Campylobacteriosis

caused by the bacterium *Campylobacter jejuni*

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Campylobacter enteritis is a disease in humans caused by bacteria that can also inhabit animals. Onset of the disease is very rapid (acute) with symptoms that include diarrhea, abdominal pain, malaise, fever, nausea and vomiting. Illness frequently lasts two to five days and is usually over in 10 days.

The reservoir is animals, most frequently poultry. Puppies, kittens, other pets, swine, sheep, rodents and birds may also be sources of human infection. Most raw poultry is contaminated with *Campylobacter*.

Transmission to humans is usually through ingestion of undercooked or contaminated food and water. Contact with infected animals (especially puppies and kittens), farm animals or infected infants has also been implicated in transmitting the disease.

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-Barré syndrome (nervous system disorder), meningitis, septicemia

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

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 easily destroyed by heating, drying and exposure to atmosphere
• Aborting ewes have immunity and can be retained for breeding
• Ewes may develop uterine infection
• Vaccine available

**EXPOSURE POINT!**
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
• Treat diagnosed cases

The disease in poultry
• *C. jejuni* is found in intestines of chickens, turkeys and waterfowl but is generally 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 over a week old generally do not develop the infection

**EXPOSURE POINT!**
Humans can become infected with *Campylobacter jejuni* through exposure to aborting ewes, 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

**EXPOSURE POINT!**
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 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

**EXPOSURE POINT!**
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
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• Treat diagnosed cases

**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

Number of human *Campylobacter jejuni* infections in North Dakota since 1984.
(North Dakota Department of Health)

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Five-year median – 63