

## Occupational Health for Animal Handling

# Care and Use of Swine

The Occupational Health Program is designed to inform individuals who work with animals about potential zoonoses (diseases of animals transmissible to humans), personal hygiene, and other potential hazards associated with animal exposure. This information sheet is directed toward those involved in the care and use of swine.

### Potential Injury and Zoonotic Diseases

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. The zoonotic diseases associated with handling swine includes the following:

**Anthrax:** This is an acute bacterial infection of humans and animals which may be rapidly fatal. The disease occurs worldwide and is an occupational hazard of persons such as wool-sorters, farm workers and veterinarians in contact with infected animals or their by-products. All domestic, zoo and wild animals are potentially at risk of infection. Anthrax bacilli are released from infected carcasses and form resistant spores on exposure to air. These spores contaminate soil for many years. Humans are usually infected by inoculation from direct contact with infected animals, carcasses or animal products and contaminated soil. Inhalation or ingestion of spores may occur. Animals are infected from contaminated feed, forage, water or carcasses. Cutaneous anthrax causes localized ulceration (sore) and scab with fever and headache and in rare circumstances be followed by more severe conditions such as septicemia and meningitis. Inhalation anthrax causes fulminating pneumonia. Intestinal anthrax is associated with acute gastroenteritis (nausea, vomiting and diarrhea).

**Brucellosis:** Is a bacterial infectious disease of animals and humans. The disease in animals is caused by various species of brucella. It is generally limited to abortions and reproductive organ infections. In humans, the disease may mimic the flu with symptoms of headache, fever, fatigue, muscle and joint pain. Rare complications include crippling arthritis, endocarditis or meningitis. There is no cure for brucellosis in animals. Humans are treated with antibiotics for up to 4 to 6 weeks. Animals and humans are exposed to the brucella bacterium by contact with infected placentas, amniotic fluids, vaginal discharges, milk, semen, reproductive tissues, and exudates from infected animals usually just prior to and after an abortion.

**Leptospirosis:** Is a disease found in many animals but are most commonly associated with livestock and dogs. The source of infection can be from any of the following: Rats, mice, voles, hedgehogs, gerbils, squirrels, rabbits, hamsters, reptiles, dogs, sheep, goats, horses, pigs and standing water. Leptospire are in the urine of infected animals and are transmitted through direct contact with urine or tissues via skin abrasions or contact with mucous membranes. Transmission can also occur through inhalation of infectious droplet aerosols and by ingestion. The disease in people is a multi-systemic disease with chronic sequelae. An annular rash is often present with flu like symptoms, cardiac and neurological disorders may follow and arthritis is a common end result.

**Rabies:** Rabies virus (rhabdovirus) can infect almost any mammal. The source of infection is an infected animal. The virus is shed in saliva 1-14 days before clinical symptoms develop. Any random-source (animal with an unknown clinical history) or wild animal exhibiting central nervous system signs that are progressive should be considered suspect for rabies. Transmission is through direct contact with saliva, mucous membranes, or blood, e.g. bite, or saliva on an open wound. The incubation period is from 2 to 8 weeks or even longer. Symptoms are pain at the site of the bite followed by numbness.

The skin becomes quite sensitive to temperature changes and there are laryngeal spasms. Muscle spasms and extreme excitability are present and convulsions occur. Rabies in unvaccinated people is almost invariably fatal. Rabies vaccine is available through Occupational Health at Student Health Services.

**Other Diseases:** There are many other diseases that can possibly be spread through working with swine. Cryptosporidiosis, salmonellosis and yersinia enterocolitica are examples of some of the disease that can be transmitted via the fecal/oral route and manifest as acute gastrointestinal illness. Ascaris suum and influenza are examples of diseases that can be transmitted through inhalation. These diseases are exhibited by respiratory difficulty as well as gastrointestinal illness.

## Allergic Reactions

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.

## How to Protect Yourself

- Wear gloves. Wear the appropriate gloves for the task and wash your hands after removing gloves.
- Wear respiratory protection. For some activities, respiratory protection should be worn. Your supervisor should be your resource for this equipment. If you wear a respirator, you must be fitted and tested for use through Environmental Health & Safety.
- Other protective clothing. Coveralls should be available and worn when working with swine. Avoid wearing street clothes while working with animals.
- Seek Medical Attention Promptly. If you are injured on the job, promptly report the accident to your supervisor, even if it seems relatively minor. Minor cuts and abrasions should be immediately cleansed with antibacterial soap. For more serious injuries or if there is any question, students should report to OSU Student Health Services, employees (faculty and staff) to the Corvallis Clinic Occupational Health department.
- Tell your physician you work with swine. Whenever you are ill, even if you're not certain that the illness is work-related, always mention to your physician that you work with swine. Many zoonotic diseases have flu-like symptoms and would not normally be suspected. Your physician needs this information to make an accurate diagnosis. Questions regarding personal human health should be answered by your physician.