



IN YOUR REGION: PARASITOLOGY

The Western United States

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The western United States has various landscapes, including deserts, mountains, and coastlines, each boasting a different climate. Many of North America's most common pet parasites thrive in warm, moist conditions, but a few have adapted to specific ecosystems in the West. Veterinary nurses in the West should familiarize themselves with their area's unique local parasite risks and those that occur throughout the region. Here is an overview of common parasites and key prevention strategies for pet owners in the western United States.

1. GIARDIA

Giardia is an intestinal protozoan parasite of dogs, cats, and other mammals, including humans. It is highly prevalent in the western region of the United States and may spread through contaminated water sources and surfaces and from pet to pet. In a retrospective analysis of fecal flotation and antigen tests from across the United States, dogs in the West had more positive *Giardia* test results than in any other U.S. region, with 13.5% testing positive. Positive *Giardia* test results from cats were similar to those in other U.S. regions at 6.1%.^{1,2}

Key prevention strategies include³:

- Maintaining proper hygiene and hand-washing
- Bathing infected pets after treatment with metronidazole, fenbendazole, or Drontal Plus (Elanco, [elanco.com/us](https://www.elanco.com/us)) to prevent reinfection
- Removing fecal waste
- Cleaning contaminated surfaces immediately

2. TICKS

The Western black-legged tick, *Ixodes pacificus*, is a primary vector for Lyme disease and anaplasmosis in the West. *Ixodes* species ticks are a threat to pet health year-round.⁴ The Rocky Mountain wood tick, *Dermacentor andersoni*, thrives at high elevations and may lead to Rocky Mountain spotted fever in dogs or

tularemia in dogs and cats, either directly or through contact with infected prey animals.^{5,6}

Key prevention strategies include⁵:

- Administering species-appropriate tick preventives (e.g., fipronil, amitraz, isoxazolines, pyrethroids) year-round
- Avoiding grassy or wooded areas that harbor ticks and cleaning up leaf litter around the yard
- Checking pets after outdoor excursions and removing ticks immediately

3. FLEAS

The coastal West supports cat flea populations, but *Ctenocephalides felis* is uncommon in arid regions. In these areas, the rat flea, *Xenopsylla cheopis*, thrives. Rat fleas can transmit pathogens that lead to serious diseases in pets and people, including bubonic plague (*Yersinia pestis*). Fleas are also well known for their ability to cause flea allergy dermatitis and transmit tapeworms.⁷

Key prevention strategies include⁷:

- Administering oral or topical flea preventives containing adulticides (e.g., imidacloprid, fipronil, spinosad, isoxazolines) or insect growth regulators (e.g., lufenuron) year-round

- Laundering bedding and vacuuming frequently if a pet has been exposed to fleas
- Controlling rodent populations near and around the home to reduce rat fleas

4. HEARTWORMS

Heartworm disease, caused by *Dirofilaria immitis*, is not as common in states that have a dry climate, as this type of climate does not support mosquitoes. However, pets in coastal states, such as California or Oregon, are at greater risk of contracting heartworms. Additionally, changing weather patterns and increased pet travel have made it challenging to predict heartworm trends. Regardless of historical patterns, heartworm disease has been reported in pets in all 50 states.⁸

Key prevention strategies include⁸:

- Administering heartworm preventives (e.g., ivermectin, milbemycin oxime, selamectin, moxidectin) year-round
- Performing heartworm antigen testing at least once per year for all dogs

5. ROUNDWORMS

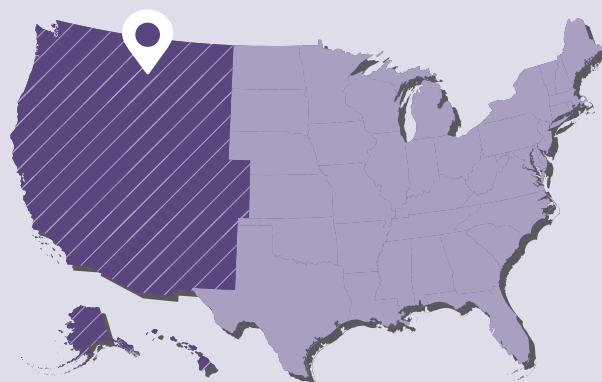
Although *Giardia* is by far the most prevalent intestinal parasite of pets in the West, retrospective analyses of fecal flotation and antigen tests show an ascarid (e.g., *Toxocara* species) positivity rate of 2.3% in dogs of this region.¹ According to the CAPC, transplacental transmission is a common route of infection in puppies, although dogs of all ages are at risk. Additionally, infective roundworm larvae can cause visceral larval migrans in children.⁹

Key prevention strategies include⁹:

- Deworming puppies beginning at 2 weeks of age
- Administering heartworm prevention containing ascaricides (e.g., pyrantel pamoate, milbemycin oxime, moxidectin)
- Checking fecal flotation tests at least 4 times during a puppy's first year, then twice yearly for adults. **TVN**

References

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Download a handout you can share with clients to educate them on the top parasites of concern in your region.

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