



## TULAREMIA

<b>Agent information:</b>	Tularemia, a bacterial zoonosis, is caused by the bacterium <i>Francisella tularensis</i> and is one of the most infectious pathogenic bacteria known. It requires inoculation or inhalation of as few as 10 organisms to cause disease. It is found naturally in animals, especially rabbits (“rabbit fever”) and rodents. <i>Francisella tularensis</i> is considered to be a dangerous potential biological weapon due to its extreme infectivity, ease of dissemination, and capacity to cause illness and death.
<b>Transmission:</b>	Tularemia is not transmitted from person to person. Infection occurs by bites from infected arthropods, handling infectious animal tissues or fluids, direct contact with contaminated water, food, or soil; and inhaling infected aerosols. Incubation period is typically three to five days but can be from one to 14 days.
<b>Signs and symptoms:</b>	Signs and symptoms depend on the method of exposure. Possible symptoms include skin ulcers, lymphadenopathy, ocular inflammation, oropharyngeal lesions, diarrhea, or pneumonia. If the bacteria are inhaled, symptoms can include abrupt onset of fever, chills, headache, myalgias, arthralgias, dry cough, and progressive weakness. Patients with pneumonia can develop chest pain, dyspnea, hemoptysis, and respiratory failure.
<b>Protective measures:</b>	Follow appropriate Body Substance Isolation (BSI) precautions, with use of Personal Protective Equipment (PPE). <b>Standard Precautions:</b> Hand washing before and after all patient contacts and contact with patient care equipment. <b>Contact Precautions:</b> Use of gloves, gown, and eye protection. <b>Airborne Precautions:</b> Initiate inhalation precautions if suspected airborne release, including wearing masks (fit tested, NIOSH-approved N-95 respirator). Victims presenting immediately after aerosolized exposure require decontamination.
<b>Decontamination of PPE and equipment:</b>	Equipment can be decontaminated using soap and water. Also, use 0.50% hypochlorite solution (one part household bleach to 10 parts water) as appropriate or if gear was visibly contaminated. Bleach may damage some types of firefighter turnout gear (one reason why it should not be used for biological agent response actions). After removing gear, response workers should shower using copious quantities of soap and water.

**Emergency Medical Services and Preparedness Section**  
**24/7 Emergency Contact Number: 1-888-295-5156**  
**Contact Number: 302-223-2999**



- Evaluation:** Appropriate specimens include swabs or scrapings of ulcers, lymph node aspirates or biopsies, pharyngeal swabs, or respiratory specimens (e.g. pleural fluid), depending on the form of illness. Blood cultures may often be negative.
- Prophylaxis:** **Post exposure:** Persons beginning treatment with streptomycin, gentamicin, doxycycline, or ciprofloxacin in the incubation period of tularemia and continuing treatment for 14 days might be protected against symptomatic infection.
- In a circumstance in which the weapon attack has been covert and the event is discovered only after persons start to become ill, persons who are potentially exposed should be instructed to begin a fever watch. Persons who develop a fever within 14 days should be given prophylaxis.
- Treatment:** **Contained casualty setting:** Where individual patients can be medically managed, administer aminoglycosides, such as streptomycin and gentamicin, for 10 days. Since tetracyclines and chloramphenicol carry a higher relapse rate, they should be given for at least 14 days. Both streptomycin and gentamicin are recommended as first-line treatment for children.
- Mass casualty setting:** Doxycycline and ciprofloxacin are the preferred choices for treatment in both adults and children.
- Reporting:** Immediately report any suspect cases to the Division of Public Health, Office of Infectious Disease Epidemiology: 1-888-295-5156.
- Additional information:** Visit the Centers for Disease Control and Prevention website: [www.cdc.gov/tularemia/](http://www.cdc.gov/tularemia/).