

Tularemia

Agent: *Francisella tularensis* (bacteria)

Mode of Transmission: In the United States, by the bite of an infected tick such as the American dog tick, the lone star tick, the blacklegged tick or occasionally by the bite of an infected deer fly. Hunters can contract the disease while cleaning infected game or when eating raw or undercooked infected meat. Humans may also become infected by drinking water contaminated by infected animals, or by breathing *F. tularensis* spores from the dried carcasses or pelts of animals that died from tularemia. Because *F. tularensis* is highly infectious when grown in culture, laboratorians who work with the bacteria may become infected with the bacteria during aerosol-generating procedures. The bacteria are not transmitted from person to person.

Signs/Symptoms: Vary depending on the mode of transmission, but usually include sudden onset of high fever, chills, fatigue, general body aches, headache and nausea. Pneumonia may complicate the disease and requires prompt identification and specific treatment to prevent development of serious, life-threatening illness.

Prevention: Preventive measures include minimizing bites by avoiding areas infested by ticks or deer flies, and avoiding untreated water in areas where tularemia is prevalent among wild animals. Impervious protective gloves should be used when skinning rabbits and other wild game. Utensils used for preparing meat from game should not be used to prepare other food items. Undercooked meat should not be consumed.

Other Important Information: Wild animals are the reservoir for *F. tularensis* and rabbits, hares, and rodents are especially susceptible to infection. Tularemia is classified as a potential bioweapon because its spores are relatively easy to disseminate as a breathable aerosol or as a food and water contaminant.

One case of tularemia was reported in 2010 in an adult male from the eastern region. No potential source of exposure was identified, including any known tick bites or contact with the carcass of a dead animal. The five-year average for tularemia in Virginia is 0.8 cases per year.