

# Trichinosis (*Trichinella spiralis*)

## DISEASE IN ANIMALS

*T. spiralis* is a nematode that parasitizes the intestinal tract of mammals, most notably pigs. The larvae encyst in the muscles and act as a source of infection for humans and other animals.

**Reporting:** Animal cases are not required to be reported. Voluntary reporting of confirmed cases in swine herds to the Ohio Department of Agriculture (ODA), Division of Animal Industry at (614) 728-6220 or (800) 300-9755 is encouraged.

**Transmission:** *Trichinella* parasites circulate among wild and domestic carnivores and omnivores through ingestion of raw or under processed meat. Pork and pork by-products were the main source of infection for people although good husbandry practices have greatly reduced the incidence in U.S. pigs.

**Clinical signs:** Trichinosis does not typically cause clinical illness in animals. High parasite burdens can cause eosinophilia, fever, anorexia and muscle pain.

**Diagnostics:** Antemortem diagnosis is rare.

- Trichinostomy or artificial digestion of meat sample: not very sensitive
- ELISA IgG and IgM: very specific for antibody
- ELISA for antigen
- PCR & Random amplified polymorphic DNA analysis (RAPD): for antigen
- Blood Profile: eosinophilia, increase in muscle enzymes & erythrocytation

**Case classification:**

- Suspected: a clinical case with signs consistent with trichinosis.
- 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 [local health department](#) (LHD) where the patient resides. If unknown, report to the LHD of the health provider or laboratory.

**Human illness:** Many infections are asymptomatic. During the initial intestinal phase there is nonspecific gastroenteritis, with anorexia, nausea, vomiting, abdominal pain and diarrhea. Larval migration in the muscles occur seven to 11 days after ingestion. Symptoms include edema of the upper eyelids, myalgia, headache, fever, sweating, chills, weakness and marked eosinophilia. This usually lasts 10 to 30 days. During the final convalescent phase, there is muscular pain that can persist for several months.

**Personal protection:** The cysts in infested carcasses can be killed by freezing (-18°C for 20 days) or by traditional rendering temperatures. Adequate cooking of meat, particularly of game, will also kill the larvae.

## FOR MORE INFORMATION

### Disease in Animals

[Merck Veterinary Manual--Trichinosis](#)

### Human illness

[ODH Infectious Disease Control Manual](#)  
[CDC--Trichinosis](#)