

# The Communicator

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*A new director will be introduced soon and the Family Economics position is pending.  
Thank you for your patience.—Debra*

## Norovirus Outbreak in Girl's Soccer Team: Likely Vehicle Was Grocery Bag or Snacks

The highly contagious nature of norovirus is highlighted in a brief report in the June 2012 issue of the *Journal of Infectious Diseases (JID)*.

Epidemiologists from Oregon Public Health explain how in October 2010, a group of Oregon soccer players, 13 and 14 years old, and some adult chaperones, came down with norovirus during a tournament in Washington state. One of the soccer players, who apparently was infected but not symptomatic prior to the trip, became nauseated and developed abdominal pain late on Saturday evening. At that time, she left her room and moved in with one of the chaperones. Shortly after midnight, she began vomiting and suffering bouts of diarrhea in the chaperone's hotel bathroom. The girl, who had no contact with her teammates after she developed symptoms, was driven home in the morning (by the chaperone, who also later became ill). But a reusable grocery bag filled with snacks—packaged cookies, chips, and grapes—had been in the bathroom. The rest of the group ate that food during a Sunday lunch, and five other members of the team were ill by Tuesday after they had returned to Oregon.

In investigating the outbreak, the epidemiologists found no connections to any other norovirus illnesses at the team's hotel, the tournament, or the restaurants where they had eaten. It wasn't until they learned about the bag in the bathroom that they were able to identify the source of infection for the team members: swabs of the grocery bag were positive for norovirus (unfortunately, no leftover food was available for analysis).

Although the first sick girl said she did not touch the grocery bag, it is known that aerosolization of vomit and feces are major sources of infection in norovirus outbreaks. The epidemiologists suggest that virus aerosolized within the hotel bathroom settled upon the bag and its contents, and that it was touching the bag and its contents by other group members that led to the outbreak. (The fact that the bag was a reusable one is only significant because the bag was later available for testing; any bag could have been a cross contamination vehicle).

## Food Safety

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In an accompanying editorial in the *JID*, a scientist at the Centers for Disease Control and Prevention notes that noroviruses are "perhaps the perfect human pathogens" because they are "highly contagious, rapidly and prolifically spread, constantly evolving, evoke limited immunity, and are only moderately virulent, allowing most of those infected to fully recover, thereby maintaining a large pool of susceptible hosts." Noroviruses are the leading cause of gastroenteritis in the U.S., responsible for more than 21 million illnesses, 70,000 hospitalizations, and 800 deaths annually. People get norovirus illness throughout the year, but cases generally peak between December and February.

This report helps raise awareness of the complex and indirect way that norovirus can spread. In general, virus particles are more robust than bacterial cells and can linger on surfaces and retain infectivity for long periods. Surfaces exposed directly or via aerosolization to vomit or feces require thorough, adequate disinfection and care on the part of the person who is doing the clean-up to avoid oral exposure to contaminated surfaces.

Source: Repp, K.K. & Keene, W.E. 2012. "A point-source norovirus outbreak caused by exposure to fomites," *J. Infectious Diseases* 205:1639; Hall, A.J. 2012. "Noroviruses: the perfect human pathogen?" *JID* 205:1622; Rothchild, M. 2012. "The case of the contaminated, reusable grocery bag: How Oregon epidemiologists solved a norovirus mystery," *FoodSafetyNews.com*, May 10,

[http://www.foodsafetynews.com/2012/05/the-case-of-the-contaminated-reusable-grocery-bag/?utm\\_source=newsletter&utm\\_medium=email&utm\\_campaign=120510](http://www.foodsafetynews.com/2012/05/the-case-of-the-contaminated-reusable-grocery-bag/?utm_source=newsletter&utm_medium=email&utm_campaign=120510).

Keywords: food safety, virus.

## Consumer Practice When Cooking Hamburgers: More Education Needed

Researchers at the University of California-Davis recently published a study of consumer practices while preparing hamburgers and salads at home.

Adult consumers (199) from six northern California counties were recruited to participate via newspaper ads, community bulletin boards, internet, and local television. Half of the participants were in families with children under 12 years old and 9 percent were adults 60 years of age or older—groups at the higher risk of contracting foodborne illnesses.

