# Rocky Mountain Spotted Fever

Rocky Mountain Spotted Fever is a tickborne disease caused by the bacteria Rickettsia rickettsii. Specifically, this organism is spread to humans by Dermacentor ticks and although the name suggests it is common in the Rocky Mountain region, it is endemic in the East Coast of the United States. Initial signs and symptoms include sudden onset of fever, muscle pain, and headache followed by the development of a rash. Specifically, this rash begins on the palms and soles and migrates towards the trunk. Other abnormal laboratory findings may include thrombocytopenia, hyponatremia or elevated liver enzymes. This illness can be very severe and doxycycline should be administered immediately if there is clinical suspicion of Rocky Mountain Spotted Fever.




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**Rickettsia rickettsii**
Rackets and rackets
Rocky Mountain Spotted Fever is a tickborne disease caused by the bacteria Rickettsia rickettsii.

**Dermacentor Wood Tick**
D-tick with Demon-tail on Wood
Dermacentor ticks are natural hosts of R. Rickettsii and transmit the organism via their bites. A tick bite can be an important clue to diagnosis of Rocky Mountain Spotted Fever. However, not all individuals with a tick bite are aware of being bitten.

**Endemic to East Coast**
Map of East coast
Although the name suggests that this disease is common in the Rocky Mountain region, it is endemic in the East Coast of the United States.

**Fever**
Fever-beaver
Fever is a common initial symptom of Rocky Mountain Spotted Fever.

**Headache**
Head-egg lump
Headache is a common early symptom of Rocky Mountain Spotted Fever.

**Rash Starts on Wrist and Ankle**
Rash on Wrist and spreading all over
A rash initially appears two to five days after the onset of fever and begins as a small flat pink macule on the wrists or ankles. Within a few days, the rash evolves to a characteristic petechial rash that commonly involves the palms or soles.

**Rash migrates towards the trunk**
Arrows pointing toward Trunk
The rash has an inward pattern of spread, beginning at the extremities and migrating towards the trunk.

**Thrombocytopenia**
Trombone-side-toe-peanut
Thromboctyopenia can be an abnormal lab finding that further suggests diagnosis of Rocky Mountain Spotted Fever. It is a relative decrease of blood platelets.

**Hyponatremia**
Hippo-salt-shaker
Hyponatremia is an electrolyte disturbance in which serum sodium concentration is lower than normal, often defined as less than 135 mEq/L. Hyponatremia can be an abnormal lab finding in Rocky Mountain Spotted Fever.

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**Elevated liver enzymes**

Up-arrow Liver

Elevated liver enzymes including AST and ALT can occur in Rocky Mountain Spotted Fever and can raise clinical suspicion for this disease.

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