

**Study:** Sporadic *Campylobacter* Infection in Infants: A Population-Based Surveillance Case-Control Study in Eight FoodNet Sites

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Infants have a higher risk of acquiring foodborne illness than older children or adults. However, findings from a recent study conducted by the Center for Disease Control and Prevention's Emerging Infection Program: Foodborne Diseases Active Surveillance Network (FoodNet) describe several ways to reduce your infant's risk of contracting the most common bacterial foodborne illness in the United States.

*Campylobacter* infection is the most common bacterial cause of diarrhea in the U.S., with an estimated 2 million illnesses each year. Infants less than one year of age have the highest rate of infection. Symptoms include diarrhea, sometimes bloody, abdominal pain or cramping, fever and occasionally nausea and vomiting, with illness typically lasting 7 days. *Campylobacter* infection has been linked to the consumption of unpasteurized (raw) milk and poultry, untreated water, contact with pets, especially those with diarrhea, and exposure to farms or farm animals. However, because of their limited diets and stage of development, the sources of infection among infants may differ from those of older age groups.

FoodNet conducted a study of sporadic (non-outbreak) laboratory-confirmed *Campylobacter* cases occurring in children under the age of one year to investigate the potential sources of infection in infants residing in Connecticut, Minnesota, Oregon, and selected counties in California, Colorado, Georgia, New York and Tennessee. The study area covered a population of approximately 35.2 million persons (12.1% of the U.S. population), including approximately 450,000 infants.

The study involved 123 infants infected with *Campylobacter* and 928 healthy infants. Parents or guardians were interviewed by telephone about various environmental and dietary exposures the infant may have had in the five days before illness.

When compared to healthy infants of the same age, infants 0-6 months old with *Campylobacter* infection were *less* likely to have been breastfed, and *more* likely to have drunk well water or to have ridden in a shopping cart next to meat or poultry in the five-days before illness or interview. For infants 7-11 months old, infants with *Campylobacter* infection were *more* likely to have visited or lived on a farm, to have contact with a pet with diarrhea in the home, and to have eaten fruits and vegetables prepared in the home. *Campylobacter* infection was associated with travel outside the U.S. in infants of all ages, though international travel was uncommon, suggesting that most infections in infants in the U.S. are acquired domestically.

Infants can become infected with *Campylobacter* through a variety of ways, suggesting several important prevention messages. First, breastfeeding was protective against illness for the youngest infants, and should continue to be encouraged. Also, the connection between infection and riding in a shopping cart next to meat or poultry and eating fruits and vegetables prepared in the home suggests that cross-contamination may be occurring. Finally, the risk of infection with visiting or living on a farm and having pets in the home with diarrhea suggest that environmental contact is likely an important source of infection. Infections caused by cross-contamination or environmental exposures could be reduced with increased hand washing and health education.