

NEED MORE INFORMATION ON LACTOSE INTOLERANCE?

LACTOSE MALDIGESTION

What The Experts Say And Scientific Research Shows

Definition

Lactose intolerance does not mean dairy intolerance, and usually does not require a restricted diet.

- “Lactose maldigestion occurs when digestion of lactose is reduced as a result of low activity of the enzyme lactase.... Interpretation of the terms used to describe lactose maldigestion varies. Lactase nonpersistence is the normal age-related decline in lactase activity and is often used to refer to lactose maldigestion. Lactose intolerance refers to gastrointestinal symptoms resulting from consuming too much lactose, the principal carbohydrate in milk and some other dairy foods, relative to the body’s ability to break it down by the intestinal enzyme lactase.” (Inman-Felton AE. Overview of lactose maldigestion (lactase nonpersistence). *Journal of the American Dietetic Association*. 1998; 98:481-9.)
- “... lactose maldigestion does not mean one is allergic to milk, dairy foods or dairy products. A milk allergy is an allergy related to the proteins in milk, not lactose. Lactose maldigestion does not require a lactose-free or severely restricted diet. Dairy products that provide key nutrients such as calcium, vitamins A and D, riboflavin and phosphorus need not be eliminated.” (Inman-Felton AE. Overview of lactose maldigestion (lactase nonpersistence). *Journal of the American Dietetic Association*. 1998; 98:481-9.)

Incidence

The incidence of lactose intolerance may be inflated due to the lack of proper medical diagnosis and confusion about the condition.

- “In the United States, the prevalence of lactose maldigestion has been estimated to be about 25% of the population. The condition occurs in 15% (6% to 19%) of whites, 53% of Mexican Americans, 62% to 100% of Native Americans, 80% of African Americans, and 90% of Asian Americans.” (*Lactose Intolerance*. Washington, DC: National Digestive Diseases Information Clearinghouse; 1994. NIH Publication No. 94-2751.)
- “Population-wide incidence figures for lactose maldigestion were based on studies employing a breath hydrogen test using a challenge dose of 50g of lactose in water. Although effective for diagnosing maldigestion, the test grossly overestimates the likelihood that an individual will experience symptoms of intolerance after consuming a glass of milk (12g of lactose) with a meal.” (Jarvis JK, Miller GD. Overcoming the barrier of lactose intolerance to reduce health disparities. *Journal of the National Medical Association*. 2002;94:55-66.)

- “In all, an estimated 30 to 50 million American adults – about 25% of the population – have low lactase levels. However, the proportion of this group that experiences symptoms of intolerance appears to be far less. In fact, because lactose intolerance is highly individual and influenced by several physiologic and psychologic factors, its true prevalence in a population is unknown.” (McBean LD, Miller GD. Allaying fears and fallacies about lactose intolerance. *Journal of the American Dietetic Association*. 1998; 98:671-676.)
- “Scientific findings indicate that the prevalence of lactose intolerance is grossly overestimated. Other physiologic and psychologic factors can contribute to gastrointestinal symptoms that mimic lactose intolerance.” (McBean LD, Miller GD. Allaying fears and fallacies about lactose intolerance. *Journal of American Dietetic Association*. 1998; 98:671-676.)

Tolerance

Scientific studies show that people who are lactose intolerant or have lactose maldigestion can enjoy 1-2 servings of milk daily with meals without experiencing discomfort.

