



IN YOUR REGION: PARASITOLOGY

The Midwestern United States

Elizabeth Kowalski, CVT, FFCP
Sycamore, Illinois

The Midwest region of the United States contains multiple overlapping and ever-expanding parasite ranges. Veterinary nurses in this region should develop a broad parasite knowledge base and keep abreast of new developments. Here is an overview of parasites with a current foothold in the Midwest.

1. GIARDIA

Giardia species are protozoans that infect mammals worldwide. Infected pets may develop watery diarrhea or enter an asymptomatic carrier state, spreading the organisms to other animals or humans. In a retrospective analysis of fecal float and antigen samples across the United States, 12.3% of dogs and 7.5% of cats in the Midwest tested positive for *Giardia*.^{1,2}

Key prevention strategies include³:

- Instructing clients to pick up fecal waste immediately
- Treating symptomatic infections with metronidazole or fenbendazole
- Preventing reinfection after treatment by instructing clients to bathe pets to remove residual cysts
- Encouraging handwashing and good hygiene

2. TICKS

The Midwest hosts many tick species, including the brown dog tick (*Rhipicephalus sanguineus*), American

dog tick (*Dermacentor variabilis*), lone star tick (*Amblyomma americanum*), and black-legged tick (also known as deer tick; *Ixodes scapularis*), as well as the newly discovered Asian longhorned tick (*Haemaphysalis longicornis*). This variety of species puts pets at risk for multiple tick-borne diseases, including Lyme disease, anaplasmosis, ehrlichiosis, and Rocky Mountain spotted fever. The Great Lakes region is a hot spot for Lyme disease and anaplasmosis, both transmitted by the black-legged tick.⁴

Key prevention strategies include⁵:

- Administering year-round species-appropriate tick preventives (e.g., fipronil, amitraz, isoxazolines, pyrethroids)
- Encouraging clients to perform routine tick checks after outdoor activities
- Vaccinating dogs against Lyme disease

3. HEARTWORMS

Midwestern pets are at moderate risk of contracting *Dirofilaria immitis* and developing life-threatening heartworm disease. Mosquito populations are robust but seasonal; therefore, risk decreases during cold winters. However, unpredictable weather patterns mean there is no season in which the risk for contracting *D. immitis* is fully eliminated.⁶

Key prevention strategies include⁶:

- Administering year-round heartworm preventives

Veterinary nurses in this region should develop a broad parasite knowledge base and keep abreast of new developments.



(e.g., ivermectin, milbemycin oxime, selamectin, moxidectin)

- Conducting annual heartworm tests on all dogs, regardless of preventive status

4. ROUNDWORMS

Roundworms—particularly *Toxocara* species—frequently infect Midwestern dogs and cats, with puppies and kittens at highest risk. In a retrospective analysis, 8.2% of Midwestern cats tested positive for roundworms.² According to the CAPC, transplacental transmission causes virtually all puppies to be born with the parasite, which can pose a zoonotic risk to children.⁷

Key prevention strategies include⁷:

- Deworming puppies and kittens starting at 2 weeks of age
- Administering year-round monthly heartworm prevention containing ascaricides (e.g., pyrantel pamoate, milbemycin oxime, moxidectin)
- Checking a fecal flotation test at least 4 times during a puppy's or kitten's first year, then twice yearly for adult pets

5. FLEAS

The cat flea, *Ctenocephalides felis*, is the dominant flea species in the Midwest. Warm, humid summer conditions bring peak flea activity, but fleas can remain active through the winter on their warm hosts or in homes. Fleas may cause flea allergy dermatitis or transmit diseases, including bartonellosis, murine typhus, and tapeworms, to both other pets and people.⁸

Key prevention strategies include⁸:

- Administering year-round preventives containing flea adulticides (e.g., imidacloprid, fipronil, spinosad, moxidectin, isoxazolines), insect growth regulators (e.g., lufenuron), or a combination product
- Encouraging clients to wash bedding, vacuum floors, treat all household pets, and use area treatments for several consecutive months to eliminate fleas from the home



SCAN THE QR CODE

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

References

1. Sweet S, Hegarty E, McCrann DJ, Coyne M, Kincaid D, Szlosek D. A 3-year retrospective analysis of canine intestinal parasites: fecal testing positivity by age, U.S. geographical region and reason for veterinary visit. *Parasit Vectors*. 2021;14(1):173. doi:10.1186/s13071-021-04678-6
2. Sweet S, Szlosek D, McCrann D, Coyne M, Kincaid D, Hegarty E. Retrospective analysis of feline intestinal parasites: trends in testing positivity by age, USA geographical region and reason for veterinary visit. *Parasit Vectors*. 2020;13(1):473. doi:10.1186/s13071-020-04319-4
3. Giardia. Companion Animal Parasite Council. Updated February 6, 2025. Accessed July 16, 2024. <https://capcvet.org/guidelines/giardia>
4. Ixodes scapularis and Ixodes pacificus. Companion Animal Parasite Council. Updated July 1, 2015. Accessed July 16, 2024. <https://capcvet.org/guidelines/ixodes-scapularis-and-ixodes-pacificus>
5. Ticks. Companion Animal Parasite Council. March 30, 2023. Updated March 30, 2023. Accessed July 16, 2024. <https://capcvet.org/guidelines/ticks>
6. Heartworm. Companion Animal Parasite Council. Updated July 28, 2020. Accessed July 16, 2024. <https://capcvet.org/guidelines/heartworm>
7. Ascarids. Companion Animal Parasite Council. Updated February 8, 2025. Accessed July 17, 2024. <https://capcvet.org/guidelines/ascaris>
8. Fleas. Companion Animal Parasite Council. Updated September 19, 2017. Accessed July 16, 2024. <https://capcvet.org/guidelines/fleas>



Elizabeth Kowalski

Elizabeth is a writer with Rumpus Writing and Editing, a veterinary copywriting company. Before transitioning to her current full-time role in 2022, Elizabeth spent 11 years in clinical practice. Unwilling to leave “the floor” entirely, she can still be found in the clinic weekly. To contact Elizabeth, visit rumpuswriting.com.