

# Campylobacteriosis

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Campylobacteriosis is a bacterial disease transmissible between humans and animals.

The onset of the disease is very rapid, with symptoms that include diarrhea, abdominal pain, malaise, fever, nausea and vomiting. The illness frequently lasts two to five days and usually ends in 10 days.

The reservoir is animals, most frequently poultry. Pets, swine, sheep, rodents and other birds also may be sources of human infection. Raw poultry often is contaminated with *Campylobacter*. Transmission to humans usually is through ingestion of undercooked or contaminated food and water. Contact with infected pets, farm animals or infants also has been implicated in transmitting the disease.

The disease can be prevented by properly preparing and cooking foods, especially poultry. Individuals who work with animals should wear protective clothing and wash their hands after handling animals.

## The Disease in Humans

- Many infections do not cause clinical signs
- All age groups affected in all parts of the world
- Important cause of chronic gastrointestinal disease
  - diarrhea, lethargy, fever, nausea, vomiting
  - usually resolves in a few days but may become chronic

- Uncommon complications include arthritis, Guillain-Barre syndrome (nervous system disorder), meningitis and septicemia
- Poultry, cattle, puppies, kittens, pigs, sheep, rodents and birds can harbor the organism
- Transmission to people is by ingestion of undercooked chicken or pork, contaminated food or water, contact with infected pets, contact with infected farm animals, fecal contamination of milk
- Person-to-person transmission is uncommon
- Preventive measures
  - Irradiate food, properly cook food, avoid recontamination of cooked foods with uncooked foods
  - Pasteurize milk, chlorinate or boil water supplies
  - Use of biosecurity to prevent the spread of the bacterium on animal production premises
  - Recognize, prevent and control the infection in animals
  - Minimize contact with poultry
- In the event of disease
  - Report to local health authority
  - Disinfect premises
  - No immunization is available
  - Organism is destroyed easily by heating, drying and exposure to atmosphere

## The Disease in Sheep

- Abortion
  - May see late-term abortions (last six weeks of gestation), premature births, stillbirths, weak lambs
  - Inflammation of fetal liver, fetal lung and placenta
- Weak lambs and aborting ewes can be carriers
- Bacteria shed in feces contaminate feed and water
- Transmission by ingestion
- Aborting ewes have immunity and can be retained for breeding
- Ewes may develop uterine infection
- Vaccine available

Humans can become infected with *Campylobacter jejuni* through exposure to aborting ewes, infected fetuses and infected lambs. Take proper precautions when assisting ewes at lambing times, when handling aborted fetuses and placentas, and when working with sick lambs.

- Wear protective gloves
- Wash hands
- Clean the environment
- Vaccinate sheep when appropriate
- Treat diagnosed cases

## The Disease in Cattle

- Uncommon cause of abortion in cattle
- May see inflammation in fetal lung, fetal liver and placenta
- Can find organism in stomach contents of fetus

- Organism can be cultured from fetal tissues and fluids, and from vaginal discharge of aborting dam
- Calves
  - Thick, mucoid diarrhea with blood flecks

Humans can become infected with *Campylobacter jejuni* through exposure to aborting cows, infected fetuses and infected calves. Take proper precautions when assisting cows at calving, when handling aborted fetuses and placentas, and when working with sick calves.

- Wear protective gloves
- Wash hands
- Clean the environment
- Treat diagnosed cases

## The Disease in Poultry

- *C. jejuni* is found in intestines of chickens, turkeys and waterfowl but generally is not disease-causing in mature poultry
- Commercial poultry and free-living birds can harbor the organism
- Poultry litter can be infected
- Infected chicks and poults can shed organism for up to two months
- Not transmitted from hen to chick
- Infection of day-old chicks with disease-causing strains results in severe inflammation in the intestine and liver
- Chicks more than a week old generally do not develop the infection
- Contaminated, undercooked poultry is responsible for more than 50 percent of human cases of campylobacteriosis

## Preharvest Prevention of Infection

- Strict biosecurity
- Housing decontamination between flocks
- Exclusion of rodents and birds
- Insect eradication
- Chlorination of drinking water
- All in/all out flock management

## Postharvest Carcass Contamination

- Improved washing of carcasses
- Counter-flow scalding
- Elimination of immersion chillers
- Reduction in manual handling
- Chemical disinfectants
- Gamma irradiation
- Thorough cooking (core temperature of 165 F for one minute)

## The Disease in Small Animals

- Most severe in puppies and kittens
- Mucoid, watery, bile-streaked diarrhea; may see blood
- Anorexia, vomiting, fever
- Prolonged infections possible but uncommon
- *Campylobacter* gastrointestinal disease also reported in ferrets, mink, primates, pigs, hamsters, guinea pigs, rats

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