

Prevent Animal-Borne Diseases This Summer

Summertime brings the risk of contracting certain animal-borne diseases, such as rabies, West Nile virus, Western equine encephalitis, Hantavirus pulmonary syndrome, plague, tularemia, and Colorado tick fever. These diseases can be carried by various animals and insects such as rodents, mosquitoes or ticks and then transmitted to humans. They also are more common during the summer when people tend to be outdoors more often and wild animals and insects are active.

State health epidemiologists and San Juan Basin Health Department officials recommend that everyone help control the presence of rodents and mosquitoes around their home; and, when heading outdoors, particularly to areas where wild animals and insects are active, wear insect repellent, appropriate clothing and protect pets from fleas and ticks. And, remember not to handle sick or dead animals or animal waste.

The following few precautions go a long way towards preventing animal-borne disease.

Rabies

Rabies is an infectious viral disease that affects the nervous system of humans and other mammals. People get rabies from the bite of a rabies-infected animal (rabid animal). Any wild mammal, such as raccoon, skunk, fox, coyote or bat can have rabies and transmit it to people through a bite. It is also possible, although rare, for persons to get rabies when infectious material, such as saliva from a rabid animal, gets into an individual's eyes, nose, mouth or open wound. Bats are by far the most common carriers of rabies in Colorado.

Bats and Rabies: Rabies can only be confirmed in a laboratory. However, any bat that is active by day (seen in places where bats are not usually seen, i.e. indoors, on the lawn) or any bat that is unable to fly, is much more likely to be rabid than others. Thus, the best advice is to not handle any bats. It is also a good idea to keep bats from entering your home by using screens or closing windows, doors and other openings. If you find a dead bat, use a shovel to place bat in plastic bag, tie knot in bag and dispose of bag in outdoor trash container. Unusual bat activity or dead bat locations can be reported to your local public health department to assist in surveillance efforts.

Bites and Exposures: If bitten by a bat, dog, cat, raccoon or other mammal, wash the affected area thoroughly and seek medical advice immediately. Contact the local animal control agency and notify them of the location of the animal so that, if indicated, the animal can undergo appropriate testing or quarantine.

West Nile Virus and Western Equine Encephalitis

These diseases are carried by mosquitoes and can be passed on to humans through the familiar mosquito bite. Both can also cause encephalitis or inflammation of the brain and lining of the brain and spinal cord. Encephalitis can be life threatening for anyone and is particularly serious for those whose ability to fight off infections is compromised. Not all mosquitoes carry disease; the mosquitoes of greatest concern are the *Culex tarsalis* and

Culex pipiens, medium-sized mosquitoes that feed primarily in the few hours around dawn and dusk.

Preventing mosquito-borne disease: The best way to prevent mosquito-borne disease is to mosquito proof your home and backyard and prevent mosquito bites. Wearing appropriate clothing and insect repellent when outdoors can greatly reduce your risk of being bitten. This is especially important during dawn or dusk, when mosquitoes are eating. For a complete list of repellents and their effectiveness, please visit www.fightthebitecolorado.com

Culex mosquitoes breed in almost any source of standing water, including old tires, irrigated fields, flowerpots, tree holes, or any puddle of water that lasts for more than a few days. Mosquitoes lay up to 250 eggs at a time in still water, which hatch into adult mosquitoes in as few as 2-3 days. If standing water is eliminated weekly, many mosquitoes will be kept from breeding in the first place.

Symptoms: Although most people who are infected with mosquito-borne viruses do not become ill and have no symptoms, others may develop symptoms between 3 and 14 days after being bitten. Symptoms may include fever, headache and tiredness lasting about 2-7 days. In some cases, the virus can cause a more serious brain infection such as aseptic meningitis or encephalitis. These infections begin with a sudden onset of high fever and a headache, and then may progress to stiff neck, disorientation, tremors, and coma. Severe infections can result in permanent impairment or death. There is no specific treatment for infection with these viruses except supportive care.

Plague

Plague is a disease caused by a bacterium named *Yersinia pestis*. These bacteria can be transmitted to humans by the bites of infected fleas or by direct contact with infected animals. Plague is frequently detected in rock squirrels, prairie dogs, wood rats and other species of ground squirrels and chipmunks. It is also found in fox squirrels, a tree squirrel common in front range city parks and residential areas. In La Plata County and elsewhere, public health professionals monitor prairie dog populations for the presence of plague. A die-off of prairie dogs is often a signal that plague is active. Citizens are requested to report any sizable rodent or rabbit die-off to their local public health department. San Juan Basin Health at 247-5702, ext.224 or email.

Symptoms: The incubation period for plague is usually 2-6 days. Typical symptoms include sudden onset of fever and chills, severe headache, muscle aches, nausea, vomiting and a general feeling of systemic illness. Lymph node pain and swelling is a suggestive symptom of bubonic plague. Treatment with antibiotics is effective during the early stages of disease.

