

Yersiniosis (*Y. enterocolitica* and *pseudotuberculosis*)

DISEASE IN ANIMALS

These agents are both Enterobacteriaceae and each has several serotypes. These serotypes have varied host specificity, infectivity to humans and known geographic distributions. *Y. enterocolitica* is also called enterocolitic yersiniosis while *Y. pseudotuberculosis* is generally referred to as extraintestinal yersiniosis. *Y. pseudotuberculosis* is considered more of an environmental pathogen, while *Y. enterocolitica* is zoonotic with swine being recognized as the primary reservoir and source of human infections. Both are found worldwide, but *Y. pseudotuberculosis* is less likely to be found in the U.S.

Reporting: Animal cases can be voluntarily reported to Ohio Department of Agriculture at (614) 728-6220 or (800) 300-9755. Voluntary reporting of laboratory confirmed cases associated with human cases to the [local health department](#) (LHD) is encouraged.

Transmission: The agents are transmitted via the fecal-oral route from the environment, wildlife and food or water contaminated with animal feces. Animals most likely to be associated with strains pathogenic to man are pigs, dogs and cats (*Y. enterocolitica*).

Clinical signs: Mammals, birds and reptiles are all naturally susceptible to infection. Most cases are asymptomatic. Illness is characterized by fever and gastroenteritis. Abortion (sheep), abscess, hepatitis and lymphadenitis have also been described.

Diagnostics:

- Culture: feces and tonsils--cold enrichment may be required
- PCR
- Serology (HA, CF, ELISA, immunoelectrophoreses, or agglutination): There may be cross-reaction with other Enterobacteriaceae and serotype 9 may cross react with Brucella

Case classification:

- Suspected: a clinical case with signs consistent with yersiniosis.
- Probable: a clinically suspect case with laboratory evidence from a screening or unvalidated test.
- Confirmed: a case that meets confirmatory testing criteria determined by a state or federal diagnostic laboratory.

DISEASE IN HUMANS

Reporting: Report by the end of the business week any suspected human illness or positive laboratory result to the LHD where the patient resides. If unknown, report to the LHD of the health provider or laboratory.

Human illness: Both agents are transmitted by the fecal-oral route and are considered to be food-borne. Symptoms of acute gastrointestinal illness are characterized by headache, watery diarrhea, fever and vomiting. The abdominal pain may mimic that of appendicitis. Infection can progress from gastroenteritis to septicemia or a focal infection (e.g. arthritis, cutaneous ulceration and osteomyelitis).

Personal protection: General precautions for handling any animal with diarrhea include wearing gloves and other protective garments to prevent direct contact with feces. Frequent handwashing is recommended and should occur before eating and preparing food, after contact with animals and after handling raw meat. Many human infections are associated with pork products, especially chitterlings. Food should be protected from rodents, birds and fecal contamination. This pathogen is one of few that continues to grow at refrigerated temperatures.

FOR MORE INFORMATION

[ODH Infectious Disease Control Manual](#)
[FDA Bad Bug Book](#)
[CDC--Yersiniosis](#)