

Wildlife DISEASES

Many wildlife diseases are transmissible to humans. Diseases such as rabies and plague are familiar to many people, but there are other, lesser known diseases that also are significant to human health. Persons who often come in contact with wildlife should be aware of these diseases and take precautions to minimize the risk of infection. Even without contact with wildlife, some diseases can be transmitted by ticks or fleas or by ingestion of contaminated food and water. Anyone who engages in outdoor activities should know about disease prevention methods.

Rabies

Rabies, sometimes called "hydrophobia," is a viral disease that affects the central nervous system. Rabies is normally transmitted to humans from the bite of a rabid animal or from the saliva of a rabid animal entering the blood stream through open cuts or scratches. Only warm-blooded animals are susceptible to the rabies virus. In Texas, the most commonly infected wild animals are skunks, bats, coyotes, raccoons and foxes. Rabid animals cannot always be identified easily. Any animal that seems abnormal in appearance or behavior, acting either overly aggressive or unusually tame, should be avoided. There is the possibility of rabies exposure with any wild animal bite or attack, so if this occurs the Texas Department of Health should be contacted.

Giardiasis

Giardiasis is an intestinal disorder caused by the protozoan *Giardia lamblia*. Human infection can occur from ingestion of Giardia cysts in contaminated water, or from contact with an infected individual. Wild animal feces also can be a source of Giardia infection and may contaminate lake and stream water. In Texas, the beaver is an important source of transmission. Symptoms of giardiasis include chronic diarrhea, abdominal cramps, bloating and fatigue. Giardiasis is not usually a life threatening disease, and once diagnosed can be effectively treated with medication. To prevent the disease, avoid drinking or accidentally ingesting untreated water.

Plague

Bubonic plague, the disease responsible for the infamous "Black Death" of the Middle Ages, is still with us today and occurs in some areas of west and north central Texas. Isolated cases have been documented in areas of south and east Texas. It is caused by the bacterium *Yersenia pestis* and can be found in wild rodent and rabbit populations. Fleas transmit plague from animal to animal.

Though human cases of plague are rare, people may be exposed to the disease if they handle infected animals or are bitten by an infected flea. Early symptoms of bubonic plague include fever and swollen lymph nodes, progressing to high fever, confusion and fatigue. Untreated bubonic plague has a relatively high fatality rate, but

prompt treatment with tetracycline or other drugs can be effective.

People living in areas where plague occurs can protect themselves by controlling fleas with insecticides and by controlling commensal rodent populations. It is also wise to use insect repellent when outdoors and avoid contact with wild rodents and rabbits.

Rocky Mountain Spotted Fever

Rocky Mountain Spotted Fever is a serious disease caused by the bacterium *Rickettsia rickettsii*. It can be transmitted to people by several species of ticks, including the lone star tick, American dog tick and brown dog tick. Symptoms of the disease may first appear "flu-like" and include fever, chills and muscle aches. Within several days a characteristic rash appears on the wrists and ankles.

Most often, the source of human infection is a tick bite, but infection can be transmitted from crushed ticks and infected tick feces left on the fur of animals. It is very important to wear rubber gloves when handling ticks and tick infested animals, and to wash hands thoroughly afterward. When outdoors, check frequently for attached ticks and remove them carefully without crushing them or leaving mouth parts in the skin. An infected tick usually must remain attached for at least four (4) hours to transmit the disease.

Lyme Disease

Lyme disease, first recognized in Old Lyme, Connecticut, is caused by the bacterium *Borrelia burgdorferi* and is transmitted by several species of ticks and fleas. The symptoms of Lyme disease are variable, but generally progress through three stages. At first there are "flu-like" symptoms such as fatigue, fever, sore throat, nausea and coughing. According to the Texas Department of Health, many of those infected develop a small red lesion around the site of the tick or flea bite. As the disease progresses many persons experience recurrent arthritis, usually in the knee and elbow joints.

Tularemia

Tularemia, sometimes called "rabbit fever," is caused by the bacterium *Francisella tularensis*.

Although tularemia affects many species of wild animals, it is most commonly transmitted to humans from infected rabbits, usually during the skinning process when the bacteria enter the body through open cuts, scratches or sores on the hands. Infection also can occur from eating undercooked meat and from tick and flea bites. Tularemia can be a water-borne disease spread by beavers and muskrats, but this mode of transmission is rare in the southern states.

Symptoms of tularemia infection include fever, infected sores at the point where the bacteria entered the body, and general "flu-like" symptoms. With prompt medical treatment, few cases are fatal. The best defense against infection is to avoid contact with infected animals. Infected rabbits usually appear lethargic and uncoordinated. Internal evidence of infection is the presence of numerous small, white spots on the rabbit's liver and spleen. Gloves should be worn when skinning rabbits.

Leptospirosis

Leptospirosis is caused by the bacterium *Leptospira interrogans*. It affects a wide variety of wildlife species, including skunks and raccoons. Human cases of leptospirosis usually are transmitted from commensal rodent populations. Infection can occur from direct or indirect contact with the urine of infected animals, either in food or water or on surface areas. In humans, the disease can range from very mild and unnoticeable to serious and life threatening. Symptoms include fever, headaches, weakness and vomiting. Commensal rodent control and proper sanitation are important in reducing the risk of infection.

Histoplasmosis

Histoplasmosis is a respiratory ailment caused by the fungus *Histoplasma capsulatum*. The fungus can be found in soil with high organic content. Infection occurs when spores of the fungus are inhaled. Histoplasmosis is associated with blackbird and pigeon roosts, bat caves and chicken houses. Excrement from these animals provides an ideal environment for the fungus.

Histoplasmosis infection may take many forms, and symptoms of the disease are highly variable. Most commonly, an infection results in

mild respiratory trouble which may go undiagnosed. But severe cases, resembling tuberculosis, also occur. The risk of infection can be reduced by avoiding dust in such areas as bird roosts and the insides of barns, silos, attics and caves inhabited by birds and bats.

Hantavirus

Hantavirus includes a group of viruses that can cause febrile illness in humans, sometimes accompanied by kidney, blood, or respiratory ailments. It can sometimes be fatal. The febrile illness includes fever, headache, muscle aches, nausea, vomiting and lower back pain. Field and commensal rodents are the natural reservoirs for

viruses in this group and these viruses are found worldwide. Infected rodents shed viruses in their urine, feces and/or saliva and can remain chronically infected. The contaminated excreta from infected rodents are thought to be the source of virus for aerosol and direct (animal bite) transmission to other rodents and humans.

Human exposure to hantavirus is prevented by avoiding contact with rodents and rodent-infested areas, by controlling rodent populations, and by proper sanitation.

For additional information contact the nearest office of Texas AgriLife Extension—Wildlife Services.

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Animal and Plant Health Inspection Service—Wildlife Services.

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