Experts Address Dairy Intake, Nutrient Adequacy, and Lactose Intolerance

Intake of dairy foods (milk, yogurt, cheese) and some dairy food nutrients, particularly calcium, is well below recommended levels. Among possible contributing factors are lack of health professionals’ awareness of the health benefits of calcium and dairy foods, and concern about lactose intolerance. Lactose intolerance is the presence of gastrointestinal symptoms resulting from insufficient levels of lactase, the enzyme needed to break down lactose, the natural sugar in milk. Two recent reviews aim to help health professionals understand the benefits of consuming adequate intakes of calcium and dairy foods, and that lactose intolerance doesn’t have to mean dairy avoidance.

Experts encourage individuals with lactose intolerance to employ strategies to keep dairy foods in their diet, which can help improve nutrient adequacy and reduce risk of some chronic diseases.

Both reviews reaffirm that adequate calcium/dairy intake is associated with overall dietary adequacy. “Low dairy diets are almost always inadequate not only in calcium, but in multiple other nutrients as well,” states Robert Heaney, MD of Creighton University in Omaha, NE. Adequate intake of calcium and dairy foods (the major dietary source of calcium) helps to build and maintain bones, thereby reducing the risk of osteoporosis, and may play a beneficial role in blood pressure, insulin sensitivity, cardiovascular disease, and other components of the metabolic syndrome.

In its updated Consensus Statement, the National Medical Association (NMA) reviewed the association between dairy food intake, better diet quality, and reduced risk of chronic diseases, with special relevance to African Americans and Hispanic Americans. Recognizing the low calcium/dairy intake of these population groups and that perceived or real lactose intolerance can be a primary reason for limiting or avoiding dairy foods, the NMA encourages health professionals to recommend dairy foods even for those with lactose intolerance.

The experts identify strategies to help lactose intolerant individuals comfortably keep dairy foods in their diet. These strategies include:

- Consume a small amount of milk or dairy foods daily and gradually increase over several days or weeks to reach tolerance.
- Eat dairy with meals to help slow digestion and allow the body more time to digest lactose.
- Try natural, hard cheeses such as Cheddar, Colby, Monterey Jack, and Swiss, which contain little or no lactose.
- Consume yogurt with “live and active cultures.”
- Try lactose-free milk, which is real milk with the same nutrients found in milk but without the lactose.
- Take over-the-counter lactase enzyme tablets with dairy to help digest dairy’s lactose.


**Review Examines Vitamin D’s Health Benefits and More**

A comprehensive scientific review of the health benefits of vitamin D and challenges to achieve optimal vitamin D status led Boston University researchers to conclude that “there is potentially a great upside to increasing vitamin D status of children and adults worldwide” to improve bone health and reduce the risk of a wide range of chronic diseases.

**Vitamin D-fortified milk is the leading food source of vitamin D for U.S. children and adults, according to data from the National Health and Nutrition Examination Survey 2003-2006.**

The following are some highlights of this review:

- **Numerous factors contribute to low vitamin D status including inadequate sun exposure (e.g., confinement to the indoors, extensive use of cover-up clothing, winter season, use of sunscreens), physiological factors (e.g., dark skin pigmentation, obesity, aging), low vitamin D intake, and use of certain medications.**

- **Measuring blood levels of 25-hydroxyvitamin D is the generally accepted method to determine vitamin D status. However, the specific level designating a deficiency is debated, as is the assay method.**

- **Vitamin D may not only improve bone health, but also may reduce the risk of type 1 diabetes, cardiovascular disease, certain cancers, cognitive decline, depression, adverse pregnancy outcomes, autoimmunity, and frailty, according to numerous studies.**

- **Emerging evidence suggests that vitamin D deficiency during pregnancy may affect fetal “imprinting” and gene regulation, potentially influencing risk of chronic diseases throughout life.**

