

Campylobacteriosis

Summary

Campylobacter infection causes acute gastroenteritis. Most infections are acquired by ingestion of undercooked chicken or pork or unpasteurized milk, from handling raw poultry, or from direct contact with fecal material of infected pets or farm animals. Laboratory diagnosis is made by stool culture. Antimicrobial treatment will shorten the duration of illness and reduce shedding of the organism, although most patients recover without treatment. Symptomatic cases should be excluded from food handling, and from direct care of infants, elderly, immunocompromised, and hospitalized or institutionalized patients. Disease can be prevented by proper food preparation, thoroughly cleaning surfaces in contact with raw poultry, and by using good hand hygiene practices (i.e., proper handwashing after using the toilet, changing diapers, and before and after handling food).

Agent

- Most cases of *Campylobacter* in humans are caused by *Campylobacter jejuni*. Other species that can cause diarrheal illness in humans include *Campylobacter coli*, *Campylobacter fetus*, and *Campylobacter lari*.

Transmission

- Reservoir: *Campylobacter* has been found in wild or domestic animals, primarily in poultry and cattle; puppies, kittens, swine, sheep, rodents and birds may also harbor *Campylobacter*.
- Mode of transmission: Infection is acquired through ingestion of *Campylobacter* bacteria in undercooked chicken or pork, contaminated food or water, unpasteurized milk; handling raw poultry; or from direct contact with fecal material of infected pets, farm animals, or infected persons (although person-to-person transmission of *C. jejuni* is uncommon). Chronic infection of poultry and other animals represents the primary source of infection.
- Period of communicability: In humans, the period of communicability is throughout the course of infection, and can range from several days to several weeks. Individuals not treated with antibiotics may excrete the organism for as long as 2-7 weeks.

Clinical Disease

- Incubation period: Usually 2-5 days, with a range of 1 to 10 days.
- Illness: The gastrointestinal illness is characterized by an acute onset of diarrhea, abdominal pain and cramping, nausea, vomiting, and fever. The abdominal pain can mimic appendicitis. Most patients recover in less than 1 week, even in the absence of antibiotic treatment; however, 20% may have prolonged illness or a relapse. Stool often demonstrates gross or occult blood and the presence of white

blood cells. Other less common syndromes associated with *Campylobacter* infection include Guillain-Barré syndrome, reactive arthritis, or Reiter's syndrome.

Laboratory Diagnosis

- The diagnosis of *Campylobacter* gastroenteritis is established via a stool culture. Stool samples should be submitted in enteric pathogen transport media.

Treatment

- Most patients with *Campylobacter* gastroenteritis will recover without treatment. However, antimicrobial therapy given early in the infection can eradicate the organism from the stool within 2 to 3 days, shorten the duration of illness, and prevent relapse. Antibiotics should be used in patients with high fever, grossly bloody stools, prolonged illness (>1 week), or immunocompromised states. Common antibiotics used include erythromycin, azithromycin, or a fluoroquinolone; the recommended duration of treatment is 5-7 days. Treatment decisions should be made in conjunction with the patient's health care provider.

Surveillance

- **Case Definition:**
 - *Laboratory criteria* – Isolation of *Campylobacter* from a clinical specimen.
 - *Confirmed* – A case that is laboratory confirmed.
 - *Probable* – A clinically compatible case that is epidemiologically linked to a confirmed case.
- **Reporting: Report all suspected or confirmed cases of *Campylobacter* to the Epidemiology and Response Division (ERD) at 505-827-0006.** Information needed includes: patient's name, age, sex, race, ethnicity, home address, home phone number, occupation and health care provider.
- **Case Investigation:** Use the Foodborne Surveillance Investigation Form to complete your Investigation. Information should also be entered into NM-EDSS per established procedures.

Control Measures

For a summary of work and daycare exclusion criteria for all enteric pathogens see Appendix 1.

