



Tick season is upon us; be aware and take precautions

- **Lone star tick** (*Amblyomma americanum*) — Females are easily identified by the white dot in the center of the back. Males often have dots or white streaks on the edge of their bodies. Very common



in Missouri.

Key Diseases and Illnesses Associated with Lone Star Ticks:

- **Alpha-gal Syndrome (AGS):** A potentially life-threatening allergic reaction to mammalian meat (beef, pork, lamb) and products, which can develop after a bite.
 - **Ehrlichiosis:** A bacterial infection causing fever, chills, headache, and muscle aches, treated with doxycycline.
 - **Heartland Virus:** A viral disease-causing fever, fatigue, nausea, and diarrhea.
 - **Bourbon Virus:** A rare, severe viral illness.
 - **Tularemia:** A serious infection that can cause skin ulcers, swollen lymph glands, and fever.
 - **Southern Tick-Associated Rash Illness (STARI):** A disease causing a rash similar to Lyme disease, along with fatigue, fever, and headache.
- **American dog tick** (*Dermacentor variabilis*) — Newly hatched larvae are yellow. Adults have an ornate brown-and-white mottling on the dorsal side. Blood-engorged females are gray. Very common in Missouri.



Key Diseases associated with American Dog ticks:

- **Rocky Mountain Spotted Fever (RMSF):** A serious bacterial disease that can be fatal if not treated early with doxycycline. Symptoms include fever, headache, rash, and muscle pain.
- **Tularemia:** A severe, potentially life-threatening bacterial infection causing high fever and glandular infections.

- **Deer tick** (blacklegged tick) (*Ixodes scapularis*) — Legs and upper body are black. Also common in Missouri.



Key Diseases Transmitted by Deer Ticks:

- **Lyme Disease:** Caused by *Borrelia burgdorferi* and *B. mayonii*; the most common, often causing a rash and fever.
- **Anaplasmosis:** Caused by *Anaplasma phagocytophilum*.
- **Babesiosis:** Caused by *Babesia microti* parasites, which infect red blood cells.
- **Powassan Virus:** A rare but serious virus that can cause encephalitis.
- **Borrelia miyamotoi Disease:** A type of relapsing fever.
- **Ehrlichiosis:** Specifically caused by *Ehrlichia muris eauclairensis*.

Preventing tick bites on people:

Before you go outdoors

- **Know where to expect ticks.** Ticks live in grassy, brushy, or wooded areas, or even on animals. Spending time outside walking your dog, camping, gardening, or hunting could bring you in close contact with ticks. Many people get ticks in their own yard or neighborhood.
- **Treat clothing and gear** with products containing 0.5% permethrin. Permethrin can be used to treat boots, clothing and camping gear and remain protective through several washings. Alternatively, you can buy permethrin-treated clothing and gear.
- **Avoid contact with ticks.** Avoid wooded and brushy areas with high grass and leaf litter. Walk in the center of trails.
- **Use Environmental Protection Agency (EPA)-registered insect repellents** containing DEET, picaridin, IR3535, Oil of Lemon Eucalyptus (OLE), para-menthane-diol (PMD), or 2-undecanone. EPA's helpful [search tool](#) can help you find the product that best suits your needs. Always follow product instructions. Do not use products containing OLE or PMD on children under 3 years old. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.
 - If you are using sunscreen, apply sunscreen first and insect repellent second.

Removal:

Remove embedded ticks promptly. You cannot force a tick to remove itself; you must pull it out. Use tweezers, or a tool specially designed for removing ticks safely. Lightly pinch the tick as close to your skin as possible (in other words, don't squeeze the tick's body fluids into yourself). Pull the tick straight out. Wash and disinfect the area; apply antibiotics.