

Trichinosis (Trichinellosis)

Trichinosis is a Class C Disease that must be reported to the state within five business days.

Trichinosis, also called Trichinellosis, is caused by eating raw or undercooked meat of animals infected with encysted larvae of the *Trichinella* parasite, a type of roundworm. While several species of parasites in the genus *Trichinella* are able to cause disease, most human infections are attributed to *Trichinella spiralis*. The usual sources of infection include pork, horse meat and wild carnivorous game (such as bear, cougar, wild boar, fox, dog, wolf, seal, and walrus meat). The disease is not transmitted person-to-person.

When a human or animal eats meat containing infective *Trichinella* cysts, the acid in the stomach dissolves the hard covering of the cyst and releases larvae. These larvae pass into the small intestine and mature to adults in one to two days. After mating, the adult females lay eggs that develop into immature larvae and migrate into muscle. Within the muscles, the larvae curl into a ball and encyst. Infection occurs when these encysted larvae are ingested by a carnivore (human or animal).

Symptoms of infection range from inapparent to fatal illness, but most infections are asymptomatic. The severity of the disease is proportional to the number of larvae ingested. During the first week after ingesting infected meat, a person may experience abdominal symptoms including discomfort, nausea, vomiting, and diarrhea. Two to eight weeks later, as the larvae migrate into tissues, fever, myalgia, periorbital edema, a hive-like rash and conjunctival and subungual hemorrhages may occur. Encysted larvae can remain viable in tissues for years, but calcification (and death) of larvae usually occurs within six to 24 months and can be detected on radiographs. In severe infections, myocarditis, speech defects, coordination problems, and pneumonitis can follow one or two months after infection.

Trichinosis became a nationally notifiable disease in 1966, but the Centers for Disease Control and Prevention (CDC) has kept statistics on trichinosis since 1947. The national trichinosis surveillance system has documented a steady decline in reported incidence of trichinosis.

Historically, pork products were the most commonly identified source of trichinosis in the United States. However, the number of reported cases attributed to pork has declined for many years, largely because of changes in the pork industry that have lowered the prevalence of *Trichinella* in domestic hogs. Most reported cases are now attributed to the consumption of wild game.

1979 Trichinosis Outbreak in Louisiana

From February 5, 1979 to March 19, 1979, 19 cases of trichinosis occurred in Louisiana. All of the patients lived in rural areas in the western part of the state. All had consumed raw or smoked sausage made by one of the patients, who had bought his hogs at a local livestock auction. The hogs were killed shortly after purchase, were made into sausage and then sold to neighbors and friends. Upon investigation, it was learned that the hogs had been fed garbage, a violation of existing Louisiana sanitary laws. *Trichinella spiralis* larvae were identified in two samples of leftover smoked sausage obtained from different patients.

A total of 31 people ate the sausage and 19 (61%) became ill. The mean incubation period between consumption of sausage and onset of illness was 17 days, with a range of five to 31 days. The illness was characterized by periorbital edema (84%), fever (74%), and myalgia (68%). Six of the 19 patients had symptoms severe enough to require hospitalization. All were treated with steroids and recovered completely.

Cases Reported After 1979

Outbreaks were also reported in Acadia parish (nine cases in 1980), and Evangeline and Jefferson Davis parishes (15 cases with one death in 1980). Additional cases were reported from Orleans parish (one case in 1982), and LaSalle and Winn parishes (one case each in 1983). In each of these outbreaks, raw or improperly cooked pork sausage was implicated.

Since then, a few cases have been suspected. There was one confirmed case in 2011 in St. Charles Parish.