



By MSgt. Gary L. Johnson, USAF (Ret.)
Ground Safety Manager
Grand Forks Air Force Base

Outdoor activities, such as camping, hiking, fishing, or picnicking, offer obvious rewards. However, they also present dangers—dangers so small you can't see them, but they're as deadly as any you'll ever meet in your lifetime.

What are these tiny hazards? *Giardia lamblia*, tularemia, hanta virus, plague, Rocky Mountain spotted fever, hepatitis, and rabies, to name just a few of the hundreds of bacteria, viruses, and organisms that can infect hunters, fishermen, campers, and hikers. Many of you have heard of rabies, hepatitis, plague, and maybe even the highly publicized hanta virus and Lyme disease, but what about the others? Maybe the more common names will spark your memory: *Giardia lamblia* is also called beaver fever, and tularemia is rabbit fever.

Beaver Fever

According to *Opflow* (a publication of the American Water Works Association), beaver fever is caused by the most common disease-causing, intestinal parasite (*Giardia lamblia*) in the United States. This strong-willed micro-bug can thrive in a wide temperature range and fends off typical chlorination and filtration procedures. The parasite enters the water supply through the feces of a host, and while many animals can serve as a host, the main culprit is thought to be the beaver. Symptoms include severe diarrhea, nausea, vomiting, fatigue, and may mimic a peptic ulcer or gall-bladder disease. Symptoms usually appear from five to 25 days after exposure.

The best way to avoid this disease is to never drink directly from creeks, rivers, lakes, ponds, and other free-flowing or free-standing bodies of water that animals or people use as toilets. Other effective methods include boiling drinking water or using

water-filtration devices especially designed to combat *Giardia*. Some purification tablets that contain iodine are effective, too, but you may wish to add some pre-sweetened drink mix to improve the taste of the treated water. One thing to remember: Beaver fever can be transmitted from one person to another, especially if the infection involves a young child, infant, or handicapped person who requires help in controlling an active case of diarrhea.

Rabbit Fever

Tularemia is a disease caused by a bacterium, *Francisella tularensis*, which can affect both animals and humans. Most cases occur during the summer when deerflies and ticks are abundant and in the early winter months during rabbit-hunting season. You can get tularemia from the bite of infected blood-sucking insects, such as deerflies. You also can get it by getting blood or tissue from an infected animal into your eyes, mouth or openings in your skin, such as cuts and scratches. Another way of contracting the disease is by eating rabbit meat that has not been cooked well. Rabbit fever is not communicable.

Symptoms of rabbit fever include fever, chills, headaches, muscle aches, chest pains, and coughing. They usually appear within three to five days after exposure, although they may appear in as little as two or as many as 10 days from infection. Antibiotics are effective in most cases, but prevention is the best method. Wear insect repellent containing DEET when hunting. Wear surgeon's gloves when skinning rabbits, and cook wild rabbit meat thoroughly.

Diehard outdoors people who may be thinking these diseases are no big deal—just like cases of flu—should consider this: While symptoms associated with these diseases are not life-threatening if



you're home or near medical help at the onset, they can be killers if you're still in the woods. The severe diarrhea associated with beaver fever can quickly cause dehydration that can and does affect your ability to reach safety. Likewise, the headaches, muscle aches, chills, fever, and chest pain that are the symptoms of rabbit fever can have the same effect.

Hanta Virus, Plague, and Rocky Mountain Spotted Fever

Of these three, hanta virus is the deadliest; it is always fatal if untreated. Thirty-five percent of people who contract hanta virus die! This virus is passed in the urine of the deer mouse, and becomes airborne on dust particles. Most infections occur when people are exposed to these pathogens while cleaning in places where deer mice have been present. Sweeping an old cabin or shed, or shaking out an old rug or blanket can carry the particles into the air and into your lungs. This disease is widespread, with cases occurring in 30 of the 50 states. It appears to be more common in the Western U.S. Symptoms are almost flu-like, with fever, muscle aches and fatigue being common. There is no vaccine for this virus.

Plague—the “Black Death” that wiped out one-third of Europe during the middle ages—is transmitted by fleas that normally infest rodents, such as mice, rats, squirrels, and prairie dogs. Sporadic outbreaks of plague still occur today in the West and Southwestern United States. Symptoms include swollen or tender lymph glands and fever that appears within one to six days after exposure. The disease can progress to a generalized blood infection (septicemic plague) or pneumonic plague. People or pets (both dogs and cats) with pneumonic plague may transmit the virus to others when coughing. Antibiotics are effective.

The last and least lethal of these three diseases is Rocky Mountain spotted fever, transmitted by the Rocky Mountain tick, *Dermacentor andersoni*, and other related ticks. Infection normally results from being bitten by an infected tick. The disease occurs more commonly in the East, from New York to Florida and Alabama to Texas. April through September are the months of highest incidence, but it can occur anytime during warm weather. Symptoms are fever, headache, rash, and nausea or vomiting, normally occurring three to 12 days after a tick bite. Left untreated, this disease can kill. There is no vaccine.

Why take chances with these deadly diseases? Use insect repellents with DEET to keep fleas, ticks and other pests at bay. Another product, Permanone (a tick repellent), is an aerosol that you apply to clothing.

If you're going on an overnight hiking, camping or hunting trip, carry enough water or a water purifier rated for *Giardia* with you. If you get tired and have a choice of pitching a tent or staying in an old shack, pitch the tent. Carry a bar of soap and wash your hands frequently if water is available. Carry alcohol swabs and use them in the absence of water. Also, waterless hand sanitizers are available. If you're hunting, carry disposable gloves (like surgeons or hairdressers use) for skinning, and always cook the meat thoroughly.

If you don't feel well after a field trip, go to your doctor and explain, in detail, where you've been and what you've been doing. This is particularly important for travelers. Doctors won't be as likely to suspect a disease that doesn't occur as frequently in the geographic region.

For more information on these and other diseases log on to: www.medsout.com/diseases/infections/index.htm