

Infected animals can make you sick, even if they appear healthy and clean. Gastrointestinal (enteric) zoonoses are one type of illness that can upset the digestive system (stomach and intestines) and can make people sick.

If you work with BIRDS, MAMMALS, FISH, or AMPHIBIANS

Birds can carry diseases such as aspergillosis and psittacosis. Only inspected and properly quarantined birds should be used in research studies or teaching demonstrations.

Rabies can also be a threat in bats. Therefore, personnel working with this species are advised to have the pre-exposure rabies prophylaxis and an annual follow-up.

Those working with rabbits should be conscious of possible allergic reactions. Aquarium-related cuts and abrasions require immediate first aid because of bacterial flora in the water. Salmonella is frequently harbored in turtles, reptiles, and amphibians, so avoid direct contact.

If you work with HAZAROUS AGENTS

Monitor exposure to potentially hazardous biological, chemical, and physical agents. Protective devices should be used and other safety practices consistent with current safety guidelines should be adapted. Potentially hazardous chemicals may be found in disinfectants, cleaning agents, and pesticides used in the animal laboratory and care room. Wash hands after handling chemicals, infectious materials, animals, and before leaving the laboratory. Use a biological safety cabinet when handling infectious materials and a fume hood when handling toxic materials. Decontaminate all work surfaces daily. Decontaminate all contaminated material by autoclaving or chemical disinfection before washing, reuse, or disposal.

If you are female of childbearing age, confer with the occupation medicine physician or the Safety Office prior to exposure to the possible inhalation of toxic chemicals.

Who should be informed?

All UNL personnel who work in laboratory animal facilities or work with animal tissue should know about this program. Personnel included are those individuals involved in direct care of animals and their living quarters and those individuals who have direct contact with animals (live or euthanized), their viable tissues, body fluids, or wastes, including: staff, investigators, lab assistants, consultants, visitors and students.

How do you enroll in the Occupational Health and Safety Program (OHS) program?

Contact the Institutional Animal Care Program (IACP) at

402-472-4486 for further information.

OHS enrollment form located at: <http://go.unl.edu/58rq>

If you need information

Contact the IACP, 402-472-4486.

In case of emergency

See a physician if any of the following occur:

- You are bitten by an animal
- You are scratched by an animal
- You are experiencing unusual symptoms

Workers' compensation injuries may be treated at any urgent care clinic. More serious injuries may be treated at any emergency room. Contact your supervisor immediately so he/she can submit the "First Report of Alleged Occupational Injury or Illness" form to Human Resources, optimally within 24 hours.

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University of Nebraska–Lincoln



Zoonoses Information for Employees Working with Animals

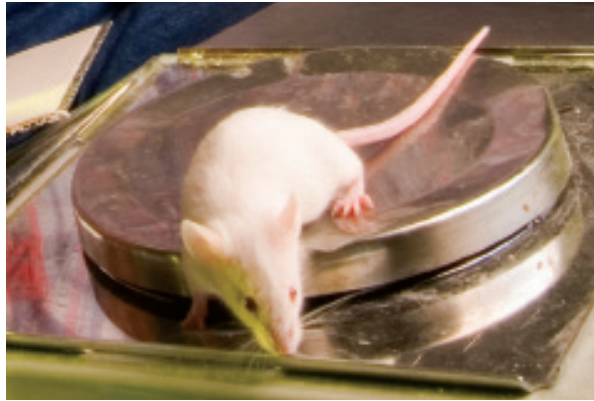
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Diseases Communicable from Animals to Humans

Zoonotic diseases are diseases of animals that are communicable to humans. Sixty-five percent of the 1,415 infectious organisms known to cause disease in humans are zoonotic (Taylor et al. 2001, Jones et al. 2008).

Zoonotic diseases have caused over \$200 billion in economic losses worldwide in the past ten years (US Institute of Medicine and the National Research Council 2009). People can be exposed to zoonoses in the laboratory, farm, zoo, aquarium, home, veterinary hospital, or field (wildlife). In an academic and research laboratory environment, non-human primates, wild animals, birds, and pregnant non-rodent mammals are the most common carriers of disease, but nearly all animals can be involved in disease transmission. Activities conducted in the field that place people in close proximity to wild animals, their dens, or harborage cause risk of exposure to zoonoses. Animal use or exposure to these animals in research, teaching, animal husbandry, and veterinary care activities places faculty, staff, students, and volunteers at risk of diseases such as avian influenza, Brucellosis, Hantavirus, Herpesvirus simiae, leptospirosis, Lyme disease, Plague, Psittacosis, Q-fever, Rabies, Rocky Mountain Spotted Fever, salmonellosis, West Nile virus, and other zoonoses. Some of the specific diseases and associated animals are described elsewhere in this brochure.