The ingredients for burgers and salads (frozen burger patties, buns, whole head lettuce, celery, and tomatoes) were delivered to the participating consumers' homes two days before the scheduled food preparation session. At the scheduled session, consumers were asked to prepare a salad and hamburger following their normal food preparation methods. One or two video cameras were positioned in consumers' kitchen to record all the food preparation; the researchers observed the preparations in real time via laptops in a separate room, if possible, to reduce the effect of observational bias. Consumers were asked to tell the researcher when the hamburger was done cooking, so the researcher could measure endpoint temperature. After food preparation was complete, the consumer answered a 23-question survey about food preparation practices and food safety knowledge. The researchers reviewed the video recordings and scored the food safety behaviors. The research was conducted in 2008 and 2009.

Even though the participants knew they were being videotaped, many committed food safety errors. Some of the findings are summarized below:

Regarding hand washing:

- Only 43 percent of participants washed their hands before beginning meal preparation.

- There were 650 hand washing events during the videotaped food preparation; these averaged 8 seconds in duration, with the greatest number lasting only 2 seconds. Only 7 percent of hand washings lasted 20 seconds or more.
- One-third of participants did not wash their hands directly after handling ground beef.

Regarding potential cross-contamination events:

- Potential cross-contamination events averaged 43 events per household during food preparation.
- 93 percent of potential cross-contamination involved the food preparer's hands, and most involved touching produce after touching raw meat.
- Two-thirds of food preparers potentially contaminated a faucet handle during food preparation, then touched the faucet handle again after washing.

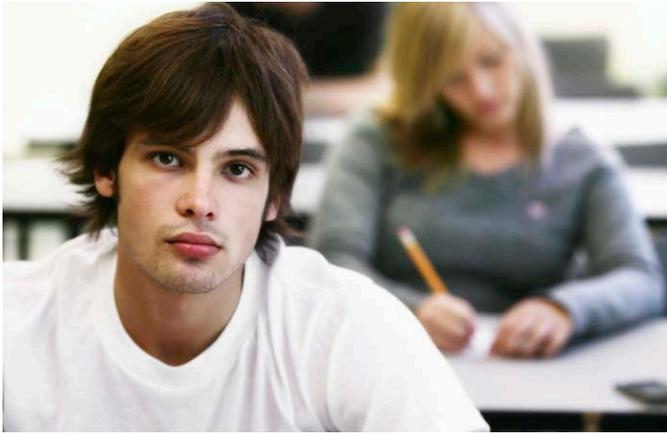
Regarding burger preparation:

- 23 percent of participants said they preferred their burgers to have pink interiors.
- 53 percent said they own a meat thermometer, but 76 percent said they would not use a thermometer for burgers.
- Visual appearance was the most commonly reported method for determining doneness of burgers.
- The final temperature of 70 percent of participant's ground beef patties was 160°F or higher.
- 65 percent said they did not know the recommended temperature for cooking hamburger and of the 35 percent who thought they knew, only one-third were correct.

Participants were asked what improvements they would suggest for the cooking instructions on packages of ground beef patties, 22 percent specifically wanted thermometer advice printed on raw ground beef package labels. Nineteen percent said the safe handling instructions should be printed in a larger text size and 12 percent suggested that pictures or diagrams would clarify directions.

Source: Phang, H.S. & Bruhn, C.M. 2011. "Burger preparation: What consumers say and do in the home." *J. Food Protection* 74:1708-1716.

Keywords: consumer, food preparation, food safety.



## Among Disadvantaged, College Reduces Odds for Marriage

For those with few social advantages, college is a prime pathway to financial stability, but it also unexpectedly lowers their odds of ever marrying, according to an analysis by Cornell University sociologist Kelly Musick in the *Journal of Marriage and Family*.

The findings suggest that social and cultural factors, not just income, are central to marriage decisions. Men and women from the least advantaged backgrounds who attend college appear to be caught between social worlds—reluctant to "marry down" to partners with less education and unable to "marry up" to those from more privileged upbringings. Lower marriage chances appear to stem from men's and women's mismatched social origins and educational attainment—a phenomenon Musick and co-authors refer to as "marriage market mismatch."

