



Rocky Mountain Spotted Fever (Veterinary) FACT SHEET

What is Rocky Mountain spotted fever?

Rocky Mountain spotted fever (RMSF) is a potentially fatal illness caused by the *Rickettsia rickettsia* bacteria. The organism is spread by ticks and is found throughout the United States, primarily in the southeast Atlantic states and South-central region. According to the CDC, approximately 700 cases of RMSF are reported annually in the U.S., most commonly from April through September.

How is RMSF spread?

RMSF is primarily transmitted by the bite of an infected tick. The American dog tick (*Dermacentor variabilis*), Rocky Mountain wood tick (*Dermacentor andersoni*) and brown dog tick (*Rhipicephalus sanguineus*) are the principal vectors in the U.S. for RMSF. The Lone Star tick (*Amblyomma americanum*) has also been suggested as a possible vector in the southwest United States. Infection can also occur from:

- direct contact with tissues, fluids or feces from infected ticks
- laboratory accident
- blood transfusions (extremely rare)

How does the disease affect people?

The incubation period for RMSF is 2 to 14 days, with an average of 7 days. RMSF can be difficult to diagnose early in the disease because initial symptoms may be nonspecific. Early symptoms may include fever, headache, abdominal pain, vomiting, and muscle pain. A non-pruritic macular rash may develop several days after the initial symptoms and typically begins on the wrists, forearms, ankles or scrotum. The rash consists of small red or purple spots on the skin that do not blanch (whiten) when pressed. RMSF can also affect the respiratory system, central nervous system or kidneys. Recovery is typically rapid with early treatment, but untreated patients may die and severe cases may require hospitalization. Untreated cases that are not fatal can be symptomatic for weeks or months.

What are the signs of RMSF in animals?

RMSF is only symptomatic in dogs; however, *R. rickettsia* has been isolated from small mammals including opossums, rabbits, chipmunks, squirrels, mice and rats. The signs are variable, with the most common being fever, anorexia and depression. Other symptoms include coughing, abdominal pain, diarrhea, vomiting, edema, oculonasal discharge, and thrombocytopenia. Neurological disease may be seen in a third of cases. Untreated survivors usually recover after two weeks. Chronic infections have not been reported.

How can I protect myself from ticks to avoid RMSF?

- Know where to expect ticks. Ticks live in moist and humid environments, particularly in or near wooded or grassy areas. You may come into contact with ticks during outdoor activities around your home or when walking through vegetation such as leaf litter or shrubs. Always walk in the center of trails to avoid vegetation that may be harboring ticks.
- Use a repellent with DEET (on skin or clothing) or permethrin (on clothing) and wear long sleeves, long pants and socks. Products containing permethrin can be used to treat boots, clothing and camping gear which can remain protective through several washings. Repellents containing 20% or more DEET (N, Ndiethyl-m-toluamide) can be applied to the skin, and they can protect up to several hours. Always follow product instructions! Parents should apply this product to their children, avoiding the hands, eyes, and mouth.
- Wear light-colored clothing, which allows you to see ticks crawling on your clothing.
- Tuck your pant legs into your socks so that ticks cannot crawl up inside of your pant legs. Some ticks can crawl down into shoes and are small enough to crawl through most socks.
- Look for ticks on your body, including in your hair, when you return from hiking or walking. Remember to check children and pets for ticks as well.

What is the correct way to remove a tick?

Using tweezers, grasp the tick firmly as close to the skin as possible. Pull the tick with a firm and steady motion until it is removed. Do not twist or pull back sharply, as this may tear the mouthparts from the body, leaving them embedded in the skin. The mouthparts alone generally cannot transmit disease because the tick can no longer pump saliva into the skin. However, to prevent secondary infection from germs that may be on the mouthparts, any remaining mouthparts should be removed in the same manner as you could remove a splinter. After removing the tick (and mouthparts), clean the skin in the area of the tick attachment with soap and water. The tick can be flushed down the toilet. Note the date when the tick was removed. Do not remove the tick with your bare hands. Do not crush the tick or use a match, nail polish, or any other substance to remove a tick. These methods could force tick saliva (containing the organism) into your skin or rupture the tick, releasing contaminated blood from the tick on your skin. The organisms in the contaminated blood can enter breaks in the skin and result in infection.

How do I protect my pets from ticks?

If you find a tick on your pet, follow the same procedure for removal. Discuss flea and tick prevention products with your veterinarian.

How do I protect my yard from ticks?

- Regularly remove leaf litter and clear tall grasses and brush from around the home.

- Place wood chips or gravel between lawns and wooded areas to keep ticks away from recreational areas.
- Provide a vegetation-free play area. Keep play areas and playground equipment away from shrubs, bushes, and other vegetation.
- Use a chemical control agent. Effective tick control chemicals are available for use by the homeowner, or they can be applied by a professional pest control expert, and even limited applications can greatly reduce the number of ticks.
- Discourage deer. Removing plants that attract deer and constructing physical barriers may help discourage deer from entering your yard and bringing ticks with them.

Where can I get more information on RMSF?

www.cdc.gov

www.dshs.state.tx.us

www.cfsph.iastate.edu

Source of Information

Centers for Disease Control and Prevention (CDC)

Department of State Health Services

The Center for Food Security & Public Health

June 2016

VPH/OPI