Care and Use of Water Buffalo

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 water buffalo.

Injury and Potential Zoonotic Diseases

Water buffalo, like cattle, are herd animals and creatures of habit with strong territorial instincts. They hesitate to move into unknown areas and they are sensitive to noise and can be frightened or spooked easily. They have poor depth perception but good panoramic vision, so they can see to their sides, but not their hind quarters, so do not approach from their back side. Generally they are docile animals, but do kick and they kick forward and out so safety precautions should include long trousers, gloves, and shin guards. Ergonomic injuries such as back strain can occur from handling and restraining water buffalo due to their size and strength. Therefore, individuals with pre-existing back or joint problems may need assistance. When compared with other domestic livestock, the water buffalo generally is a healthy animal. However, zoonotic diseases, as with other animals, can be a health hazard. The following lists several of the diseases that are associated with the care and handling of water buffalo:

**Leptospirosis**: Is bacteria 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, standing water. Leptospires 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 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.

**Tuberculosis**: This disease may be transmitted to people through contact with birds, livestock, and non-human primates. Tuberculosis is usually transmitted by the aerosolization of infective bacilli which can be mainly found in the sputum as well as other body fluids. When dealing with animals, contact with body fluids during necropsy may be a major mode of transmission of tuberculosis to humans. Pulmonary tuberculosis is the most common type but other organs may also be involved.

**Ringworm**: Dermatophyte infection (most commonly *Microsporum* spp. and *Trichophyton* spp.) is
commonly known as ringworm because of the characteristic circular lesion often associated with it. Dermatophytes are classified as fungi and may not be readily apparent. Disease in people is from direct contact with infected animal. Ringworm is usually self-limiting, and appears as circular reddened rough skin and is responsive to prescription topical therapy.

**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 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 (sores) and scab with fever and headache which may be followed within a few days by severe illness such as septicemia and meningitis. Inhalation anthrax causes fulminating pneumonia. Intestinal anthrax is associated with acute gastroenteritis (nausea, vomiting, and bloody diarrhea).

**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, mucus 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 Services.

**How to Protect Yourself**

- **Wash your hands.** The single most effective preventative measure that can be taken is thorough, regular hand washing. Wash hands and arms after handling water buffalo. Never smoke, drink, or eat in the animal areas or before washing your hands.

- **Wear protective clothing.** When working with water buffalo wear appropriate coveralls and foot wear, and other equipment based on the work at hand, and remove them after completing the work.

- **Wear respiratory protection.** Dust masks should be worn if you already have allergies and are outside in dusty areas or while attending livestock in their enclosures.

- **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 and then protected from exposure to dirt and animal by-products. For more serious injuries or if there are any questions, employees should report to Occupational Health Services.

- **Tell your physician you work with cattle.** 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 water buffalo. 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.
Contact

Occupational Health Services
employeehealth@ucdavis.edu 530-752-6051

More information
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