- **To prevent vitamin D deficiency, a combination of sensible sun exposure, intake of foods that contain vitamin D, and a vitamin D supplement is recommended. Only a few foods such a wild-caught salmon and UV-exposed mushrooms naturally contain vitamin D. However, consumption of vitamin D-fortified foods such as milk, some yogurts, and some cheeses helps to meet vitamin D needs.**

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**American adults are choosing healthier foods, according to a new government report.**

Daily caloric intake decreased by 78 calories between 2005 and 2010. Improvements in overall diet quality were evidenced by the decline in calories from total fat (by 3.3%), saturated fat (by 5.9%), and intake of cholesterol (by 7.9%). In addition, fiber intake increased by 1.2 g per day (by 7.5%). Eating at home more often was associated with more frequent family meals, particularly home-cooked meals.

*Reduced consumption of foods away from home (e.g., at restaurants, fast food establishments) contributed to the decline in caloric intake and improvements in diet quality. Changing attitudes toward food and nutrition were also suggested to contribute to improvements in diet quality. Between 2007-08 and 2009-10, increases were reported in the percentage of working-age adults who believed that body weight was within their control; used nutrition information, including the Nutrition Facts Panel and package health claims always or most of the time when shopping for food; and showed increased concern for nutrition during grocery shopping. Also, more working-age adults were likely to rate their own diet quality as excellent, very good, or good, as compared with fair or poor, in 2009-10 than in 2007-08.*

The USDA credited these changes in part to efforts taken in recent years to improve families’ access to healthy food choices across income categories and strategies to empower them to improve their food choices and diet quality. Examples of these efforts include USDA’s MyPlate symbol and resources at ChooseMyPlate, USDA’s SuperTracker (the free online meal and physical activity planning tool), improved nutrition standards in schools via implementation of the Healthy Hunger-Free Kids Act of 2010, and reformulation efforts by major food and beverage companies to improve consumers’ diets.

A recent study published in the *American Journal of Clinical Nutrition* reports that the declining calorie intake consistent with the leveling off of obesity rates between 2003 and 2011 may be explained by improvements in Americans’ dietary and health behaviors resulting from efforts by both the public and private sectors to decrease obesity rates.

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**Good News Emerging About Americans’ Diets**

American adults are choosing healthier foods and consuming healthier diets, according to a recent study by the U.S. Department of Agriculture (USDA)’s Economic Research Service. Researchers examined dietary intake data from 2005 to 2010 for a nationally representative sample of 9,839 working-age adults who participated in the National Health and Nutrition Examination Survey (NHANES).

*Emerging evidence suggests that vitamin D deficiencies are a common, under-diagnosed condition worldwide. Pregnant women, children, older adults, institutionalized persons, and non-Western immigrants are groups at high risk of vitamin D deficiency.*

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**Examples of these efforts include USDA’s MyPlate symbol and resources at ChooseMyPlate, USDA’s SuperTracker (the free online meal and physical activity planning tool), improved nutrition standards in schools via implementation of the Healthy Hunger-Free Kids Act of 2010, and reformulation efforts by major food and beverage companies to improve consumers’ diets.**

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**References:**


American Academy of Pediatrics Recommends Only Pasteurized Milk

In a new policy statement, the American Academy of Pediatrics (AAP) recommends consuming only pasteurized dairy products, as opposed to raw (unpasteurized) milk and milk products. The AAP statement reaffirms recommendations issued by virtually all national and international advisory and regulatory committees related to food safety to consume only pasteurized milk and milk products. The risks of bacterial infections from virulent pathogens including E. coli and Salmonella resulting from consuming raw milk and milk products can have serious health consequences, particularly for pregnant women, infants, and young children.

At least 97% of milk and milk products consumed in the U.S. today is pasteurized to kill disease-causing bacteria in raw milk. Pasteurization of milk involves heating raw milk to at least 161 degrees Fahrenheit for more than 15 seconds followed by rapid cooling. Although the U.S. Food and Drug Administration prohibits shipping raw milk or milk products for human consumption across state lines, a number of individual states allow raw milk and milk products to be sold within their state.

