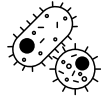


The following is general information for those involved in the care and use of laboratory swine.  
Contact [occupational.health@cuanschutz.edu](mailto:occupational.health@cuanschutz.edu) if you have any questions.

## **POTENTIAL RISKS**



Physically, swine handling can be very demanding. Because it is so difficult to withstand their pushing and shoving, care should be taken when entering pens that hold a large number of animals. Swine should be guided for moving and sorting with solid, hand-held panels. Swine respond well to the use of a panel and the panel protects the handler from being bitten or gored.

### **Potential swine zoonoses**

#### **Rabies**

- Rabies virus (rhabdovirus) can infect almost any mammal
  - Rare in research environments
- Virus sheds in saliva 1-14 days before clinical symptoms develop
- Any random-source or wild animal exhibiting central nervous system signs that are progressive should be considered suspected for rabies
- Transmission
  - Contact with saliva, mucus membranes, or blood (e.g. bite or saliva on an open wound)
- Symptoms
  - Pain at the site of bite
    - Followed by numbness
  - Skin becomes sensitive to temperatures changes
  - Laryngeal (throat) spasms
  - Muscle spasms
  - Extreme excitability and convulsions
- Rabies in unvaccinated people is almost invariably fatal

#### **Brucellosis**

- Found in dogs & swine breeding colonies
  - Manifested by abortions and reproductive organ infections
- Transmission to humans not clear but likely through oral or skin contact with organism-infected blood or other tissues

- Symptoms
  - Mimics the flu
  - Fever
  - Headache
  - Fatigue
  - Muscle & joint pain
  - Rare complications: arthritis, meningitis, and endocarditis
- Treated with antibiotics for 4-6 weeks

#### **Anthrax**

- Acute bacterial infection- may be rapidly fatal
- All domestic, zoo, and wild animals at risk of infection
- Anthrax bacilli are released from infected carcasses and form resistant spores on exposure to air
  - Spores contaminate soil for many years
- Transmission
  - Inoculation from direct contact with infected animals, carcasses or animal products and contaminated soil
- Cutaneous anthrax symptoms
  - Localized ulceration (sore) and scab
  - Fever
  - Headache
  - Rarely- septicemia and meningitis
- Inhalation anthrax symptoms
  - Fulminating pneumonia
- Intestinal anthrax symptoms
  - Acute gastroenteritis (nausea, vomiting, diarrhea)

#### **Leptospirosis**

- Bacteria found in many animals
- Found in the urine of infected animals
- Disease is multi-systemic with chronic sequelae
- Transmission
  - Direct contact with urine or tissues via skin abrasions or contact with mucous membranes
  - Inhalation of infectious droplet aerosols and by ingestion

- Symptoms
  - Annular rash
  - Flu-like symptoms
  - Cardiac and neurological disorders may follow
  - Arthritis a common result

**Other diseases associated with contact with swine:**

- Cryptosporidiosis, Salmonellosis, yersinia enterocolitica, Ascari suum, influenza

**ALLERGIC REACTIONS TO SWINE**



- Swine are one of the least likely animals to cause human allergies
  - However, respiratory protection may be necessary when working around feed and bedding for those who already have allergies
- 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 swine, wear appropriate gloves for the task
- Wash your hands after removing gloves

**Wear respiratory protection**

- Respiratory protection should be worn when there is risk of aerosol transmission of zoonotic agents
- Respiratory protection should be worn when there is a medical history or symptoms of allergies
- 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 swine**

- Whenever you are ill, mention to your physician that you work with swine
- 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](mailto:occupational.health@cuanschutz.edu)**