



NATIONAL DAIRY COUNCIL®

Lactose Intolerance

Dispelling Myths and Helping
People Enjoy Milk, Cheese
& Yogurt



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Today's Discussion

- Lactose intolerance defined
- The impact of dairy avoidance
- Prevalence – who's impacted
- Managing Lactose intolerance

Lactose Intolerance Defined





Varying Degrees of Lactose Sensitivity

Lactose Maldigestion

Incomplete digestion of *lactose*, the natural sugar in milk, due to low activity of the *lactase* enzyme; may be asymptomatic

Lactose Intolerance

Gastrointestinal disturbances following the consumption of an amount of lactose greater than the body's ability to digest and absorb

Source: Lactose Intolerance, National Digestive Diseases Information Clearinghouse. 2006.

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

J Natl Med Assoc. 2009;101:1S-24S



Lactose Intolerance vs Milk Allergy

Key differences...

Lactose intolerance	Milk allergy
A sensitivity	An allergy
Occurs in gastrointestinal system	Triggered by immune system
A sensitivity to milk carbohydrate (lactose)	A reaction to milk protein
Rare in young children	Generally impacts young children; may be outgrown*
Can enjoy milk and milk products with simple management strategies	Should avoid milk and milk products (unless allergy is outgrown)

Source: Lactose Intolerance, National Digestive Diseases Information Clearinghouse.
<http://digestive.niddk.nih.gov/ddiseases/pubs/lactoseintolerance/>

*Allergy and Asthma Foundation of America.
 Milk Allergy
http://www.aafa.org/display.cfm?id=9&sub=20&cont=516_



The Impact of Avoiding Milk, Cheese and Yogurt



Lactose Intolerance: A Barrier to Dairy Consumption

- Over 80% of pediatricians and dietitians agree that lactose intolerance is a major reason some people avoid milk and milk products
- Lactose intolerance is the number one barrier to health professional recommendations for dairy



The Unintended Consequences

People who avoid milk and milk products due to lactose intolerance miss many benefits

Dairy and its essential nutrients are associated with:

- Improved nutrient intake and diet quality
- Better bone health
- Weight management
- Reduced risk of certain chronic diseases

Source: U.S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans*, 2005. 6th Edition, Washington, DC: U.S. Government Printing Office, January 2005.

Van Loan M. *JACN*, 2009; 28:120S-129S

Miller GD, et al. *Handbook of Dairy Foods and Nutrition*, 2007



Low Dairy Intake Among Ethnic Groups



**Only half of African
Americans eat one or
more servings of dairy a day¹**

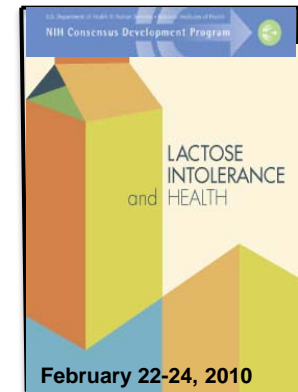
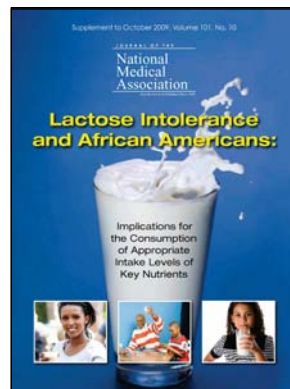
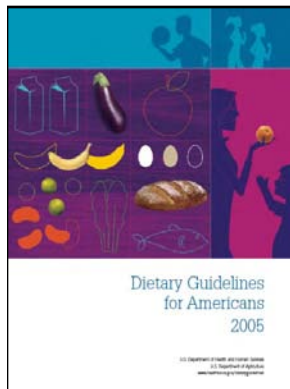


**On average, U.S.-born
Hispanics consume only
1.5 – 1.6 servings of
dairy a day²**

1. Wooten WJ, et al. *J Natl Med Assoc.* 2004; 96:1S-31S
2. Sharma S, et al. *J Am Diet Assoc.* 2004;104:1873-1877



Health & Nutrition Authorities Support Dairy



Who Experiences Lactose Intolerance?