**There is overwhelming evidence that pasteurization of milk is an effective public health measure and that consumption of raw (unpasteurized) milk can have serious health consequences.**

Despite claims made by proponents of raw (unpasteurized) milk that pasteurization destroys or neutralizes essential nutrients in milk, and that raw milk is associated with health benefits such as protection against lactose intolerance and asthma, there is no solid scientific evidence to support these claims. Pasteurized milk/milk products is just as nutritious as unpasteurized (raw) milk, and claims of health benefits of raw milk are based largely on testimonials or anecdotes. Importantly, between 1998 and 2011, 148 disease outbreaks were linked to raw milk/milk products consumption resulting in 2,384 illnesses, 284 hospitalizations, and 2 deaths, according to the U.S. Centers for Disease Control.

A recent scientific review by Belgium researchers concludes that “it is clearly demonstrated that the consumption of raw milk poses a realistic and unnecessary health threat because of its possible contamination with pathogenic bacteria.” Further, pasteurization “remains the most frequently used and most effective method to increase the microbiological safety of milk without substantially changing the nutritional value of milk or other benefits associated with raw milk consumption.”


Another Reason Why Breakfast is the Most Important Meal of the Day

Consuming breakfast is associated with a number of health benefits, supporting its title as “the most important meal of the day.” Suggested benefits include contributing to nutritional intake and better overall diet quality, alleviating hunger or food insufficiency, helping to achieve a healthy body weight, and improving cognition and academic performance (see Nutrition Reports 2013, No. 1). Added to these reported advantages is the recent finding that teens with healthy breakfast habits are at lower risk of metabolic syndrome in adulthood than those with poor breakfast habits (i.e., skipping breakfast or only drinking or eating something sweet).

**Study finds that teens’ poor breakfast habits independently predict increased risk of metabolic syndrome in adulthood.**

Swedish researchers collected data on teens’ breakfast habits at age 16. Then 27 years later, 889 of the study participants were examined for the presence of metabolic syndrome and its components. After taking into account socioeconomic status and other lifestyle factors, the teens who skipped breakfast or ate a poor breakfast had a significantly higher incidence of metabolic syndrome at age 43 than those who ate more substantial breakfasts at age 16.

Metabolic syndrome is a cluster of metabolic abnormalities (e.g., abdominal obesity, high blood triglyceride levels, low levels of protective high density lipoprotein cholesterol, high blood pressure, and high fasting blood glucose levels) that increases risk of cardiovascular disease and type 2 diabetes. In adulthood, abdominal obesity and high blood glucose levels were the components most closely linked with teens’ poor breakfast habits. The researchers call for further study to understand the relationship between breakfast habits early in life and adult metabolic syndrome.


Health Benefits of Potassium Reviewed

Increasing potassium intake lowers blood pressure in adults and is associated with reduced risk of stroke, according to recent reviews of the science. In addition, increased intake of potassium may lower the risk of kidney stones and have a beneficial effect on bone health. Although few studies have been carried out in children, a review in the British Medical Journal states that “available evidence suggests that increased potassium intake might reduce blood pressure, and consuming more potassium through foods high in potassium would probably be beneficial for most children.”

Potassium is a shortfall nutrient, meaning that it is consumed in low enough amounts to be of public health concern, according to the 2010 Dietary Guidelines for Americans. The average dietary potassium intake for the U.S. population aged two years and older is 2,640 mg/day, which is lower than the Institute of Medicine (IOM)’s dietary recommendation of 4,700 mg potassium/day for persons aged 14 years and above. Fruits and vegetables, especially potatoes, are excellent sources of potassium per serving.

Most individuals would benefit from increasing intake of foods containing potassium. Milk is the top source of potassium for Americans when consumption patterns are considered.

However, milk is the number one food source of potassium when consumption patterns are considered. The Dietary Approaches to Stop Hypertension (DASH) dietary pattern, which is high in fruits, vegetables, and fat-free or low-fat dairy products and effective at reducing blood pressure, is a food-based approach to increasing potassium intake.