1. Case management

1.1. Isolation:

- 1.1.a Exclude symptomatic persons from food handling, and from direct care of infants, elderly, immunocompromised, and hospitalized or institutionalized patients. Antimicrobial treatment should be considered for these persons. These persons may be allowed to resume their usual duties when:

- Diarrhea has resolved, and
 - Proper hygiene measures can be maintained (as assessed by a food sanitarian, trained environmentalist, or infection control practitioner).
- 1.1.b Exclusion of asymptomatic infected persons from food handling, and from direct care of infants, elderly, immunocompromised, and hospitalized or institutionalized patients may be indicated if their food handling or personal hygiene habits (as assessed by a food sanitarian, trained environmentalist, or infection control practitioner) are inadequate to prevent transmission of enteric infection to patrons or patients. They need not be excluded from work if proper hygiene measures are maintained.
- 1.1.c For hospitalized patients, contact precautions should be used.
- 1.2. Prophylaxis: Not applicable.
2. Contact management
- 2.1. Isolation: None required.
- 2.2. Prophylaxis: Not applicable.
3. Prevention
- 3.1. Emphasize good hand hygiene practices (i.e., proper handwashing after using the toilet, changing diapers, and before and after handling food, especially raw poultry). Thoroughly clean cutting boards and surfaces that have been in contact with raw poultry.
- 3.2. General guidelines for preventing foodborne illness include:
- Thoroughly cook raw food from animal sources;
 - Wash raw vegetables;
 - Avoid unpasteurized dairy products;
 - Wash hands, knives, and cutting boards after handling uncooked foods.
- 3.3. Immunization: Not applicable.

Management of *Campylobacter* in Child Care Centers

1. Outbreaks of *Campylobacter* infection in child care centers are uncommon.
2. Management of isolated cases
 - 2.1. When a case of *Campylobacter* occurs among a child care center attendee, that child should be excluded until s/he is asymptomatic and the stools are formed. Asymptomatic children may return to child care without follow-up stool cultures.
 - 2.2. Per child care licensing regulations, a center should notify parents or guardians in writing of a case of *Campylobacter* in the facility (Subsection D of 8.16.2.20 NMAC). See Appendix 8 for a template of a notification letter.
 - 2.3. When a case of *Campylobacter* occurs among a child care center staff member, that person should be excluded from their work duties until they are asymptomatic as defined above.
 - 2.4. A case of *Campylobacter* in a child care facility should prompt the search for other cases among children and staff members of the facility, as well as household members or other close contacts of the index case. Stool cultures should be obtained on other symptomatic persons.

2.5. The child care center should review its infection control protocols with staff, and emphasize the following:

- Standard precautions should be followed. Strict hand washing routines for staff and children, and routines for handling fecally contaminated materials should be assured.
- Frequently mouthed objects should be cleaned and sanitized daily. Items should be washed with dishwashing detergent and water, then rinsed in freshly prepared (daily) household bleach solution (dilute 1 cup bleach in 9 cups of water).
- Food-handling and diaper changing areas should be physically separated and cleaned daily.
- Diaper changing surfaces should be nonporous and cleaned with a freshly prepared (daily) household bleach solution (dilute 1 cup bleach in 9 cups of water). Cleaning of diaper changing surfaces after each use is required; diapers should be disposed of properly. If available, nonporous gloves should be worn when changing diapers.
- Animals with diarrhea in a child care center should be isolated from children and taken to a veterinarian for diagnosis and treatment.

References

American Academy of Pediatrics. Pickering LK, ed. 2006 Red Book: Report of the Committee on Infectious Diseases. 27th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006.

Heymann, DL, ed. Control of Communicable Diseases Manual. 18th edition. Washington, DC: American Public Health Association; 2004.

For a summary of the clinical characteristics of common enteric pathogens, see Appendix 1.

CAMPYLOBACTER INFECTIONS

What is campylobacter?

When your doctor says that you have campylobacteriosis, the doctor means that you have an intestinal or stomach infection with bacteria called *Campylobacter*.

What are the symptoms of campylobacter infection?

Campylobacteriosis causes mild or severe diarrhea, often with traces of blood in the stool (feces). Sometimes persons develop fever. Symptoms usually appear 2 to 5 days after the exposure.

How is campylobacter spread?

Campylobacter is usually spread by eating or drinking contaminated or “dirtied” food or water and, once in a while, by contact with infected animals. This is because animals such as pigs, cattle, dogs, cats, and birds (particularly poultry such as chicken and turkey) may carry the bacteria in their intestines. These sources may contaminate meat products (especially poultry), water supplies, milk and other foods.

How long are people contagious?

Generally, infected people will continue to pass the germ in their stool for a few days to a week or more. Certain antibiotics may shorten this carrier phase.

Who gets campylobacter?

Anyone can get campylobacter infection.

What treatment is available for people with campylobacter?

Most campylobacter infections will go away without treatment. However, there are some instances where your health care provider may recommend treatment with antibiotics to make you feel better sooner and shorten the time *Campylobacter* are present in your stool. Persons with diarrhea should drink plenty of fluids.

