Protect yourself and your family from tick bites by following some tick-tips:

1) Brown dog ticks spend most of their lives resting in protected places <u>off</u> their host. Reduce tick harborage opportunities by removing furniture, and unused items from under or around your home. Avoid using space under homes as storage areas and reduce plant growth next to and under your home. Wash pet bedding and vacuum inside homes weekly.

2) Check the whole family (including pets) for ticks daily, especially during the warmer months of the year. Remove ticks immediately using tweezers by grabbing them as close to the skin surface as possible and pulling straight off. Avoid squeezing ticks between your fingers!



3) In Arizona and Sonora, consider treating around your home for ticks spring-fall. Apply a pyrethroid pesticide (granular or liquid) around and under homes to reduce brown dog tick populations. Follow pesticide label instructions on how to apply products correctly. Use all recommended personal protective equipment including masks and gloves, application rates, buffer zones, and remove all outside toys and pet food canisters before applying. 4) To treat your dog for ticks, you can use:

- Topical (spot-on) treatments
- Oral medications
- A fitted tick collar

Wear gloves when applying tick treatments and follow label recommendations regarding how often you should repeat treatments.



5) When outdoors, wear long pants and sleeves and use an EPA registered tick repellent. **Seek medical advice if you or a family member become ill following a tick bite.**

For more information on brown dog ticks: extension.arizona.edu/pubs/az1769-2018.pdf

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THE UNIVERSITY OF ARIZONA Agriculture, Life & Veterinary Sciences & Cooperative Extension

Brown Dog Ticks

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Brown Dog ticks spread the bacteria that causes Rocky Mountain spotted fever (RMSF) in Arizona and northwest Mexico. As its name suggests, this tick mainly takes blood from dogs, but it will also feed on humans and other mammals and can cause serious disease.

Identification and life cycle

Brown dog ticks go through four life stages – egg, six-legged larva, eight-legged nymph, and adult. After hatching ticks must take a blood meal at every stage to survive.



Between each stage, the tick sheds its exoskeleton and grows larger. Brown dog ticks are 3-host ticks and require a new host animal at each stage of their life.

Under warm conditions and with access to dog hosts, brown dog ticks can complete their entire life cycle in as little as two months. In locations that are warm yearround this tick can produce four generations each year. The tick usually spends its whole life in the host's living area, which can lead to tick infestations inside homes, since dogs typically live some of their time with humans. Brown dog ticks can complete their entire life cycle indoors and reproduce year-round under these conditions.

How ticks find their hosts

Brown dog ticks can actively seek out hosts in the environment, using cues like carbon dioxide in exhaled breath, heat, and vibrations that cause the tick to run towards the host. They also use a strategy called "questing" where they wait ready to grasp onto an animal that brushes past.



Once a tick has found a host, it moves to a preferred feeding spot (often the ears and neck) and using its mouthparts the tick pierces the skin and continues to take a blood meal. Research has shown that brown dog ticks frequently group together when feeding on a host and the transfer of the bacteria that causes RMSF from infected to uninfected ticks can occur at this time.

Once feeding is complete, the tick drops off the host and moves to a protective location in the environment to finish digestion and molt to the next life stage or lay eggs if the tick is a fertilized female.

Signs and symptoms of RMSF

Symptoms of RMSF appear 3-12 days after a bite from an infected tick.

Early signs of RMSF include:

- Fever
- Headache
- Vomiting
- Nausea
- Stomach pain
- Muscle pain
- Rash, sometimes with blackened skin near the tick bite.



These symptoms are similar to other illnesses, and often people are unaware of having a recent tick bite. But it is important to seek medical attention as soon as possible. Diagnosing RMSF is even more complicated in Sonora and other areas of Mexico because symptoms can be confused with other widespread illnesses, particularly dengue.

RMSF can be treated effectively with antibiotics, but early and complete treatment is critically important. RMSF can be deadly if it is not treated soon enough. Doxycycline should be prescribed and taken by the patient as soon as RMSF is suspected. Based on CDC guidelines, treatment should be continued for at least 72 hours after fever subsides and until the patient improves.