



## Campylobacter enteritis: It could happen to you!

**C**ampylobacter enteritis is a common form of acute gastroenteritis in North America.<sup>1</sup> A recently reported outbreak in Oklahoma demonstrated many of the clinical and epidemiologic characteristics of this disease.<sup>2</sup> Physicians should be familiar with the illness and should confirm the diagnosis by culture when possible.

In the Oklahoma outbreak, a large number of people became ill after eating lunch at a local restaurant. On the basis of the case definition, 14 people were confirmed as having *Campylobacter* enteritis. The symptoms were typical: all of those affected had diarrhea, 93% had a fever, 79% experienced nausea, 36% were vomiting and 21% had bloody stool. Two people had to be admitted to hospital.

Infection with *Campylobacter* is a common cause of Guillain-Barré syndrome, and about 40% of people with this acute, demyelinating disease have an immediate prior history of such infection.<sup>3</sup> However, none of the people affected in the Oklahoma outbreak had evidence of neuromuscular paralysis.

*Campylobacter* bacteria are efficiently spread through contaminated drinking water and unpasteurized milk. However, so-called sporadic cases, such as those reported from Oklahoma, are usually associated with the preparation of contaminated food. For example, about 90% of broiler chicken carcasses are contaminated with *Campylobacter*,<sup>4</sup> and the infective dose is low (about 500 organisms, or the number contained in a single drop of raw chicken juice). Thus, improper cooking of poultry and other meats, as well as improper preparation of other foods, can lead to human infection.

In the Oklahoma outbreak, the kitchen staff admitted to cutting up poultry on the same countertop subsequently used to prepare salads and other foods. Interviews with the restaurant patrons revealed that infection with *Campylobacter* was strongly associated with eating lettuce (odds ratio 48.3). Eating poultry was not associated with illness, because the meat had been cooked at the proper temperature.

*Campylobacter* can be killed by cooking poultry and other meats to an internal temperature of 82°C (180°F). This is the temperature at which the meat is no longer pink and the juice runs clear. Poultry and other meats must be prepared separately from other foods, both in restaurants and at home. Countertops, utensils, towels and aprons used in the preparation of poultry and other meats should be washed with hot water and soap before

they are used for other foods, particularly foods that will not be cooked. Handwashing is also essential.


Patients presenting with diarrhea and fever may well have *Campylobacter* enteritis. The diagnosis can be suspected on the basis of symptoms and is easily confirmed by stool culture. Suspected cases, particularly when associated with other cases among family members or acquaintances, should be promptly reported to the local health department.

Physicians should also remember that patients presenting with demyelinating disease of acute onset may have concurrent *Campylobacter* enteritis. — JH

### References

1. Tauxe RV. Epidemiology of *Campylobacter jejuni* infections in the United States and other industrial nations. In: Nachamkin I, Blasser MJ, Tompkins L, editors. *Campylobacter jejuni: current status and future trends*. Washington: American Society of Microbiology; 1992. p. 9-19.
2. Outbreak of *Campylobacter* enteritis associated with cross-contamination of food — Oklahoma, 1996. *MMWR* 1998;47(7):129-31.
3. Allos BM. Association between *Campylobacter* infection and Guillain-Barré syndrome. *J Infect Dis* 1997;176:S125-8.
4. Food Safety and Inspection Service. *Nationwide broiler chicken microbiologic baseline data collection program, 1994-1995*. Washington: US Department of Agriculture; 1996.


The



# Consult Cochrane Library

This electronic library provides evidence in 4 databases for informed decision-making:


- The Cochrane Database of Systematic Reviews
- The York Database of Abstracts of Reviews of Effectiveness
- The Cochrane Controlled Trials Register
- The Cochrane Review Methodology Database



\$214.95/CMA members, \$270.95/nonmembers. All orders must be prepaid. Please add 7% GST, 15% HST (as applicable) and \$3 shipping/handling. Network prices available. Choose CD-ROM for Windows or 3 1/2-inch disk for Windows

CMA Member Service Centre  
tel 888 855-2555 or 613 731-8610 x2307

ASSOCIATION  
MÉDICALE  
CANADIENNE



CANADIAN  
MEDICAL  
ASSOCIATION