- “Recent evidence strongly suggests that people with medically confirmed lactase maldigestion can include the recommended number of servings of milk and other dairy foods in their diet without experiencing gastrointestinal discomfort. People with lactose maldigestion who include milk and other lactose-containing dairy foods in their diet may actually improve their tolerance to lactose.” (Inman-Felton AE. Overview of lactose maldigestion (lactase nonpersistence). *Journal of the American Dietetic Association*. 1998; April:481-9.)
- In a double-blind study, Suarez et al. found that persons with lactose maldigestion experienced negligible symptoms when they ingested four servings of dairy daily, including milk, yogurt and cheese. Regarding milk, they consumed a cup of milk with breakfast and another cup with dinner. In addition, they concluded that the “symptoms resulting from lactose maldigestion are not a major impediment to the ingestion of a dairy-rich diet supplying 1500 mg of calcium a day.” (Suarez FL, Adshead J, Furne JK and Levitt MD. Lactose maldigestion is not an impediment to the intake of 1500 mg calcium daily as dairy products. *American Journal of Clinical Nutrition*. 1998;68:1118-22.)
- “Scientific findings also indicate that people with laboratory-confirmed low levels of the enzyme lactase can consume 1 serving of milk with a meal or 2 servings of milk per day in divided doses at breakfast and dinner without experiencing symptoms. Several dietary strategies are available to help lactose maldigesters include milk and other dairy foods in their diet without experiencing symptoms.” (McBean LD, Miller GD. Allaying fears and fallacies about lactose intolerance. *Journal of American Dietetic Association*. 1998; 98:671-676.)

- “Johnson et al reported that when 45 lactase-deficient African Americans were fed either a lactose-containing milk or lactose-hydrolyzed milk under double-blind conditions, one third of the subjects experienced some minor intolerance to both types of milk. The subjects’ symptoms were not due to the lactose content of milk, but perhaps to social and cultural attitudes that influenced their ability to tolerate milk.” (McBean LD, Miller GD. Allaying fears and fallacies about lactose intolerance. *Journal of the American Dietetic Association*. 1998; 98:671-676. *citing* Johnson AO, Semanya JG, Buchowski MS, Enwonwu CO, Scrimshaw NS. Correlation of lactose maldigestion, lactose intolerance and milk intolerance. *American Journal of Clinical Nutrition*. 1993;57:339-401.)
- “For adolescent girls who have an especially critical need for calcium, this study demonstrates that lactose intolerance is not a limiting factor in consumption of adequate calcium. Dietetic practitioners can advise lactose-intolerant clients to include dairy foods with meals at levels that result in sufficient calcium to meet the Recommended Dietary Intakes. Recommendations may include up to 1 cup of milk, yogurt and cheese with a meal. Such recommendations do not result in symptoms of intolerance.” (Pribila BA, Hertzler SR, Martin BR, Weaver CM, Savaiano DA. Improved lactose digestion and intolerance among African-American adolescent girls fed a dairy-rich diet. *Journal of the American Dietetic Association*. 2000;100:524-528.)

Dangers of Misdiagnosis

Many Americans say they are lactose intolerant based on self-diagnosis, and they may be putting themselves at long-term health risk by unnecessarily avoiding dairy.

- “Self-diagnosis of lactose maldigestion and/or lactose intolerance is not recommended because it could lead to unnecessary dietary restrictions and expense, possible nutritional shortcomings, and, more importantly, failure to detect or treat another more serious gastrointestinal problem. Several tests are available to diagnose low lactase levels, directly or indirectly.” (McBean LD, Miller GD. Allaying fears and fallacies about lactose intolerance. *Journal of American Dietetic Association*. 1998; 98:671-676.)
- “... the extensive publicity concerning the ill effects of lactose intolerance has resulted in a widespread belief that lactose malabsorption induces severe problems. In reality, it appears that symptoms due to underlying irritable bowel syndrome have been misattributed to lactose intolerance, and a major educational campaign will be required to reverse this misperception.” (Suarez FL, Adshead J, Furne JK and Levitt MD. Lactose maldigestion is not an impediment to the intake of 1500 mg calcium daily as dairy products. *American Journal of Clinical Nutrition*. 1998;68:1118-22.)
- “The avoidance of dairy products for any reason virtually guarantees inadequate dietary intake of calcium.” (Suarez FL, Adshead J, Furne JK and Levitt MD. Lactose maldigestion is not an impediment to the intake of 1500 mg calcium daily as dairy products. *American Journal of Clinical Nutrition*. 1998;68:1118-22.)

