

Laboratory Rabbits

The following document describes common types of zoonotic illnesses encountered when working with the indicated species. This is not an exhaustive list and the possibility of zoonotic disease should be considered every time work is conducted with animals. Specific-pathogen-free status in laboratory animals tests only for the presence of particular pathogens and is NOT an assurance that the animal is pathogen-free or that it cannot transmit zoonotic diseases. PPE and experimental practices appropriate to the specific task should be followed when working with any animal species. EHS recommendations are made during review of your IACUC protocol –additional questions about the potential for zoonotic disease exposure should be directed to your EHS representative.

If you have had an exposure and/or are showing symptoms of illness, and need medical attention refer to the information in the [University of Michigan's Bite Scratch Protocol](#)

Bacterial

Disease:	PASTEURELLOSIS
Description of Disease:	Pasteurellosis is caused by infection with the bacteria in the genus <i>Pasteurella</i> and particularly the species <i>Pasteurella multocida</i> . The lab animal reservoirs for pasteurellosis are cats, dogs, rabbits, guinea pigs, and pigs.
Symptoms in Animals:	Pasteurellosis is largely subclinical in rabbits and these animals may act as carriers for the disease. If signs of infection are present, these may include respiratory illness, nasal discharge, ear infections, abscesses, and genital infections.
Transmission and Symptoms in Humans:	This disease is transmitted to humans through bite or scratch wounds or through contact with respiratory secretions. Reported signs in humans include redness and painful swelling at the site of the bite as well as enlarged lymph nodes. These signs can appear as early as 8-12 hours after the bite. All animal bite wounds that break the skin should be promptly evaluated by medical personnel.
Prevention:	

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Additional Information:	https://iacuc.wsu.edu/zoonoses-associated-with-rabbits/#:~:text=Zoonotic%20diseases%20specifically%20associated%20with,bacteria%20through%20bites%20and%20scratches.
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Disease:	Plague - <i>Yersinia pestis</i> Laboratory rabbits can be affected but are not a common reservoir for <i>Y. pestis</i>.
Description of Disease:	Plague is caused by a bacterium called <i>Yersinia pestis</i> that can cause disease in rats, rabbits, and cats. While antibiotics have decreased the incidence of plague in society, if left untreated the disease can cause severe illness and potentially death. Plague has been found in wild rodents and rabbits in the western United States.
Symptoms in Animals:	Cats infected with <i>Yersinia pestis</i> will develop the bubonic form of the plague. Plague in cats is characterized by fever, lethargy, and enlarged lymph nodes. As the disease progresses, abscesses, lesions, and ulcers may develop on the affected lymph nodes, and signs of vomiting, diarrhea, and weight loss may be present. Dogs that contract the disease are typically asymptomatic and show no clinical symptoms. Rodents harboring disease can have mild to severe infections or have no symptoms at all.
Transmission and Symptoms in Humans:	Plague is transmitted primarily through bites of fleas infected with the bacterium. Fleas found on animals can bite the animal or human handling the animal and simultaneously transfer the bacterium into the blood stream. People typically show symptoms 2-6 days after receiving a bite from an infected flea. The most common form of disease is called bubonic plague, and usually presents as a fever with chills, and enlarged, painful lymph nodes. The plague can also be transmitted directly from animal to person by breathing in air droplets contaminated with <i>Yersinia pestis</i> . Although this route of transmission is less common it results in a more severe form of the disease. People that contract this form of the disease, called pneumonic plague, develop life threatening symptoms extremely quickly. Clinical signs are similar to bubonic plague but also include labored and increased breathing with a cough that becomes progressive with blood

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	stained sputum.
Prevention:	Flea control programs are important for the control and prevention of plague in dogs and cats. Appropriate precautions should be taken around animals suspected of plague. PPE should include gloves, and face mask or shield to protect from air born droplets, eye protection, and protective gowns.
Additional Information:	http://www.cdc.gov/ncidod/dvbid/plague/index.htm

