

Rocky Mountain Spotted Fever (RMSF)

Event	Characteristics of RMSF
Disease and Agent	Rocky Mountain spotted fever (RMSF) <i>Rickettsia rickettsii</i>
Transmission	<ul style="list-style-type: none"> • Tick bite • About half of patients report a history of tick bite 1-2 weeks prior to symptom onset.
Incubation	2-14 days after the bite of an infected tick
Differentiating Features	<ul style="list-style-type: none"> • Most common first symptoms include fever, headache, and malaise. Abdominal pain with nausea, vomiting, and diarrhea can occur, especially in children. • Patients might have conjunctivitis and mild peripheral edema on examination. About 80% of patients develop a maculopapular rash on day 2-6 of symptoms, and in about 30% of these patients the rash involves the palms and soles.
Complications	<ul style="list-style-type: none"> • Untreated patients can develop hypotension, altered mental status, or respiratory failure around day 5 or 6 of symptoms. • Progression to petechial rash typically occurs around day 6 of symptoms and can be accompanied by altered mental status, seizures, and other signs of organ damage.
Diagnosis	<ul style="list-style-type: none"> • Clinical laboratory findings can include mild hyponatremia, thrombocytopenia, and elevated liver enzymes, beginning around day 3 of symptoms. • Confirmation testing includes indirect immunofluorescence assay (IFA), IgM, and IgG antibody testing on 2 serum samples taken 2-4 weeks apart. A fourfold increase from acute phase to convalescent phase confirms RMSF. IgG is more specific and is the preferred test. • Patients with RMSF are not likely to have detectable antibodies in the first 5 days of symptoms and antibodies present during this time might represent past exposure rather than current illness. Treatment decisions should be made in the first few days of symptoms and based on clinical suspicion alone.
Treatment (for adults and children of all ages)	Doxycycline is most likely to prevent fatal outcomes if initiated in the first 5 days.

