2015, No. 1

Nutrition Reports

A Newsletter of the United Dairy Industry of Michigan

Inside this Issue

The United Dairy Industry of Michigan is the umbrella organization for the Dairy Council of Michigan and the American Dairy Association of Michigan. On behalf of funding members, these non-profit organizations provide science-based nutrition information to, and in collaboration with, a variety of stakeholders committed to fostering a healthier society, including health professionals, educators, school nutrition directors, academia, industry, consumers and media.

New Studies Support Breakfast's Health Benefits

Breakfast is described as the "most important meal of the day." Yet, many people frequently skip this morning meal, missing out on its nutritional, health, and academic benefits. The following new studies support breakfast's positive impact on health.

According to a study published in the *Journal of the Academy of Nutrition and Dietetics*, consuming breakfast, in particular breakfast meals that include nutrient-dense foods such as grains, cereals, low-fat milk, and whole fruit/100% fruit juice, has a positive effect on adults' nutrient intake, diet quality, and weight loss and maintenance compared to skipping this meal.

Using data from nearly 19,000 adults who participated in the National Health and Nutrition Examination Survey 2001-2008, the researchers compared the nutrient intake, diet quality, and weight/adiposity of adults assigned to 11 different breakfast patterns compared to skipping breakfast entirely. Nearly 20% of the adults skipped breakfast.

Another study published in *Nutrition Journal* shows that compared to skipping breakfast, eating a breakfast rich in protein may reduce cravings for sweet, highly palatable foods, which may help curb obesity. Sixteen overweight/obese late-adolescent girls who typically skipped breakfast consumed a normal protein (13 grams) or a high protein (35 grams) breakfast, or no breakfast for six consecutive days. Although both breakfast meals staved off cravings for sweet and savory foods, the high protein breakfast led to a greater reduction in post-meal food cravings.

Recent findings from a national dietary survey of more than 4,400 Australian children aged 2 to 16 years suggest that consuming a dairy food at breakfast is a simple strategy to increase children's total daily intake of dairy foods. Children who consumed a dairy food (milk, cheese, or yogurt) at the "first daily occasion of eating" had a higher total intake of dairy foods throughout the day than those who did not consume dairy at breakfast. The researchers suggest that children who do not consume a dairy food or its nutritional equivalent at breakfast are unlikely to meet the daily recommended intake for dairy. The findings of this study are important considering Australian children's lower than recommended intake of dairy foods. ■

O'Neil, C.E., et al. Nutrient intake, diet quality, and weight/adiposity parameters in breakfast patterns compared with no breakfast in adults: National Health and Nutrition Examination Survey 2001-2008. J. Acad. Nutr. Diet. 114: 27S-43S, 2014.

Hoertel, H.A., et al. A randomized crossover, pilot study examining the effects of a normal protein vs. high protein breakfast on food cravings and reward signals in overweight/obese "breakfast skipping," late-adolescent girls. Nutr. J. 13: 80-87, 2014.

Riley, M.D., et al. Dairy food at the first occasion of eating is important for total dairy food intake for Australian children. Nutrients 6: 3878-3894, 2014.

The School Breakfast Program

The federal government's School Breakfast Program (SBP) enables all school children in the United States to receive a nutritious breakfast every school day. Research demonstrates the well-established nutrition, health, and education benefits of this program.

On a typical school day, 13.2 million children participate in the program, 85% of whom receive free or reduced price breakfasts. In Michigan, more than 385,000 children participate in the SBP. Eighty-six percent of these students receive breakfasts free or at a reduced price.

To learn more about the SBP, visit the following websites:

- U.S. Department of Agriculture
  Fns.usda.gov/sbp/school-breakfast-program-sbp
- Food Research and Action Center
  Frac.org/federal-foodnutrition-programs/school-breakfast-program
- United Dairy Industry of Michigan
  MilkMeansMore.org/schools/school-meals/school-breakfast

Study Rejects Claim that Raw Milk Is Better for Lactose Intolerance

Myths regarding lactose intolerance abound. For example, some raw milk advocates argue that raw (unpasteurized) milk, despite it well-known health risks, is better for people with lactose intolerance than pasteurized milk. However, a new randomized controlled trial involving 16 adults with lactose malabsorption or intolerance found this alleged benefit of raw milk to be untrue. Based on their findings, the Stanford University School of Medicine researchers concluded that their "results do not support widespread anecdotal claims that raw milk reduces the symptoms of lactose intolerance."