An Adult Condition

- Lactose intolerance is rare in younger children^{1, 2}
- Lactose intolerance typically emerges in late-adolescence or adulthood²

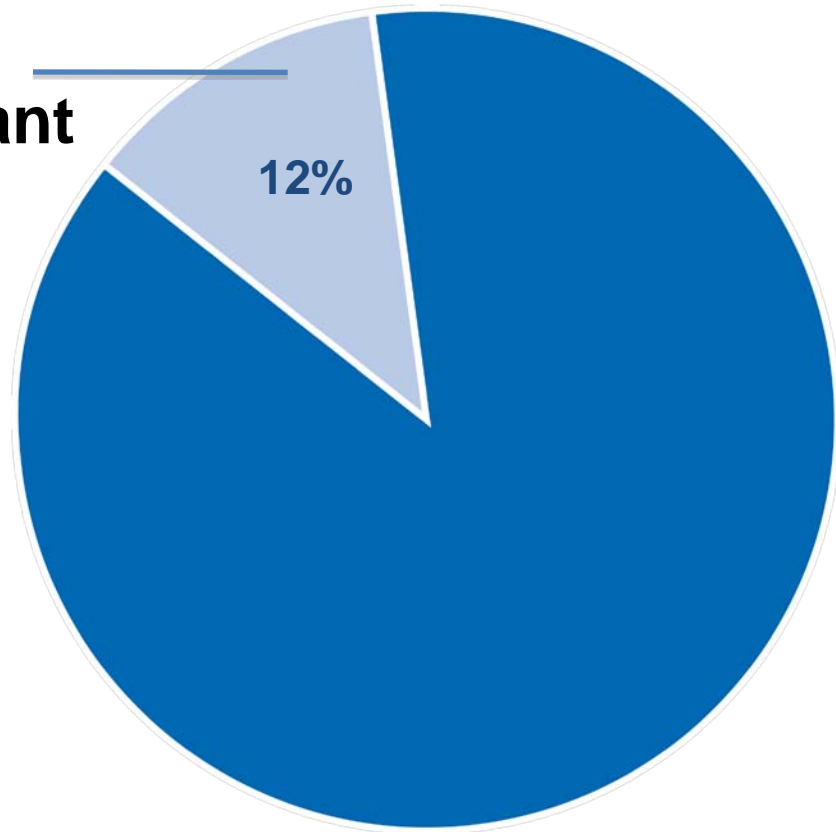
1. Bhatia J et al. *Pediatrics*, 2008; 121:1062-1068
2. Heyman MB. *Pediatrics*, 2006; 118(3):1279-86.



Lactose Intolerance Prevalence

12% of Adults Report Being Lactose Intolerant

Percent of Adults, by Ethnic Group, Who Self-Reported Lactose Intolerance



19.5%	10.05%	7.72%
African Americans	Hispanic Americans	European Americans

Source: Nicklas, TA, et al. *Nut Today*, Sept/Oct 2009.



Why Lactose Intolerance Rates May Have Been Over-Estimated

New Estimates (2009)¹

- Based on self-reports
- Reflect real life consumption

Previous Estimates (1988)²

- Lactose maldigestion breath tests
- Based on unrealistic amounts of lactose
- Findings widely misinterpreted

1. Nicklas, TA, et al. *Nut. Today*, Sept/Oct2009.

2. Scrimshaw NS, et al. *Am J Clin Nutr.* 1988;48: 1083-1140.

What Can Health & Nutrition Professionals Do To Help?