"College students are becoming more diverse in their social backgrounds, but they nonetheless remain a socio-economically select group—particularly at elite universities like Cornell," said Musick. "It may be difficult for students from less privileged backgrounds to navigate social relationships on campus, and these difficulties may affect what students ultimately gain from the college experience."

Musick hoped the findings could raise awareness of potential social barriers faced by first-generation



# Family Development



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college students, which could be keeping them from participating fully in the academic and social opportunities colleges have to offer.

For the study, Musick and sociologists at the University of California-Los Angeles (UCLA) estimated the propensity of men's and women's college attendance based on family income, parental education and other indicators of social background and early academic achievement, based on a sample of about 3,200 Americans from the 1979 National Longitudinal Survey of Youth, followed from adolescence into adulthood.

They found that college attendance negatively affected marriage chances for the least advantaged individuals—lessening men's and women's odds by 38 percent and 22 percent, respectively. By comparison, among those in the highest social stratum, men who attend college increase their marrying chances by 31 percent and women by 8 percent.

Musick said that past studies have shown "college is the great equalizer" in the labor market, dampening social class differences. But the same can't be said for the marriage market.

"This research demonstrates the importance of differentiating between social background and educational achievement," she said. "Educational achievement may go far in reducing income differences between men and women from different so-

cial backgrounds, but social and cultural distinctions may persist in social and family relationships."

Source: Cornell University, [www.cornell.edu](http://www.cornell.edu).

Keywords: marriage, higher education, income.



## Rising Poverty Rates Take a Toll on Two Generations

The younger the parent and the younger the child, the more likely a family is to be poor, according to a recent *Child Trends* report, *Two Generations in Poverty: Status and Trends among Parents and Children in the United States*. As policy makers ponder the merits of alternative measures of poverty, the *Child Trends* report outlines the disproportionate effects of poverty on young children, young parents, and children and parents in single-mother families.

Among the report's highlights:

- The younger the parent, the more likely a family is to be poor. In 2010, 21.9 percent of 18-24 year olds lived below the federal poverty level compared to 12.2 percent of those 25-64 and 9 percent of those over 64.
- The younger the child, the more likely a family is to be poor. Twenty five point 9 percent of children under 5 years of age lived in poverty in 2010 compared to 20.5 percent for those 5-17 years old.

- Overall poverty rates mask much higher rates for some sub-groups, such as single-mother families, whose poverty rate was 40.7 percent in 2010, compared to 8.8 percent for married-couple families.

A large body of research shows a consistent link between poverty and negative outcomes for adults, including parents, and for children. For parents, the negative effect of poverty extends beyond material hardships and basic needs, and is associated with increased mental health problems and difficulties in parenting. Among children, the effects of poverty are potentially even more pervasive and lasting. Children experiencing early, deep, or persistent poverty are especially likely to experience long-term, deleterious effects on their development and life circumstances, such as increased economic hardships as adults.

"Poverty can have a toxic effect on children and parents," *Child Trends'* President, Carol Emig, said. "This report illustrates that poverty is particularly prevalent for children and adults at vulnerable periods in their lives—in the critical early years of childhood, when development is occurring at a rapid pace and in the often challenging transition to adulthood, when young women and men are starting families and trying to establish independent households."

"With single parents, especially women, and their children experiencing unprecedented rates of poverty, the country is at risk of losing the next generation," *Ascend* Executive Director, Anne Mosle, said. "Given the impact of poverty on young families in particular, this report underscores the need for solutions that address opportunities for parents and their children together, particularly in the area of education. To ensure the next generation is on the path to success, their parents must also be on a path toward economic security."

Source: [www.childtrends.org](http://www.childtrends.org).

Keywords: poverty, young adult, children at risk.



## Fast Food Consumption Increases Health Risks in Asia and Southeast Asia Populations

Several studies conducted in the U.S. have found a link between fast food consumption and an increase in health risks. Researchers at the University of Minnesota (UM) wanted to determine if the introduction of western-style fast food restaurants (Wendy's, McDonald's, Burger King), in the 1980s and 1990s, affected Asian and Southeast Asian populations' health.

Lead UM researcher Dr. Odegaard and colleagues collaborated with the National University of Singapore to determine if western-style fast food consumption was linked to development of type 2 diabetes and coronary heart disease. They analyzed medical records and in-person interviews that covered diet and lifestyle habits of 63,257 Chinese Singapore residents, aged 45-74 who participated in the Singapore Chinese Health Study from 1993-1998. From 1999-2004, they conducted a follow-up telephone interview with 52,322 subjects.