Do infected people need to be kept home from school, work or daycare?

Since the bacteria are passed in stool, people with diarrhea should be excluded from day care, patient care, and foodhandling. Most infected people may return to work or school when their diarrhea stops, provided that they carefully wash their hands after using the toilet and before preparing food.

How can I protect myself and my family from getting campylobacter?

You can decrease your chance of coming in contact with *Campylobacter* with the following practices:

- Always treat raw poultry, beef and pork as if they are contaminated.
- Wash hands frequently with water and soap, and especially after using the toilet, changing a diaper or before preparing and/or eating food.(Sanitizing gel may be substituted when hands are not visibly soiled.)
- Avoid food or water from sources that may be contaminated.
- Wrap fresh meats in plastic bags at the market to prevent blood from dripping on other foods.
- Refrigerate foods promptly; minimize time kept at room temperature.

- Immediately wash cutting boards and counters used for preparation to prevent cross contamination with other foods.
- Ensure that the correct internal cooking temperature is reached particularly when using a microwave for cooking.



Epidemiology and Response Division
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INFECCIONES DE CAMPILOBACTER

¿Qué es el campylobacter?

Si su doctor le dice que tiene “campilobacteriosis”, lo que quiere decir es que usted tiene una infección en su estómago o intestinos causada por bacterias del tipo *Campylobacter*.

¿Cuáles son los síntomas de una infección por campylobacter?

La campilobacteriosis causa diarrea leve o grave, a menudo con presencia de sangre en las heces. A veces se puede desarrollar fiebre. Los síntomas normalmente aparecen entre 2 y 5 días después de haber estado expuesto.

¿Cómo se transmite el campylobacter?

Se suele transmitir al tomar agua o comer alimentos contaminados y, a veces, puede transmitirse por contacto con animales infectados. Esto ocurre porque los animales como los puercos, las vacas, los perros, los gatos y las aves (en particular pollos y pavos) pueden tener la bacteria en sus intestinos y contaminar la carne que comemos (sobre todo el pollo), el agua, la leche y otros alimentos.

¿Por cuánto tiempo puede alguien con campilobacteriosis contagiar a otros?

Generalmente, el germen se encontrará presente en las heces de las personas infectadas por unos días, o hasta una semana o más. Algunos antibióticos pueden reducir el tiempo que dura esta fase.

¿Quién puede contraer campilobacteriosis?

Cualquier persona puede contraer una infección por campylobacter.

¿Cómo se trata la campilobacteriosis?

La mayoría de las infecciones por campylobacter desaparecen sin usar ningún tratamiento. Sin embargo, hay algunos casos en los que su médico le puede recomendar tratamiento con antibióticos para hacerle sentir mejor y reducir el tiempo durante el cual el campylobacter está presente en sus heces. Las personas que tienen diarrea deben tomar muchos líquidos.

¿Es necesario quedarse en casa y no ir a la escuela, a la guardería o al trabajo?

La bacteria está presente en las heces, por eso las personas con diarrea no deben ir a la guardería y si trabajan con pacientes o manipulando alimentos, deben quedarse en casa. La mayor parte de las personas infectadas pueden regresar a la escuela o al trabajo cuando ya no tengan diarrea, pero se tienen que lavar las manos con cuidado después de ir al baño y antes de preparar cualquier comida.

¿Cómo puedo protegerme yo y también proteger a mi familia contra la campilobacteriosis?

Para reducir sus posibilidades de entrar en contacto con el campylobacter, haga lo siguiente:

- Siempre trate la carne de pollo, res y puerco con precaución, como si estuviera contaminada

- Lávese las manos con frecuencia con agua y jabón, sobre todo después de usar el baño, cambiar pañales y antes de preparar o comer alimentos. (En lugar de lavárselas puede usar un gel desinfectante para manos cuando no se vean sucias).
- Evite agua o comida que puedan provenir de fuentes contaminadas.
- Ponga la carne cruda dentro de bolsas de plástico cuando la compre en el mercado para que la sangre de ésta no se mezcle con otros alimentos.
- Ponga los alimentos en el refrigerador rápido, deben estar a temperatura ambiente el mínimo tiempo posible.
- Lave inmediatamente los tableros para cortar y mostradores que usó para preparar estos alimentos, de esta forma evita que otros alimentos se puedan contaminar también.
- Asegúrese de que la carne se cocina con la temperatura interna correcta, sobre todo si usa un horno microondas para cocinarla.