

ANIMAL AND HUMAN HEALTH PREVENTION OPPORTUNITIES

Better Biosecurity at Fairs for a Healthier Herd, Fitter Flock, and Happier and Healthier Humans

Fairs and petting zoos offer enormous educational and entertainment opportunities for our communities by providing children and adults with exposure to livestock and other domestic animals. Learning about animal husbandry and the unique lives of different animal species helps to strengthen the human-animal bond, spark interest in animal care, and promote animal welfare. It is imperative to teach youth the value of animals and animal care to encourage interest in animal health, livestock production, and veterinary medicine. Despite the benefits, fairs and animal exhibits require special consideration to keep the animals and the public safe and free from disease. Being aware of the potential risks and ways to mitigate potential for disease spread or injury will make fairs more enjoyable for the people and the animals. In this issue of Montana One Health, we describe the key concerns for management and care of exhibit animals and guidelines that will help to decrease risk of associated zoonotic disease transmission.

Risks for Humans at Fairs

- Zoonotic disease transmission
- Allergies associated with animals
- Injuries due to bites, kicks, falls, or scratches
- Internal and external parasites

Risks for Animals at Fairs

- Disease transmission from other animals and from humans
- Increased stress
- Injury

Human Illness Prevention Actions

Direct contact with animals or their environment can lead to disease in humans. Although anyone can get sick from a zoonotic disease, children younger than five, people who are immune compromised, adults older than 65, and people who are pregnant are more at risk of getting sick and having potentially severe outcomes. The best ways to prevent zoonotic disease transmission at fairs include providing an adequate number of handwashing stations at the exits to animal areas and educating visitors on the risk of disease transmission.

Lack of hand washing (lack of soap, running water, paper towels, or signs to remind); inadequate cleaning of surfaces; direct contact with animals; feeding animals; direct contact with manure, bedding, sawdust/shavings, and barriers; and improper separation of food services from animal contact areas all can contribute to the spread of disease from animals to humans.

Montana had a human case of swine influenza in September 2023. A child in Lewis and Clark county developed flu-like symptoms after visiting a fair. The child did not have any known direct contact with the pigs at the fair and fair organizers did not report any obvious illness in the pigs. Fortunately, the child recovered well, but this is an important reminder of the risk for disease transmission.

Animal Care and Management

Veterinarians can directly impact human health by working with petting zoo, fair, and other animal exhibit organizers to ensure the exhibits are as safe as possible for both the animals and humans. All animals in exhibits should be considered potential carriers of zoonotic diseases.

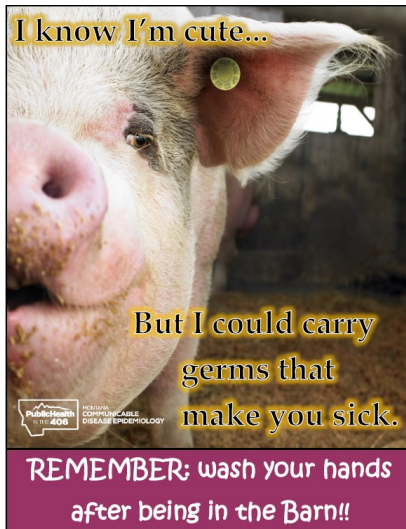
Animals should be monitored daily and any animals with signs of illness should be removed from display. Animals should have proper care from a licensed veterinarian and should have received all species-appropriate vaccines and parasite control. Animal housing should limit the potential for interactions with wildlife. Facility design should limit the risk associated with animal contact, including exposure to manure. See the Facility Design and Use section in the Compendium of Measures to Prevent Disease Associated with Animals in Public Settings.

When animals are returning home from a fair or exhibit, participants should adhere to basic biosecurity practices. These practices include isolation of returning or new animals from animal at the farm, cleaning and disinfection of all equipment and trailers that were used off farm, adequate washing of clothing and boots or using different footwear for on and off the farm and observing the animals for signs of illness after they return home.

Common Zoonotic Diseases Associated with Animals in Public Settings

- * Enteric diseases such as campylobacteriosis, salmonellosis, cryptosporidiosis, and Shiga toxin-producing *E. coli*
- * Internal parasites such as toxoplasmosis, roundworms, and hookworms
- * Skin infections such as Ringworm, parapox virus, cowpox virus, and mpox
- * External parasites including fleas, ticks, and mites
- * Aerosolized diseases such as influenza (swine/avian), tuberculosis, Q Fever, and *Chlamydia psittaci*
- * Other bacterial pathogens including *Pasteurella* spp, *Francisella tularensis*, *Staphylococcus* spp, *Streptococcus* spp, *Capnocytophaga canimorsus*, *Bartonella* spp
- * Other viruses such as Rabies from animal bites

For a comprehensive list of zoonotic disease in public settings including host, transmission, and symptoms please refer to Appendix 1 of the Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2023



Key Points for Protecting People and Animals at Fairs

- ◇ Do not allow consumption of food or beverages, smoking, use of bottles or pacifiers in the animal areas.
- ◇ Do not allow children to sit or play on the ground in animal areas or on manure.
- ◇ In areas with animal contact, 1-way flow of visitors is recommended with a separate entrance and exit.
- ◇ Ensure that animal feed bowl/bins and water are not accessible to the public.
- ◇ Promptly remove manure and soiled animal bedding.
- ◇ Train staff members to encourage appropriate human-animal interactions, to identify and reduce potential risks, and to process reports of injuries and exposures.
- ◇ Provide adequate ventilation for animals and peoples, but avoid creating air movement that distributes dust which may contain contaminants.
- ◇ Visitors to aquatic touch tank exhibits should be advised not to participate if they have open wounds.
- ◇ Post signs and notify visitors that they are entering an animal area and that there are risks associated. Include who may be at higher risk.
- ◇ Post signs to instruct visitors to wash their hands when leaving the animal area.
- ◇ Restrict storage, preparation, serving, and consumption of food and beverages to nonanimal areas.
- ◇ Provide handwashing stations and display handwashing signs where food and beverages are served.
- ◇ Clean and disinfect the animal area as necessary. Surfaces should be cleaned of organic material first and then disinfected appropriate to the area. Most disinfectants require at least 10 minutes of contact time for best result.
- ◇ Ill or injured animals, animals with known zoonotic infection, and animals from herds with recent abortion, diarrhea, or respiratory illness should not be exhibited.
- ◇ Sick or otherwise immunocompromised people should avoid exposure to exhibit animals.

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DPHHS and DOL have safety infographics available for display. DOL also has funding available for handwashing stations to be used at animal exhibits. Contact us for information.

Reference
Compendium of Measures to Prevent Disease Associated with Animals in Public Settings
<https://www.nasphv.org/Documents/AnimalsInPublicSettings2023.pdf>