy products such as kefir, buttermilk, etc.
- Consume dairy with meals to aid in digestion of lactose. Cook with dairy.

References:

Lactose Intolerance. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/lactose-intolerance/symptoms-causes/syc-20374232>. Accessed October 12, 2022. MyPlate- Dairy. USDA. <https://www.myplate.gov/eat-healthy/dairy>. Accessed October 12, 2022. Science Summary- Dairy Innovation. National Dairy Council. <https://www.usdairy.com/research-resources/dairy-and-lactose-intolerance-science-summary>. Accessed October 12, 2022. USDA and HHS. 2020-2025 Dietary Guidelines for Americans.; 2020. https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf.



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