

WILDLIFE TRANSMITTED DISEASES

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Living in rural areas offers many wonderful opportunities to see wildlife. Most of the time these experiences are awe-inspiring and avenues for learning. But sometimes they can put you in close contact with animals that have the potential to be dangerous to humans. Although events where human life is threatened by wildlife are uncommon, it is important to be aware of the risks and act responsibly when enjoying Arizona's rural areas. For example, some animals can transmit disease to humans. It is relatively easy to avoid contracting a disease from a wild animal by staying informed and taking necessary precautions.

Hantavirus Pulmonary Syndrome

Wild rodents like deer mice, cotton and rice rats, and white-footed mice are vectors for Hantavirus and can transmit Hantavirus Pulmonary Syndrome (HPS) to humans. HPS is a disease that people can get directly from being in contact with infected wild rodents or indirectly by breathing in particles from rodent urine, droppings or nest materials. Although uncommon, Hantavirus is found throughout the U.S. and can be fatal in people. Once contracted, however, Hantavirus is NOT transmitted from person to person. The best prevention is rodent control in and around your home.

To prevent rodents from visiting your home and sheds, seal up rodent entry holes or gaps with steel wool, metal screening, or caulk and clean up rodent food sources and nesting sites. You can also trap rats and mice by using an appropriate snap trap. You will need to take special precautions when cleaning rodent-infested areas. The CDC recommends the following:

- Put on disposable rubber, latex, vinyl or nitrile gloves and a breathing mask.
- Do not stir up dust by vacuuming, sweeping, or any other means.



COURTESY OF THE CDC

Deer mice are vectors for Hantavirus.

- Thoroughly wet contaminated areas with a bleach solution (1.5 cups of bleach per gallon of water) or household disinfectant.
- Once everything is wet, remove contaminated materials with a damp towel and then mop or sponge the area with bleach solution or household disinfectant.
- Spray dead rodents with disinfectant and then double-bag the body and all cleaning materials. Bury, burn, or throw out dead rodents in an appropriate waste disposal system. (Contact your county or state health department concerning other appropriate disposal methods.)
- Disinfect gloves with disinfectant or soap and water before taking them off and throwing them away
- After throwing away the gloves, thoroughly wash hands with soap and water (or use a waterless alcohol-based hand rub when soap is not available).

If you have been exposed to rodents or rodent infestations and have symptoms of fever, deep muscle aches, and severe shortness of breath, see your doctor immediately. Inform your doctor of possible rodent exposure so that he/she is alerted to the possibility of rodent-borne diseases, such as HPS.

Rabies

Rabies is a viral disease that can be transmitted to humans through the bite of an infected mammal, most frequently skunks, foxes, raccoons and bats. Once contracted, rabies affects the central nervous system with flu-like symptoms developing early on. Once symptoms appear, rabies is not treatable and is fatal. Symptoms include insomnia, anxiety, confusion, fear of water, slight paralysis, hallucinations, agitation, and difficulty swallowing. Fortunately, if rabies is caught before the onset of symptoms, a post-exposure vaccine can be administered by a doctor. If you have been bitten by an animal you do not know or one that is behaving strangely, see a health care professional immediately. The CDC has several recommendations to avoid being exposed to rabies:

- Keep vaccinations up to date for all dogs, cats, and ferrets. This requirement is important not only to keep your pets from getting rabies, but also to provide a barrier of protection for you, if your animal is bitten by a rabid wild animal.
- Do not handle, feed, or unintentionally attract wild animals with open garbage cans or litter.
- Never adopt wild animals or bring them into your home. Do not try to nurse sick animals to health. Call animal control or an animal rescue agency for assistance.
- Teach children never to handle unfamiliar animals, wild or domestic, even if they appear friendly; nor to handle or touch any animal found on the ground or that appears sick.
- Prevent small wildlife from entering living quarters or occupied spaces where they might come in contact with people and pets.

West Nile Virus

West Nile virus (WNV) is generally transmitted to humans through mosquitoes that have fed on infected birds. The virus can affect people in a couple ways: 1) West Nile fever causes mild flu-like symptoms that last a few days while 2) West Nile encephalitis, which is more rare, causes more serious symptoms such as headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions and paralysis. The best prevention against contracting WNV is mosquito control. The CDC offers several recommendations to decrease your chances of becoming infected:

- Remove standing water around your home. If you have a fountain or other small water feature, you can buy mosquito “dunks” or “chunks,” made of materials



West Nile virus is generally transmitted to humans through mosquitoes.

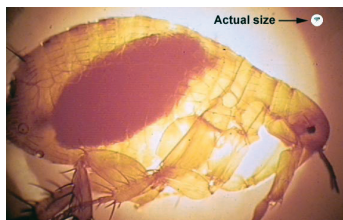
that prevent mosquitoes from reproducing (generally available at places like Ace Hardware, Home Depot).

- Replace water in birdbaths frequently.
- Clean birdbaths and allow to dry thoroughly at least twice a week (this will also help reduce transmission of other diseases among birds).
- Any time you are in areas with mosquitoes (and especially at dawn or dusk) wear clothing that covers as much skin as possible. Since mosquitoes can bite through thin fabrics, wear thicker clothing or apply repellants onto your clothing.

Plague

Plague is an infectious disease that can be transmitted from animals to humans. People usually get plague from being bitten by a rodent flea that is carrying the plague bacterium or by handling an infected animal. In Northern Arizona, the most common vectors are fleas from Gunnison's prairie dog, but other rodents and even coyotes and domestic pets can carry plague-infected fleas as well. Fever, headache and extremely painful, swollen glands are signs that a person has been infected with plague. Antibiotics given at the first sign of illness are extremely effective against plague, but plague can be fatal if left untreated. The best prevention is to eliminate food and shelter for rodents and coyotes in and around your home. Remove brush, rock piles, junk, and food sources (such as pet food), from your properties. In addition, treat your pets (dogs and cats) regularly for fleas.

Enjoying Arizona's rural areas is full of excitement. With a little prevention, you can ensure that your chances of contracting a disease from a wildlife encounter are



Fleas carry plague from infected rodents to humans.

minimized. For more information on vector biology, wildlife conflicts and prevention, see:

Mosquitoes
ag.arizona.edu/pubs/insects/az1221.pdf

Arizona Dept of Health Services
 Vector Borne and Zoonotic Diseases
azdhs.gov/phs/oids/vector/index.htm

Centers for Disease Control:
cdc.gov/ncidod/dvbid/westnile/index.htm

cdc.gov/rabies/

cdc.gov/ncidod/diseases/hanta/hps/index.htm



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cals.arizona.edu/pubs/natresources/az1481f.pdf

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