- “The major nutritional consequence of lactose avoidance is an insufficient intake of calcium.” (Suarez FL, Savaiano D, Arbisi P and Levitt MD. Tolerance to the daily ingestion of two cups of milk by individuals claiming lactose intolerance. *American Journal of Clinical Nutrition*. 1997;64:1502-6.)
- “When dairy products are eliminated, calcium intake is compromised.” (Inman-Felton AE. Overview of lactose maldigestion (lactase nonpersistence). *Journal of the American Dietetic Association*. 1998; 98:481-9.)

Problems of Dairy Avoidance

Those who avoid dairy have lower calcium intakes and may be putting themselves at increased risk for osteoporosis and other chronic diseases.

- “In this study, we have shown that among lactose maldigesting African-American women after adjusting for age and weight, lactose intolerant women have lower calcium intakes than those who are lactose tolerant. Lactose maldigesting intolerant women also had a higher Body Mass Index (BMI) than lactose tolerant women.” (Buchowski MS, Semenya J, Johnson AO. Dietary calcium intake in lactose maldigesting intolerant and tolerant African-American women. *Journal of the American College of Nutrition*. 2002;21:47-54.)
- “One obstacle that likely interferes with calcium consumption among many ethnic groups is lactose maldigestion. The real or perceived occurrence of intolerance symptoms after dairy food consumption may cause maldigesters to avoid dairy products. Low calcium intakes, a greater than previously thought potential for low bone density and extensive lactose maldigestion among Hispanic-American and Asian-American populations may create an elevated risk for osteoporosis.” (Jackson KA, Savaiano, DA. Lactose maldigestion, calcium intake and osteoporosis in African-, Asian-, and Hispanic-Americans. *Journal of the American College of Nutrition*. 2001;20:198S-207S.)
- “Health practitioners play a key role in helping their clients with lactose intolerance understand the importance of calcium and other dairy food nutrients in the diet and the serious consequences of calcium deficiency diseases. A large body of evidence suggests that the intake of calcium and other dairy-related nutrients helps reduce the risk of several chronic diseases, such as hypertension and stroke, colon cancer and osteoporosis.” (Jarvis JK, Miller GD. Overcoming the barrier of lactose intolerance to reduce health disparities. *Journal of the National Medical Association*. 2002;94:55-66.)

The Importance of Calcium Intake

Proper calcium intake is important for bone health and avoiding osteoporosis. The U.S. government is concerned that people aren't getting enough calcium.

- Dairy products provide approximately 72% of the calcium available in the U.S. food supply. (Gerrior S, Bente L *Nutrient Content of the U.S. Food Supply, 1909-94*. Washington, D.C.: U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, 2000. Home Economics Research Report No. 54.)

- “Because of the increased importance of calcium and its relationship to various diseases (eg, osteoporosis, hypertension and certain types of cancer), maintaining calcium intake of 1,000 to 1,300 mg/day is a primary goal.” (Inman-Felton AE. Overview of lactose maldigestion (lactase nonpersistence). *Journal of the American Dietetic Association*. 1998; 98:481-9.)
- “Inadequate calcium intake, particularly throughout childhood and early adulthood, is thought to increase the risk of postmenopausal osteoporosis.” (Suarez FL, Savaiano D, Arbisi P and Levitt MD. Tolerance to the daily ingestion of two cups of milk by individuals claiming lactose intolerance. *American Journal of Clinical Nutrition*. 1997;64:1502-6.)
- Much evidence indicates that the development of osteoporosis is, in part, related to inadequate calcium intakes and that high calcium intake may slow the loss of bone mass observed in postmenopausal women. (Tolstoli CG, Levin RM. Osteoporosis – the treatment controversy. *Nutrition Today* 1992; July/August:6-29.)
- Milk is one of the best dietary sources of calcium. (*Healthy People 2010*. U.S. Department of Health and Human Services, Public Health Service, January 2000.)
- The government has identified low calcium intake as one of the priority nutritional problems in the U.S. Reversing this downward spiral is one of the public health objectives identified in *Healthy People 2010* – the federal road map for improving the health of Americans. (*Healthy People 2010*. U.S. Department of Health and Human Services, Public Health Service, January 2000.)