Their results show the risk of developing coronary heart disease (CHD) and type 2 diabetes increased based on how many times a week they consumed fast foods. Subjects had a 20 percent increased risk of developing CHD if they ate fast food once a week; this increased to 50 percent if they ate fast food 2-3 times a week, and increased to 80 percent if they ate fast food 4 or more times a week. They also found that eating fast food 2-3 times a week increased their risk of developing type 2 diabetes by 27 percent.



## Nutrition Education

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Lead researcher Odegaard stated, "The consumption of western-style fast food is really growing in Asia and Southeast Asia. For the major fast food chains, this is their primary engine of growth. What we found was a dramatic public health impact by fast food, a product that is primarily a Western import into a completely new market."

Source: July 2012, *Circulation*. Odegaard et al., Western-Style Fast Food Intake and Cardio-Metabolic Risk in an Eastern Country.

Keywords: fast food, diabetes, heart disease.



## How Can Speed Eaters Eat So Much, So Fast?

The first hot dog eating contest occurred in 1916 during a 4<sup>th</sup> of July celebration on Coney Island. In 2012, at the Nathan's Famous Fourth of July International Hot Dog Eating Contest, 28 year-old Joey Chestnut won the men's competition by eating 68

hot dogs and buns and 45 year-old Sonya Thomas won the women's competition by eating 45 hot dogs and buns. Their calorie intake for eating this many hot dogs in 10 minutes was 20,000 for Chestnut and 13,500 for Thomas.

How can speed eaters' stomachs accommodate such large quantities of food in a short time period? Researchers at the University of Pennsylvania were able to answer these questions by conducting gastric scans of a competitive speed eater and a regular eater stomach under various conditions.

When eating or drinking large quantities of food, they found that the speed eater's stomach expanded much more than the regular eater's stomach. Many speed eaters train their stomach to expand by consuming large quantities of water. In addition, speed eaters train themselves to overcome the usual negative feelings of fullness and satiety that stop most people from consuming such large quantities.

One of the problems the speed eater mentioned was that due to this type of training, he never felt full or sated. In order to prevent gaining weight, he had to carefully measure all of the food and beverages he consumed and exert tremendous will power.

The long-term effects of competitive speed eating are unknown. Speed eaters have the potential to become chronic binge eaters and become obese. Also, there is a possibility that their stomachs could remain chronically large and not shrink to its normal size. If this happens, they may experience continuous nausea or vomiting and require surgery to partially or totally remove their stomach.

Researchers suggest that the International Federation of Competitive Eating (IFOCE), an organization that organizes and promotes world-wide speed eating events, follow-up with their athletes to monitor any long-term effects they may be experiencing.

Source: September 2007, *American Journal of Roentgenology* <http://www.ajronline.org/content/189/3/681.full.pdf+html>.

Keyword: eating.



## Exercise Is Important After Liposuction

There are two types of fat in the body, subcutaneous and visceral. Subcutaneous fat is located under the skin and you can pinch it with your fingers. Visceral fat is located around and within internal organs and is linked to development of heart disease, high blood pressure, diabetes, and stroke.

Liposuction is a cosmetic surgical procedure that suctions out subcutaneous fat cells. Brazilian researchers found that patients who undergo abdominal liposuction need to exercise to prevent accumulation of abdominal visceral fat after their surgery.

In this study, Fabiana Benatti and colleagues, at the University of Sao Paulo, monitored 36 Brazilian women between the ages of 20-35, all of whom underwent abdominal liposuction during 2010-2011. Two months after this surgery, half of the subjects walked or jogged for 40 minutes and did light strength training experiences three times a week for four months. The rest of the subjects remained sedentary.

At the end of the study period, subjects in the sedentary group had a 10 percent increase in visceral fat while the exercise group had no increase in visceral fat. Benatti was unsure why liposuction increased synthesis of visceral fat.

Exercise plays an important role in preventing fat that was lost during surgery being redistributed and potentially making individuals less healthy than before the operation.

Source: July 2012, *American Journal of Clinical Nutrition*.

Keyword: fat.