Disease:	TETANUS
Description of Disease:	Tetanus (lockjaw) is an acute, often fatal disease caused by the toxin of the tetanus bacillus, <i>Clostridium tetani</i> .
Symptoms in Animals:	The organism is commonly found in the intestines of animals where it causes no negative effects.
Transmission and Treatment in Humans:	The bacterium usually enters the body in the spore form, often through a puncture wound contaminated with soil, dust, or animal feces, or through lacerations, burns, and minor unnoticed wounds. Humans infected through a wound or lesion frequently develop muscle rigidity and painful muscular contractions. Infection may be fatal.
Prevention:	All employees working with animals should be immunized against tetanus at least every ten years. All animal bite or scratch wounds should be thoroughly cleansed and evaluated by a physician.
Additional information:	https://www.cdc.gov/tetanus/index.html

Disease:	SALMONELLOSIS
Description of Disease:	The most common serotypes of <i>Salmonella enterica</i> in rabbits are Typhimurium or Enteritidis. Rabbits raised for use in research are very rarely infected.
Symptoms in	Salmonella is primarily a septicemic disease with a brief

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Animals:	clinical course in rabbits, but diarrhea and abortion may be observed in some animals.
Transmission and Treatment in Humans:	In the laboratory environment, <i>Salmonella spp</i> may be transmitted to humans when a person ingests infected fecal material or has contact with fomites. Infected humans may have diarrhea (with or without blood), fever, and stomach cramps. More severe signs and symptoms may develop especially in individuals with compromised immune systems. Onset of signs will usually occur 6 hours to 6 days after infection and last for 4-7 days. In humans, infection is diagnosed through laboratory testing of a stool sample or vomitus.
Prevention:	The practice of good personal hygiene, such as hand washing after handling animals and their environment, the use of personal protective equipment, and effective environmental sanitation are most important in preventing disease transmission to personnel.
Additional information:	https://www.cdc.gov/salmonella/index.html

Disease:	Tularemia
Description of Disease:	Tularemia is caused by the bacterium <i>Franeisella tularensis</i> and induces disease in many different species. Rabbits and hares are especially susceptible and often die in large numbers during outbreaks.
Symptoms in Animals:	When infected, rabbits and rodents exhibit weakness, fever, ulcers, regional lymphadenopathy, and abscesses. Some animals are asymptomatic and display no clinical signs, while others may be found dead without a history of illness.
Transmission and Treatment in Humans:	There are many different presentations of tularemia that manifest depending upon the route of the infection. Ulcerative tularemia is the most common form of the disease and usually occurs when handling dead infected animals. People that handle infected animals will develop a skin ulcer at the site where the bacteria enters an open wound. Enlarged lymph nodes will also be present at the region of infection. The pneumonic form of tularemia, while rare, is the most serious

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	<p>form of the disease and results from breathing in aerosols containing the organism, for example during post-mortem examination of an infected animal. Symptoms include cough, chest pain, and difficulty breathing. These symptoms can be fatal if not treated promptly. Fever, chills, headaches, diarrhea, muscle aches, joint pain, and progressive weakness can develop in all forms of the disease. Person-to-person transmission has never been reported. While there have been relatively few cases of tularemia in North America, it is a very infectious disease and only a small number of the organisms are required to cause serious infection. Bacteria can survive for long periods of time in the environment.</p>
Prevention:	<p>Due to these characteristics, if an animal is suspected of having tularemia, good infection control procedures should be practiced. Precautions against bites or scratches should be taken. Gloves should be worn, and any breaks in the skin should be covered when handling animal carcasses. Regular hand washing with soap and water, and cleaning of equipment is also an important preventive measure against tularemia.</p>
Additional information:	<p>http://www.cdc.gov/tularemia/index.html https://www.avma.org/tularemia-facts</p>

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References

Merck Veterinary Manual 2006 <http://www.merckvetmanual.com/mvm/index.jsp>

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