Pinpointing the Problem: Moving Beyond Belly Aches



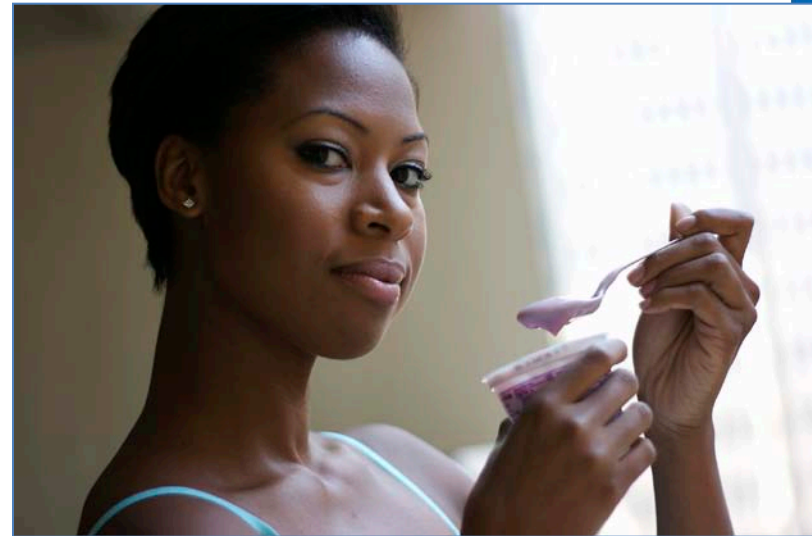
Two-Step Process

1. Verbal or written confirmation
2. Hydrogen Breath Test, Lactose Tolerance Test or Stool Acidity Test



Simple Strategies to Manage Lactose Intolerance

- ✓ **Reduce it** – Opt for lactose-free products
- ✓ **Sip it** – Introduce dairy slowly
- ✓ **Stir it** – Mix milk with food
- ✓ **Slice it** – Choose natural cheeses
- ✓ **Shred it** – Top foods with cheese
- ✓ **Spoon it** – Try yogurt





There's More than One Way to Enjoy Dairy



- Lattes, warm milk, hot chocolate
- Natural cheeses such as Cheddar, Parmesan, Swiss
- Cold beverages such as smoothies/licuados
- Cereal and milk (hot or cold)



Easy Ways to Cook with Dairy

- Traditional foods with milk, natural cheeses and yogurt
- Soups made with milk





Amount of Lactose in Common Dairy Foods

Product	Lactose (g)
Whole, 2%, 1%, Skim Milk (1 cup)	13 g
Lactaid® Milk, low-fat, lactose-free (1 cup)	0 g ^A
Cottage Cheese, low-fat, 2% milkfat (1/2 cup)	3 g
Cheddar Cheese, sharp (1 oz)	<0.1 g
Swiss Cheese (1 oz)	<0.1 g
Mozzarella (1 oz)	<0.1 g
American Cheese, pasteurized, processed (1 oz)	1 g
Yogurt, low-fat (1 cup)	13 g ^B
Ice Cream (1/2 cup)	4 g

Note: these averages are supplied by the USDA. Lactose content varies by product and the lactose content of a specific product would need to be verified by a vendor.

Unless otherwise indicated, data sourced from: USDA / ARS, Nutrient Data Laboratory, Standard Reference, 22, January 2010.

Lactose content varies by product and the lactose content of a specific product would need to be verified by a vendor.

A. http://www.lactaid.com/page.jhtml?id=/lactaid/products/products.inc#1pct_Milk.

B. Many people with lactose intolerance can enjoy yogurt because the cultures that are inherent in yogurt help digest the lactose.



Lactose-Free Products Provide Delicious Options

- Real milk without the lactose
- Same essential nutrients





People Like Lactose-Free Milk

Individuals with lactose intolerance rated their beverage liking as follows:

Liking	Beverage	Varieties Included
#1	Reduced-fat (2%) lactose-free cow's milk	White
#2	Fat-free lactose-free cow's milk	White White, fortified
#3	Soy-based milk-substitute beverage	Plain, organic Vanilla Plain, fortified



Adapting Your Message Can Lead to Success

- Promote small sequential steps to change a lifestyle
- Motivate parental change
- Keep culture and taste preferences top of mind
- Accentuate the positives

Source: Messaging concepts adapted from:
MEE Productions Inc., Philadelphia, PA. *Multi-Cultural Audience Research*. Copyright
National Dairy Council, 2009.



Strategies for Health Professionals to Help Patients Manage Lactose Intolerance

- Get informed
- Ask
- Advise
- Identify those at risk
- Educate



Resources

www.nationaldairycouncil.org