Numerous government agencies and health professional organizations agree that drinking raw milk is unsafe because of the risk of foodborne illnesses. A new study by the U.S. Centers for Disease Control reports that the average number of foodborne illnesses due to drinking raw milk more than quadrupled between 1993-2006 to 2007-2012.

Research reveals that there are a variety of dairy options such as lactose-free pasteurized milk and cottage cheese, natural cheeses such as Swiss and Cheddar, and yogurt with active cultures, as well as strategies such as consuming smaller amounts of pasteurized milk at a time, especially with food, that are well tolerated by lactose intolerant individuals. Visit www.milkmeansmore.org/nutrition/dairy-nutrition/lactose-intolerance for the latest science and resources to combat misperceptions regarding lactose intolerance; lactose-friendly recipes; and effective management strategies for persons with lactose intolerance to comfortably consume dairy foods. ■

Mummab, S., et al. Effect of raw milk on lactose intolerance: a randomized controlled pilot study. Ann. Fam. Med. 12: 134-141, 2014.

U.S. Food and Drug Administration. The dangers of raw milk: Unpasteurized milk can pose a serious health risk. Food Facts. June 19, 2014. www.fda.gov/Food/ResourcesForYou/Consumers/ucm079516.htm.

Mungal, E.A., et al. Increased outbreaks associated with nonpasteurized milk, United States, 2007-2012. Emerging Infectious Diseases 21: 119-122, 2015.

Dairy's Benefits for Children and Teens Reviewed

Milk and dairy products are an important source of nutrients for children and adolescents in developed countries worldwide, and consumption of dairy foods is associated with several health benefits, according to a review of 78 scientific publications.

The researchers found that intake of milk and other dairy products contributes essential nutrients such as calcium, phosphorus, magnesium, zinc, potassium, and vitamins A, D, B_{12}, and B_2 (riboflavin) to children's and adolescents' diets, as well as energy, high-quality protein, and essential fatty acids. Also, consumption of milk and milk products is important for children's and adolescents' growth, development, and bone health, and may be beneficial for weight management, dental health, and blood pressure.

Despite these benefits, data indicates that children's and adolescents' consumption of dairy foods in many developed countries fails to meet intake recommendations and consumption of dairy foods, especially milk, declines with age. In addition to age, several other factors such as parental influence, gender, availability of other beverages, and dietary patterns influence dairy food consumption. In general, males consume more dairy foods than females; children mimic their parents in dairy intake; increased consumption of sweetened beverages is associated with decreased milk consumption; and children and adolescents who consume breakfast have higher intakes of milk and calcium. ■

Dror, D.K. and L.H. Allen. Dairy product intake in children and adolescents in developed countries: trends, nutritional contribution, and a review of association with health outcomes. Nutr. Rev. 72: 68-81, 2014.

Pediatricians Recommend Total Diet Approach to Children's Nutrition

The American Academy of Pediatrics (AAP) has issued a new policy statement recommending that schools and families consider children's whole diet, rather than simply focusing on eliminating nutrients such as added sugars in specific foods.

Children's diets are a national concern because of the high prevalence of childhood obesity in the U.S. In an effort to curb childhood obesity and improve the quality of children's diets, substantial improvements have been made over the past decade in school meals, as well as in the nutritional quality of foods sold in school vending machines. However, there remains an opportunity to improve the nutritional quality of food brought to school by students, parents, and staff, such as food in packed lunches and for snacks, bake sales, fundraisers, and holiday parties.

The AAP cautions that a focus on cutting out foods simply on the basis of reducing added sugars could result in whole categories of foods, including nutrient-rich foods, being eliminated from children's diets. A minimum amount of sugar added to nutrient-rich foods could encourage children to consume these foods by increasing their palatability; whereas, prohibiting all foods containing added sugar could compromise children's overall nutrition and increase food waste. The AAP points to flavored milk as a good example "of the balance reached to limit added sugars and yet promote nutrient-rich foods." "Sugars consumed in nutrient-poor foods and beverages [sugary soft drinks, candy] are the primary problem to be addressed, not simply the sugars themselves," notes the AAP.

To improve children's nutrition and health, the American Academy of Pediatrics recommends a whole diet approach that can include a minimum amount of added sugars to make nutrient-rich foods more palatable.

