

The following is general information for those involved in the care and use of laboratory rodents (rats, mice, hamsters, guinea pigs and gerbils). Contact occupational.health@cuanschutz.edu if you have any questions.

POTENTIAL RISKS



Injuries from working with laboratory rodents can be sustained from a bite or a scratch. While rodents may carry organisms that are potentially infectious to humans, the major health risk of working with laboratory rodents is the development of an allergy.

The development of disease in human hosts often requires an immune-compromising preexisting condition.

Potential rodent zoonoses

Lymphocytic choriomeningitis

- Caused by the arenavirus commonly found in hamsters
 - Can also infect mice
- Transmission can occur through:
 - Contact with infected tumors, feces, urine
 - Or aerosolization of any of these
- Symptoms in humans are flu-like
 - Range from mild to severe
- Rare in laboratory animal facilities

Campylobacteriosis

- Caused by gram negative bacterium
- Transmission by fecal-oral route through contaminated food or water, or direct contact with infected fecal material
- Symptoms
 - Acute gastrointestinal illness
 - Diarrhea with or without blood
 - Abdominal pain
 - Fever
 - Pseudo-appendicitis
 - Rare: septicemia and arthritis
- Usually brief and can be treated with antibiotics

Leptospirosis

- Caused by bacteria found in many animals
- Transmitted through:
 - Direct contact with urine or tissues via skin abrasions or contact with mucous membranes
 - Inhalation of infectious droplet aerosols
 - Ingestion of infectious materials
- Symptoms
 - Annular rash
 - Flu-like symptoms
 - Cardiac and neurological disorders may follow
 - Arthritis a common result

Hantavirus Infection

- Caused by hantavirus mainly found in wild rodents
- Rodents shed virus in their respiratory secretions, saliva, urine and feces
- Transmits to humans via inhalation of infectious aerosols
- Symptoms
 - Fever
 - Headache
 - Myalgia
 - Petechiae
 - Other hemorrhagic symptoms
 - Anemia
 - Gastrointestinal bleeding

Other diseases associated with contact with rodents:

- Yersinia
- Tularaemia
- Salmonellosis

ALLERGIC REACTIONS TO RODENTS



- The greatest occupational risk to working with rodents is allergic reaction or developing allergies.
 - Those with other allergies at greater risk
 - Dander, hair, scales, fur, saliva, body waste (urine in particular) contain powerful allergens
- Symptoms
 - Nasal or eye symptoms
 - Skin disorders
 - Respiratory symptoms
 - Asthma
- Contact Occupational Health if you develop allergic symptoms

HOW TO PROTECT YOURSELF



Wash your hands

- Single most effective preventative measure
- Regular, thorough hand washing
- Wash hands and arms after handling any animal
- Never drink or eat in the animals rooms or before washing your hands

Wear gloves

- When working with rodents, wear appropriate gloves for the task
- Wash your hands after removing gloves

Wear respiratory protection

- Respiratory protection should be worn when there is a medical history or symptoms of allergies
- Respiratory protection may need to be worn when there is risk of aerosol transmission of zoonotic agents
- Initial Medical Evaluation for respiratory clearance is performed through Occupational Health
- Fit testing is performed through Industrial Hygiene once clearance is complete through Occupational Health

Wear other protective clothing

- Disposable gowns are required to be worn in the vivarium
- Consider changing clothing before leaving work. Place dirty clothing in a bag and launder clothes at home before wearing again.

Follow proper exposure reporting protocols

- If you are injured on the job, promptly report the incident to your supervisor
 - Immediately call or email Occupational Health (303) 724-9145 during business hours
 - Outside of normal hours seek medical attention at emergency department or other healthcare provider
 - Fill out incident report for exposure to biological hazards
 - File a claim with University Risk Management
 - <https://www.cu.edu/risk/file-claim>
- Minor cuts and abrasions should be immediately cleansed with antibacterial soap
 - Protect injuries from exposure

Tell your physician you work with rodents

- Whenever you are ill, mention to your physician that you work with rodents
- Many zoonotic diseases have flu-like symptoms

For more information, refer to the Occupational Health website
<https://research.cuanschutz.edu/ehs/home/divisions/occupational-health>



or contact Occupational Health at occupational.health@cuanschutz.edu