



CAMPYLOBACTERIOSIS

1. **Agent:** *Campylobacter* is a Gram-negative spiral-shaped rod. Several species are pathogenic in man. Of these, the two most common causes of gastroenteritis are *C. jejuni* and *C. coli*. *C. fetus* causes septicemia in immunocompromised persons.

2. **Identification:**

a. **Symptoms:** Watery or bloody diarrhea, abdominal pain, malaise, myalgia, nausea, and fever characterize *Campylobacter* enteritis. May also cause bacteremia, meningitis, septic arthritis, endocarditis, salpingitis and cholecystitis. Guillain-Barré syndrome is an uncommon consequence of *C. jejuni* infection. Post-infectious arthritis sometimes is associated with recent campylobacteriosis.

Transplacental spread from systemic maternal infection has resulted in abortion, stillbirth, and early neonatal meningitis.

b. **Differential Diagnosis:** Other enteric pathogens; illness can mimic acute appendicitis.

Diagnosis: Isolation of organisms by culture from stool, blood, or other body fluids and tissues, identification of the organism through PCR (Polymerase chain reaction) testing, also known as CIDT (Culture-independent diagnostic test) is also an acceptable form of diagnosis. CIDTs do not need to be “culture confirmed” however it is strongly recommended.

3. **Incubation:** 1-10 days; usually 2-5 days. Not less than 24 hours.

4. **Reservoir:** Many animal hosts, including poultry, swine, cattle, sheep, puppies, kittens, rodents, and birds.

5. **Source:** Feces of infected animals or persons; contaminated poultry, unpasteurized milk, meat, water or food products.

Transmission: Ingestion if the organisms in undercooked meats particularly chicken, and

pork, contaminated food and water, or raw milk; from contact with infected pets (especially puppies and kittens), farm animals or infected infants. People and food may be contaminated from contact with raw poultry fluids, especially from cross contamination of common cutting boards or kitchen utensils. Contamination of milk most frequently occurs from fecal-carrier cattle.

6. **Communicability:** Variable, as long as organisms are excreted (usually 2-7 weeks). Person-to-person transmission appears to be uncommon with *C. jejuni*.

7. **Specific Treatment:** Primarily supportive. May consider erythromycin, tetracyclines, or quinolones for gastroenteritis; aminoglycosides for systemic infection. Treatment to eradicate shedding for persons in sensitive occupations or situations may be considered.

8. **Immunity:** Immune mechanisms are not well understood, but lasting immunity to serologically-related strains follows infection.

REPORTING PROCEDURES

1. Report within 1 working day of identification of case or suspected case (Title 17, Section 2500, *California Code of Regulations*).

2. If a prepared commercial food item is the **LIKELY** source of this infection, a **FOODBORNE INCIDENT REPORT (FBIR)** should be filed. For likelihood determination and filing procedures, see Part 1, Section 7 – Reporting of a Case or Cluster of Cases Associated with a Commercial Food: Filing of Foodborne Incident Reports.

3. Epidemiologic Data:

a. Specific food history and place of purchase (e.g., unpasteurized milk, poultry product, raw beef, liver, or seafood). This should include high-risk foods cooked at home.

b. Attendance at group gatherings where food was served and visit to restaurant or



- commercial food establishments within the incubation period.
- c. Exposure to others with diarrhea in or outside the household.
 - d. Contact to a child care center, institution or a baby-sitting group.
 - e. Consumption of untreated water or recreational water exposure.
 - f. Travel history within incubation period.
 - g. Contact with pets (especially puppies) or other animals before onset.
 - h. History of recent gastrointestinal procedures (e.g. colonic, barium enema).
 - i. Some ethnic food preparation practices may involve undercooking of poultry or other meat.
 - j. For infants 30 days of age and under, if source is not identified, culture care givers (even if asymptomatic) to identify possible source.
 - k. Food handling and storage techniques in the home, especially of raw poultry or other raw meats.
 - l. If an outbreak of campylobacteriosis is identified while investigating an individual case, discuss with ACDC by telephone.

CONTROL OF CASE, CONTACTS & CARRIERS

Contact within 24 hours to determine if sensitive occupation or situation is involved; otherwise, investigate within 3 days.

CASE:

Precautions: Enteric precautions until clinical recovery.

1. Sensitive Occupation or Situation:

- a. **Symptomatic:** Remove from work until asymptomatic. Clearance is not required.
- b. **Asymptomatic:** No restrictions.

2. Non-Sensitive Occupation or Situation: No restrictions.

CONTACTS: Household members or persons who share a common source.

1. Sensitive Occupation or Situation:

- a. **Symptomatic:** Remove from work until asymptomatic. May culture stool if etiology is uncertain or as part of outbreak investigation.
- b. **Asymptomatic:** No restrictions.

2. Non-Sensitive Occupation or Situation: No restrictions.

3. Presumptive Cases:

- a. Definition: any person who is epi-linked to a confirmed case, who has diarrhea (more than 2 loose stools in 24 hours) and fever, or diarrhea and at least 2 other symptoms.
- b. Follow up is the same as for a confirmed case.

PREVENTION-EDUCATION

1. Thoroughly cook all food derived from animal sources.
2. Avoid cross-contamination of other foods: All utensils, including a chopping board, that have been in contact with raw meat or poultry products should be washed before using for preparation of other foods. Properly handle and store raw meats so the fluids do not contaminate other foods. After working with raw meat or poultry products, wash hands thoroughly.
3. Avoid the use of unpasteurized milk and milk products.
4. Emphasize hand washing and personal hygiene.
5. Consult veterinarian about ill pets. Properly dispose of their excreta.
6. Properly refrigerate perishable food.



7. Dispose of feces properly; properly clean contaminated inanimate articles.
8. Advise regarding risks associated with colonic irrigation.
9. Avoid exposure to untreated water. When swimming or wading, avoid swallowing water.

DIAGNOSTIC PROCEDURES

1. Culture:

Container: Enteric.

Laboratory Form: [Test Requisition Form H-3021](#)

Examination Requested: Campylobacter.

Material: Feces. Follow instructions provided with container. Maintain at room temperature.

Remarks: Mark "SOS" (for sensitive occupation or situation) in red on specimen and laboratory form, if appropriate.

2. Culture for Identification (CI):

Container: Culture for Identification (CI).

Laboratory Form: [Test Requisition Form H-3021](#)

Material: Pure culture on appropriate medium.

Storage: Same as above.