

Spotted Fever Group Rickettsioses

Frequently Asked Questions

What are spotted fever group rickettsioses (spotted fevers)?

Spotted fever group rickettsioses (spotted fevers) are a group of diseases caused by closely related bacteria. These bacteria are spread to people through the bite of infected mites and ticks. The most serious and commonly reported spotted fever group rickettsiosis in the United States is Rocky Mountain spotted fever (RMSF). Spotted fevers can range from mild to life-threatening.

Other causes of spotted fever group rickettsioses (spotted fevers) in the United States include:

- *Rickettsia parkeri* rickettsiosis, caused by *R. parkeri*
- Pacific Coast tick fever, caused by *Rickettsia philipii*
- Rickettsialpox, caused by *Rickettsia akari*

How do people get spotted fever group rickettsioses?

People get spotted fevers through the bite of an infected tick or mite. Spotted fevers **not** contagious from person to person.

- *Rickettsia parkeri* rickettsiosis is caused by infection with the bacteria *R. parkeri* and is spread by the bite of infected Gulf Coast ticks, which are found in the southeastern United States.
- Pacific Coast tick fever is caused by the bacteria *R. philipii* and is spread by the bite of infected Pacific Coast ticks, which are found along the western coastline in California, Oregon, and Washington.
- Rickettsialpox is caused by the bacteria *R. akari* and is spread through the bite of infected mouse mites. Cases occur occasionally throughout the United States, and are most often reported in the northeastern United States, particularly New York City.

What are the symptoms of spotted fever group rickettsioses?

The first sign of many spotted fevers (including *Rickettsia parkeri* rickettsiosis, Pacific Coast tick fever, or rickettsialpox) is generally a dark scab at the site of tick or mite bite, known as an eschar. Eschars usually develop a few days to a week following the bite of an infected tick or mite.

Several days after an eschar develops, patients can develop other signs and symptoms, including:

- Fever
- Headache
- Rash
- Muscle aches

R. parkeri rickettsiosis, Pacific Coast tick fever, and rickettsialpox are less severe than RMSF; however, it can be difficult to distinguish between RMSF and other spotted fevers, especially during early stages of these diseases.

How are spotted fever group rickettsioses diagnosed?

The signs and symptoms of spotted fevers are similar to those of many other diseases. See your health care provider if you develop the signs or symptoms of spotted fevers. Be sure to tell your health care provider if you become ill and have recently been bitten by a tick, exposed to mice, or have spent time in areas where ticks or mice may be found.

What is the treatment for spotted fever group rickettsioses?

Some spotted fevers are not life-threatening and can resolve over time, even without treatment. For others, especially RMSF, early treatment with the antibiotic doxycycline can be lifesaving. Doxycycline is the recommended antibiotic treatment for all spotted fevers, including RMSF in adults and children of all ages. Since it frequently takes many days for blood tests to show positive results, treatment usually begins before test results are available. (NOTE: It is very important to finish your antibiotics even if you begin to feel better, unless otherwise directed by your health care provider.)

Can people with spotted fever group rickettsioses pass the illness to others?

Spotted fevers are spread only through the bite of an infected tick or mite. Infected persons cannot pass the disease to other people.

What spotted fever group rickettsioses occur outside of the United States?

Spotted fevers occur worldwide and cause a wide range of illnesses, from relatively mild to life-threatening. The most commonly reported spotted fever found among United States patients after traveling outside of the country is African tick bite fever, caused by *Rickettsia africae*. Almost 90% of travel-related spotted fevers occur among travelers to sub-Saharan Africa. Another frequently identified spotted fever is Mediterranean spotted fever, caused by *Rickettsia conorii*. For more information about tickborne spotted fevers found outside of the United States visit: <https://www.cdc.gov/otherspottedfever/imported/index.html>.

How can spotted fever group rickettsioses be prevented?

You can reduce your risk by taking these actions to avoid tick bites, or to safely remove a tick if you are bitten:

- Avoid wooded areas with tall grass, dense shrubs, and leaf litter, where ticks like to hide.
- Make your yard less attractive to ticks by mowing lawns and trimming trees.
- Wear solid, light-colored clothing. This will make it easier to find a tick on your clothes.
- Tuck your pants into your socks and wear a long-sleeved shirt. This will help prevent a tick from attaching to your skin.
- Use EPA-registered insect repellents on yourself and your pets. Repellents that contain DEET can be used on clothing and exposed skin. The other type of repellent contains permethrin and should **ONLY** be used on clothing. Always read and follow label directions carefully.
- Check yourself for ticks frequently when you are in tick-infested areas. Check again after returning and again before going to bed. Don't overlook some of ticks' favorite hiding places – on the scalp, behind the ears, under the arms, on the ankles, and in the groin.

What should I do if I find a tick?

- If the tick is not attached (if it has not bitten you), grab it with a tissue.

- If the tick has bitten you, remove it as soon as possible.
- Use fine-tipped tweezers to grab the tick close to the skin. Do not twist or jerk the tick—this may cause the mouth parts to break off and remain in the skin. If this happens, remove the mouth parts with tweezers if possible. If not, leave them alone and let your skin heal.
- With a steady motion, gently pull straight up until all parts of the tick are removed.
- Do not use petroleum jelly, hot matches, nail polish remover or other products to remove a tick.
- After removing the tick, clean your skin with soap and warm water.
- Contact a healthcare provider if you develop a fever and/or rash within a few weeks and tell the provider about the tick bite.

How should I dispose of a tick?

Submerge the tick in rubbing alcohol, place the tick in a sealed bag or container, or wrap the tick tightly in tape. Never crush a tick with your fingers.

Where can I get more information on spotted fever group rickettsioses?

- Your health care provider
- Your local health department
- NJ Department of Health www.nj.gov/health/cd/topics/rocky.shtml
- Centers for Disease Control and Prevention hwww.cdc.gov/otherspottedfever

This information is intended for educational purposes only and is not intended to replace consultation with a health care professional. Adapted from Centers for Disease Control and Prevention .