To improve the nutritional quality of food brought to school from home or elsewhere, which is usually lower in nutrition and higher in calories than that provided by schools, the AAP recommends:

- Choosing a mix of foods from the five food groups: vegetables, fruits, whole grains, low-fat dairy, and quality protein sources such as lean meats, fish, nuts, seeds, and eggs.
- Providing a variety of food experiences.
- Avoiding highly processed foods.
- Using minimum amounts of added sugars with nutrient-rich foods to increase their palatability, enjoyment, and consumption.
- Offering appropriate sized portions. ■

American Academy of Pediatrics, Council on School Health, Committee on Nutrition. Snacks, sweetened beverages,added sugars, and schools. Pediatrics 135 (3): 575-583, 2015.

Removing Chocolate Milk from School Meals Reduces Students' Milk Consumption, Finds Canadian Study

Studies in the United States have shown that when schools eliminate chocolate milk, children's intake of milk and milk's nutrients is reduced (see *Nutrition Reports* 2013, Vol. 3). In the first such study in a Canadian population, researchers investigated the effects of removing chocolate milk from schools on children's milk intake, and factors influencing children's decision to drink or not drink milk. In all, 1,205 school children in grades 1 to 8 from six elementary schools in Saskatoon, Canada participated in the 12-week study.

Key findings follow:

- When chocolate milk was removed from schools, total milk consumption decreased by 12.3%, and the number of students choosing milk dropped by 41%. Conversely, more children chose to drink milk when chocolate milk was available and more chose to drink chocolate milk than unflavored milk when both were available.
- Taste, cost, convenience, and variety influenced children's decision to drink milk. Children consistently mentioned taste as an important factor influencing their decision to drink milk. Although both rural and urban students chose chocolate milk more often than white milk, rural students drank more milk overall than urban students. Students receiving free milk drank more milk (plain and chocolate) in schools than those who purchased milk.
- Nutrient modeling showed that chocolate milk is more cost-efficient and convenient than alternative food/drink combinations to replace nutrients such as calcium and vitamin D that would be reduced if chocolate milk was removed from schools. ■

Henry, C., et al. Impact of the removal of chocolate milk from school milk programs for children in Saskatoon, Canada. Appl. Physiol. Nutr. Metab. 40: 1-6, 2015.

NutritionReports®

Dairy Council of Michigan
United Dairy Industry of Michigan
2163 Jolly Road, Okemos, MI 48864-3961
www.MilkMeansMore.org

Author/Editor: Lois D. McBean, MS, RDN
Design: Jessica Kerbawy

Non-Profit Org.
U.S. Postage
PAID
Lansing, MI
Permit #238

Higher Protein Diets Linked to Cardiometabolic Health, Study Reports

Consuming diets higher in protein than the current Recommended Dietary Allowance (RDA) of 0.8 g/kg body weight/day is associated with cardiometabolic health, according to a new study that examined habitual protein intake patterns and health in nearly 24,000 free-living American adults. Cardiometabolic health is a measure of risk of type 2 diabetes and heart disease and is determined by body weight, blood glucose, cholesterol levels, and blood pressure.

Using data from the National Health and Nutrition Examination Survey 2001-2010, the researchers found that Americans typically consume diets higher in protein than the RDA, and men generally consume more protein than either women or older adults. Habitually consuming higher protein diets was associated with lower body mass index (BMI) and waist circumference and higher blood levels of high-density lipoprotein (HDL) cholesterol (the so-called "good" cholesterol). These cardiometabolic advantages of higher protein diets were greater for overweight than normal weight individuals, and were largely independent of intake of total calories, carbohydrate, and fat.

Based on their findings, the researchers suggest that "consuming protein well above the RDA (1.0-1.5 g/kg BW [body weight]) is safe and may be considered a valid nutritional strategy to improve cardiometabolic health."

Dairy foods such as milk, flavored milk, cheese, cottage cheese, yogurt, and Greek-style yogurt are good sources of high-quality protein. To learn more about how dairy foods can help meet protein needs and protein's health benefits, visit www.MilkMeansMore.org/nutrition/dairy-nutrition/protein. ■

Pasiakos, S.M., et al. Higher-protein diets are associated with higher HDL cholesterol and lower BMI and waist circumference in US adults. J. Nutr. 145: 605-614, 2015.

Nutrition Reports is Going Digital!

This is your last **mailed** copy of Nutrition Reports.

Nutrition Reports is moving into the digital age and will be sent electronically to you via email. To continue receiving this newsletter, please visit **www.MilkMeansMore.org/nutrition-reports** to submit your email address.