Humans usually are not susceptible to infectious diseases suffered by animals. There are some important exceptions, however. In many cases the animals show little, if any, sign of illness. A bacterium in the normal flora of a healthy animal may cause a serious disorder in a person exposed to it. While the animals have developed “resistance” to these microorganisms, humans with no previous exposure to the agent lack protective immunity. Therefore, one should always be aware of possible consequences when working with each type of animal and then take precautions to minimize the risk of infection. In the event that you do become ill with a fever and other flu-like symptoms, it is important to let the physician caring for you know of the work you do with animals.

Occupational Health Program for Personnel with Research Animal Contact

Some common sense steps can be taken to lessen the risk of infection in general, including cleanliness in routine tasks involving animals and washing hands after completion of work with animals. Research staff should protect themselves against accidental self-inoculation by not recapping needles; exercising proper use and disposal of needles and syringes by discarding them in a container designed for proper disposal; taking enough time to give injections properly and by using a two-person team to inoculate animals. Further precaution should be taken by thoroughly cleansing the puncture site if accidentally injected.

The use of biological safety cabinets, physical containment devices, face masks, gloves and other personal protective equipment (PPE) as indicated for procedures such as necropsy, bedding changes, and tissue and fluid sampling, and replacing manually operated pipettes for mouth pipetting.

The scope of possible infections is quite large, and only a few examples will be described here. All personnel should be aware that laboratory animals, particularly rats and mice, rabbits, guinea pigs, hamsters, cats, and monkeys are sources of potent allergens to sensitized persons.

Things you should know....

If you are FEMALE

Female caretakers, especially those of childbearing age, should avoid exposure to possible toxoplasmosis from infected species or contact with cats. Since asymptomatic toxoplasma infection is common before childbearing years, serological samples should be taken from women handling high-risk species prior to beginning work to avoid confusion about the significance of positive antibody tests in case of subsequent pregnancy. Avoid cat feces. Wear gloves when working in areas potentially contaminated with cat feces. Always wash hands after handling any potential source of infection.

If you are female of childbearing age, confer with the occupation medicine physician or the Safety Office prior to exposure to the possible inhalation of toxic chemicals.

Avoid working with hazardous agents, especially toxic chemicals, in the first trimester of pregnancy.

If you work with DOGS or CATS

Dogs and cats used in studies at UNL are vaccinated against rabies. Parasites such as visceral larval from dogs, some tapeworms, and sarcoptic mange are a potential risk to those handling infected animals. Cats can be a source of allergic reactions and toxoplasmosis infection. Ringworm, a fungus disease of the skin, is also a common infection in cats and is readily transferable to humans. Cat scratch disease is a zoonotic infection characterized by regional lymphadenitis that follows a skin papule (welt) at the site of the cat scratch. While the prognosis usually is excellent and the disease in most cases is self-limiting, an examination by an occupational physician is recommended.

If you work with RODENTS

Contact with rodents requires precautions against diseases such as toxoplasmosis, tapeworm infections, lymphocytic choriomeningitis (LCM), salmonellosis and ringworm and other dermatomycoses. Additional concerns for investigators using wild rodents are Hantavirus, leptospirosis and plague. Attention should also be paid to the possibility of allergic reaction. Care must be taken when handling rodents and potentially infected materials, such as bedding and feces, in the laboratory. Gloves, masks and a dedicated lab coat should always be worn when working with rodents.

If you work with FARM ANIMALS

Working with domesticated farm animals carries the potential for several different zoonotic diseases.

Q fever, a potentially serious human disease, was quite common in people who drank unpasteurized milk and in slaughterhouse workers exposed to the tissues of freshly harvested cattle, sheep, and goats. We now know that the agent that causes Q fever is shed abundantly from the placental membranes of sheep. Sheep used in reproductive research or other studies should be examined serologically for possible infection. Gloves, masks and protective clothing are required for individuals working with pregnant sheep and goats. Rabies can also be a threat in large animals such as cattle and horses. A pre-exposure rabies prophylaxis is recommended for people working with cattle or horses.

Enteric disease has been responsible for illnesses and outbreaks, including *Salmonella*, *E. coli* O157:H7, and *Cryptosporidium*. These germs can come from many types of animals, including pets, wild animals, and farm animals.