### Disease Tick Symptoms

<table>
<thead>
<tr>
<th>Disease</th>
<th>Tick</th>
<th>Symptoms</th>
</tr>
</thead>
</table>
| **Rocky Mountain spotted fever (RMSF)** | American dog tick                 | • Onset of symptoms is three to 14 days (average seven days) after tick bite.  
• Initial symptoms may include: high fever, severe headache, muscle aches, nausea, vomiting and loss of appetite.  
• Later symptoms: rash (two to six days after onset of fever), abdominal pain, joint pain and diarrhea.  
• Rash usually starts as small, flat, pink spots that do not itch on wrists and ankles, and then spreads.  
• It can lead to heart, lung or kidney failure, swelling of the brain, and/or death.  
• Early treatment with antibiotics is important.  

Males are typically smaller than the females and often mistaken for an immature stage.  
Female and male American dog tick. |
|                                      |                                   | Photo courtesy of Gary Alpert, Harvard University, Bugwood.org                                                                                      |                                   |                                   |
| **Human monocytic ehrlichiosis (HME)** | Lone star tick                    | • Onset of symptoms is five to 21 days after tick bite.  
• Symptoms usually include fever, fatigue, headache and muscle aches.  
• Other symptoms include nausea, vomiting, diarrhea, cough, joint pain and confusion.  
• Rash is often absent and more common in children.  
• Severe disease or death occurs rarely.  
• Early treatment with antibiotics is important.  

Lone star tick male and female |
|                                      |                                   | Photo courtesy of Mat Pound, USDA Agricultural Research Service, www.insectimages.org                                                                         |                                   |                                   |
| **Lyme disease**                     | Black-legged tick                 | • Onset of symptoms is three to 30 days after tick bite.  
• Early symptoms may include rash, fever, headache, muscle aches, fatigue and joint aches. Rash appears in 60 percent of cases.  
• Some people develop late symptoms, which vary and may include: secondary bull’s-eye shaped rashes, joint and muscle pain with or without swelling, neurological symptoms and heart problems.  
• Early treatment with antibiotics is important to prevent late symptoms, including those that may be chronic and disabling.  

Black-legged ticks male, female, larvae and nymph with head of a pin for size comparison. |
|                                      |                                   | Photo courtesy of Jim Occi, www.Bugwood.org                                                                                                           |                                   |                                   |
| **Southern tick-associated rash illness (STARI)** | Lone star tick                   | • Symptoms are indistinguishable from those of early Lyme disease and include a bull’s-eye shaped rash, sometimes with fever, headache, muscle pain or fatigue.  
• STARI is treated with antibiotics.  

Adult, nymph and larval ticks on the ear of a deer. |
|                                      |                                   | Photo courtesy of Mat Pound, USDA Agricultural Research Service, www.insectimages.org                                                                         |                                   |                                   |

---

*If you find an attached tick, remove it promptly. See your physician if you become ill within the next 30 days.*

[www.cdc.gov/ticks/removing_a_tick.html](http://www.cdc.gov/ticks/removing_a_tick.html)