



NATIONAL DAIRY COUNCIL®

# Lactose Intolerance

Dispelling Myths and Helping  
People Enjoy Milk, Cheese  
& Yogurt



©2010 National Dairy Council®



# 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\\_](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 day<sup>1</sup>**

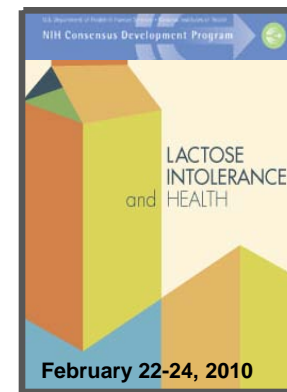
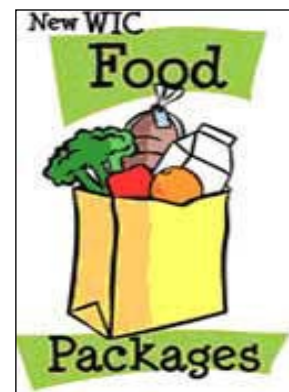
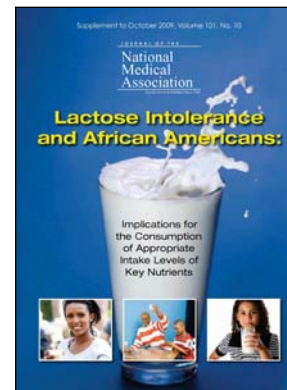
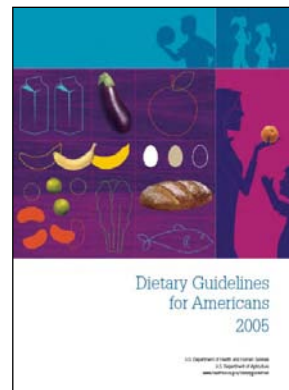


**On average, U.S.-born Hispanics consume only 1.5 – 1.6 servings of dairy a day<sup>2</sup>**

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<sup>1, 2</sup>
- Lactose intolerance typically emerges in late-adolescence or adulthood<sup>2</sup>

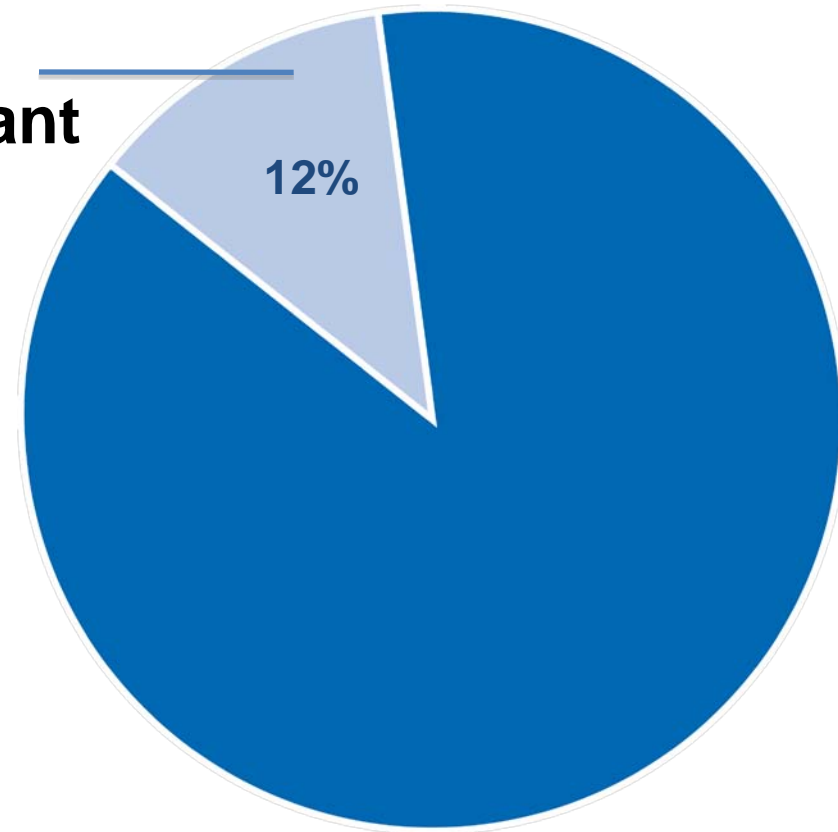
1. Bhatia J et al. *Pediatrics*, 2008; 121:1062-1068  
2. Heyman MB. *Pediatrics*, 2006; 118(3):1279-86.



# Lactose Intolerance Prevalence

**12% of Adults Report Being Lactose Intolerant**

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



**19.5%**  
African  
Americans

**10.05%**  
Hispanic  
Americans

**7.72%**  
European  
Americans



# Why Lactose Intolerance Rates May Have Been Over-Estimated

## **New Estimates (2009)<sup>1</sup>**

- Based on self-reports
- Reflect real life consumption

## **Previous Estimates (1988)<sup>2</sup>**

- 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



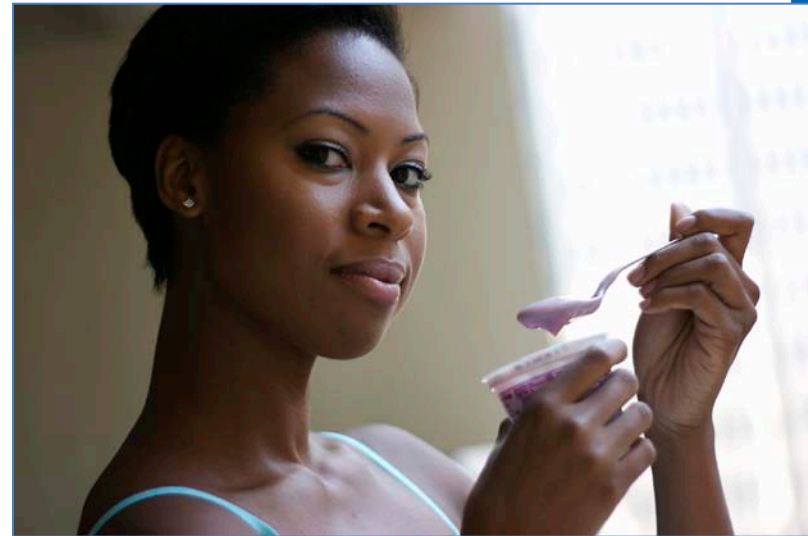
## Two-Step Process

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



# Simple Strategies to Manage Lactose Intolerance

- ✓ **Sip it** – Introduce dairy slowly
- ✓ **Try it** – Opt for lactose-free products
- ✓ **Stir it** – Mix milk with food
- ✓ **Slice it** – Choose natural cheeses
- ✓ **Spoon it** – Try easy-to-digest 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 <sup>A</sup>
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 <sup>B</sup>
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](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



# Strategies for Health Professionals to Help Patients Manage Lactose Intolerance

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

