



# Yersiniosis

## Background

Yersiniosis is caused by non-*pestis Yersinia* species and is reportable in Michigan. It is most commonly caused by *Yersinia enterocolitica* although infections by other species, including *Y. pseudotuberculosis* can occur and are reportable. The bacteria are transmitted via the fecal-oral route and can be found in soil, water, and animals. Yersiniosis is the fifth most commonly reported gastrointestinal bacterial illness reported through FoodNet. The [2022 FoodNet Safety Report](#) states that the incidence of *Yersinia* infections increased in 2023 by 247% compared with data from 2016-2018. The expanding use of culture-independent diagnostic tests (CIDTs) has increased the recognition of certain pathogens, including *Yersinia*.

## Clinical Symptoms

In young children, symptoms include fever, abdominal pain, and diarrhea, which is often bloody. In older children and adults, symptoms include fever and right-sided abdominal pain, which may be confused with appendicitis. In a small proportion of cases, particularly in those who are immunocompromised, complications such as skin rash, joint pains, or spread of bacteria to the bloodstream can occur. The incubation period is 4-6 days (range 1-14), and symptoms may last 1 to 3 weeks.

Extraintestinal infections can also occur. *Y. enterocolitica* has been recovered from other sites including the throat, lymph nodes, joint fluid, urine, bile, and blood.

## Risk Factors

- Eating contaminated food, especially raw or undercooked pork products, including raw pork intestines (chitlins or chitterlings).
- Contact with a person who has prepared chitlins.
- Drinking contaminated unpasteurized milk or untreated water.
- Contact with infected animals or their feces including, but not limited to pigs, cattle, goats, and rodents.
- Flies may also be a reservoir for the bacteria and may play a role in the transmission of the bacteria between animals and humans.

## Prevention

- Avoid eating raw or undercooked pork.
- Drink only pasteurized milk.
- Wash hands with soap and water before eating and preparing food, after contact with animals, and after handling raw meat.
- After handling raw chitlins, clean hands and fingernails thoroughly with soap and water before touching infants or their toys, bottles, or pacifiers.
- Use separate cutting boards for meat and other foods and clean with soap and water after preparing raw meat.
- Clean up after animals and wash your hands with soap and water after contact with pets and other animals, their feces, or their belongings.

## Case Definition

**Clinical Criteria:** Common presentations of illness include fever, diarrhea (bloody or non-bloody), or abdominal pain that may be severe enough to mimic appendicitis. Presentations of extraintestinal illness can include sepsis, wound infection, or soft tissue infections. Gastrointestinal signs may be absent in these instances.

### Laboratory Criteria:

*Confirmatory:* Isolation of any non-*pestis Yersinia* spp. by culture from a clinical specimen

*Presumptive:* Detection of non-*pestis Yersinia* spp. in clinical specimen using a nucleic acid amplification test (NAAT) or other culture independent diagnostic test (CIDT)

**Epidemiologic Linkage:** A person who shares an exposure with (or is exposed to) a confirmed or probable case of yersiniosis.

### Case Classifications:

*Confirmed:* A case that meets the confirmatory laboratory evidence.

*Probable:*

A case that meets the presumptive laboratory evidence **OR**

A case that meets clinical criteria **AND** epidemiologic linkage criteria

A repeat culture or NAAT, or other molecular test result more than 365 day after initial report should be counted as a new case for surveillance. When two or more different *Yersinia* non-*pestis* species are detected from one or more specimens from the same individual, each should be reported as a separate case.

The full case definition can be found at: [24-ID-08 Non-pestis Yersinio.pdf](#)

**Note: Isolates are requested to be forwarded to the Michigan Department of Health and Human Services Bureau of Laboratories. If an isolate is not available, the CIDT positive specimen should be submitted.**

### Resources

- Information for the general public: <https://www.cdc.gov/yersinia/about/index.html>
- Information for healthcare providers: <https://www.cdc.gov/yersinia/hcp/clinical-overview/index.html>
- FoodNet 2023 Preliminary Data: <https://www.cdc.gov/foodnet/reports/preliminary-data.html>