Preventing plague: The best way to prevent plague is to control the presence of rodents and fleas in and around the home. In addition, people should avoid contact with any species of wild rodents, especially sick or dead rodents. Dogs and cats should be confined so they cannot prey on infected rodents and then bring the disease home with them. Pet

owners who live close to rodent populations should use flea control products recommended by their veterinarian. Controlling fleas on pets will prevent the transfer of fleas to humans. If these reasonable precautions are taken, the probability of contracting plague is extremely low

If a dead rabbit, squirrel, prairie dog or other rodent is found, do not directly handle the animal. Use gloves and place in a plastic bag. Large die-offs of dead squirrels, prairie dogs, other rodents and rabbits should be reported to San Juan Basin Health at 970-247-5702, ext. 224.

Hantavirus Pulmonary Syndrome

Hantavirus pulmonary syndrome (HPS) is a serious respiratory disease caused by a virus (hantavirus). Hantavirus is carried by wild rodents, particularly deer mice, and is present in their droppings (feces), urine and saliva. These dried droppings or urine can be stirred up in dust and breathed in by people. People may get hantavirus when they breathe in air contaminated by the virus. Hantavirus has not been shown to infect other kinds of animals, such as dogs, cats or farm animals. The disease is not contagious and does not spread from human to human.

Symptoms: The incubation period (time between exposure and appearance of symptoms) varies widely, but ranges from 1 to 6 weeks, with an average of 2-3 weeks. First symptoms of HPS include fever, headache, and muscle pain, severe abdominal, joint and lower back pain, nausea and vomiting. A cough and shortness of breath usually develops 1 to 5 days after the onset of symptoms. The primary symptom of HPS is difficulty in breathing due to fluid build-up in the lungs. This can quickly progress to respiratory failure.

Preventing Hantavirus: The best way to prevent the risk of hantavirus infection is to control the presence of rodents in and around the home. This includes sealing up rodent entry holes or gaps; trapping mice and rats; and, being careful not to create food sources for the rodents, i.e. keeping yard clean and putting away pet food. Hantavirus is often encountered when cleaning vacated sheds, cabins or other enclosed areas, so it is especially important that areas where rodents have been are cleaned cautiously and carefully. Areas should not be swept or vacuumed as this can stir up dust. Instead, use gloves and thoroughly wet contaminated areas with a bleach solution or household disinfectant. Once wet, contaminated materials can be taken up with damp towel and then mopped or sponged with bleach solution or household disinfectant. Contaminated gloves should be disinfected before taking them off. After taking off the clean gloves, wash hands with soap and warm water.

Colorado tick fever

Colorado tick fever is caused by a virus that thrives in the environment through a rodent-tick-rodent cycle. The virus can be transmitted to humans by the bite of an infected Rocky Mountain wood tick. Ticks emerge in the mountains of Colorado in late March and are present throughout the summer with the peak season occurring in late May through early June.

Symptoms: Colorado tick fever is the most common tick-borne disease in Colorado. However, it is believed that most cases go unrecognized. This viral illness is characterized by fever, headache, body aches, nausea, abdominal pain, and lethargy. Symptoms usually last 4-5 days, followed by an apparent recovery, and then a relapse with symptoms for 2-3 more days. Complete recovery can take 2 or 3 weeks. The disease is not life threatening and infection results in life-long immunity.

Tularemia

Tularemia is bacterial disease associated with various animal species, especially rodents, rabbits, hares and beavers. Humans can be infected with the bacteria, which is treatable with appropriate antibiotics. People can get tularemia from many different sources including through the bite of an infected insect (usually a tick or deerfly), handling infected animal carcasses, consuming contaminated food or water, or by inhalation of the bacteria. Although this disease can occur throughout the year, the peak times correspond with tick season (in spring and summer and with the rabbit hunting season in early winter. Tularemia is not spread from person to person.

Symptoms: Symptoms of tularemia disease usually appear 3-5 days after exposure and can include a sudden high fever, headaches, swollen lymph nodes, muscle and joint pain, and a sore or lesion at the site where the bacteria entered the body. In addition, if the bacteria are ingested, such as by swallowing contaminated water or eating improperly cooked/prepared rabbit meat, a person may have a sore throat, abdominal pain, vomiting or diarrhea. If any of these symptoms are noted after handling dead animals or swallowing untreated drinking water (as you find in a creek), contact your physician.

Preventing Tularemia:

Recommendations for avoiding exposure to tularemia include the following:

- Do not handle sick or dead animals. Instruct children to leave wildlife alone.
- Wear rubber gloves when skinning or handling animals, especially rabbits.
- Thoroughly cook meat from wild game, especially rabbit and squirrel meat, before eating.
- Use protective clothing and insect repellents to avoid deerfly and tick bites.
- Conduct frequent “tick checks”.
- Avoid untreated drinking water.
- Use DEET or other tick repellent during the Colorado tick season. Ticks emerge in the mountains of Colorado in late March and are present throughout the summer with the peak season occurring in late May through early June.

For more information on animal borne disease and prevention visit the Colorado Department of Health and Environment Web site: <http://www.cdphe.state.co.us> or the Centers for Disease Control and Prevention (CDC) at <http://www.cdc.gov>

Individuals may call the San Juan Basin Health Department’s Zoonosis Program at 970-247-5702, ext. 228.