

Lindsay A. Starkey, DVM, PhD,
DACVM (Parasitology)



KEY POINTS

- ▶ Many pet owners still believe that parasites do not pose a threat during the cooler seasons of the year; however, the risk is rarely absent, with activity for some parasites even increasing during the cooler months.
- ▶ Pet owners should be educated on the risks that exist to their pets throughout the different seasons and that the best way to prevent parasite-related problems is to use safe and effective year-round prevention strategies.
- ▶ Consistent, cohesive communication amongst the veterinary team and pet owners is key to the implementation and continuation of a new or updated parasite control strategy.
- ▶ Even though not all parasites may pose the same risk during all months of the year in all locations, year-round implementation of a parasite prevention program, including the use of broad-spectrum parasite preventive products, is still recommended.
- ▶ The veterinary team should also work to find the product(s) that best fit the lifestyle of the pet and preferences of the owner to ensure compliance.

Wintertime Worries: Why Parasites Are Still a Problem

Although many veterinary professionals recommend year-round use of broad-spectrum parasiticides for all patients to protect both animal and human health,¹⁻³ pushback still exists among clients. One key factor behind some of this pushback centers around the perceived “seasonality of parasites,” the idea that parasites do not pose a threat during the cooler seasons of the year. Some parasites may tend to have decreased activity in colder weather, but nevertheless, the risk is rarely, if ever, absent. In fact, activity for some parasites may even increase during the cooler months.⁴⁻⁶

Seasonality of Parasites

Ectoparasites

It would seem to make sense that ectoparasites such as fleas, ticks, and mosquitoes would become less active or disappear in harsh winter weather; however, more data continue to describe that the risk for ectoparasites is not absent in the winter months.^{4,5,7}

Many tick species can survive in colder temperatures, and some even thrive in temperatures near freezing.⁷ In a survey, veterinarians across the United States collected ticks from pets entering their clinic.⁴ Ticks were recovered from dogs and cats every month of the year. Of the ticks submitted from October through March, ≈61% collected from dogs and 72% collected from cats were *Ixodes scapularis*.⁴ The second most common tick collected from dogs during those winter months was *Rhipicephalus sanguineus*, at ≈19% of the total ticks.⁴

Similar data regarding fleas exist. In one collaborative global flea-monitoring study, veterinarians collected flea eggs from infested pets entering their practice year-round.⁵ The months with the fewest flea eggs collected and submitted were January through March, with peak months running August through October.⁵

Internal Parasites

When infecting pets, internal parasites are being housed at ≈101.5°F (38.6°C), with plenty of surrounding nutrients to support their existence. Furthermore, parasites with life stages that are hardy in adverse climatic conditions (eg, roundworms, whipworms, tapeworms) are primed for transmission year-round.

For internal parasites, stages within animals that do not receive treatment are fully

protected against the outside world, although their offspring (typically eggs) may enter an environment that could be incompatible with life, especially in the winter. However, the eggs of some parasites are incredibly resilient and can withstand freezing temperatures and other climate adversities.⁸⁻¹⁰ In addition, some internal parasites utilize intermediate or paratenic hosts for transmission, through which the immature parasite stages may survive for extended periods while safely contained within that host. Using the data available through the Companion Animal Parasite Council, a recent study detailed the seasonality of fecal-based diagnoses for select internal parasites of dogs.⁶ Year after year, detection of both roundworm and whipworm infections peaked during the cooler months as compared with hookworms, which were identified more frequently in the warmer months. Survivability of environmental stages, seasonal use of preventive products, and canine breeding season were hypothesized as contributing to the seasonal nature of internal parasite detection.⁶

“Off-Season” Strategies

How can compliance with recommendations for year-round parasite prevention and protocols, including the use of broad-spectrum products, be increased? As with so many preventive care challenges, the answer lies in improving client education and communication.

More information regarding the threat of

parasitism in the “off season” is available now than ever before. Through utilization of the published literature, interactive websites with county-level data, and one’s own clinical experiences and findings, pet owners can be educated on the risks that exist to their pets during the different times of year and that the best way to prevent parasite-related problems is to stay ahead of them by using safe and effective year-round prevention strategies. These can include in- or on-pet approaches (eg, broad-spectrum preventive products), as well as environmental strategies such as fecal stewardship, limiting roaming and scavenging behaviors, and vector mitigation in and around the home.

Communication is also key to the implementation and continuation of a new or updated strategy regarding parasite control. The entire veterinary team must be on-board so that clients receive a cohesive and consistent message on year-round parasite prevention and its importance. The team must also continue to communicate the importance after the visit, whether that be with directed, timely reminders for re-dosing or monthly social media updates highlighting local parasite data. These follow-up conversations can serve as opportunities for encouragement and positive reinforcement with clients.

Lastly, but most importantly, parasite prevention should make it easy for the pet owner to succeed. That means finding the products that best fit the lifestyle

of the pet and preferences of the pet owner. Would using something long-lasting that only needs to be administered every few months increase the owner’s ability to comply with recommendations? Does the owner want to give a “treat,” or would they prefer to apply something topically? Are there skin or food allergies to consider? Offering too many product choices can make it harder for pet owners to make a decision; limiting product recommendations to a few options allows for consistent messaging and inventory control but still permits owners to choose preventives that best suit their needs. It is imperative that the veterinary team actively include the client in the decision-making process, combining the owner’s knowledge of their capabilities and their pet with the team’s knowledge of risks and products that will result in the most comprehensive and effective strategy for parasite prevention.

Conclusion

The data that continue to be gathered and published highlight year-round parasite risk for pets, regardless of lifestyle or geography. Even though not all parasites may pose the same risk during all months of the year in all locations, year-round implementation of a parasite prevention program, including the use of broad-spectrum parasite preventive products, is still recommended. Compliant use of the right product or combination of products by pet owners will be beneficial for controlling and preventing parasitic diseases in pets. ■

References

1. CAPC. Parasite prevalence maps: feline heartworm AB. CAPC website. <https://capcvet.org/maps/#/>. Accessed June 25, 2021.
2. American Animal Hospital Association, American Veterinary Medical Association. AAHA-AVMA feline preventive healthcare guidelines. AVMA website. https://www.avma.org/sites/default/files/resources/felinepreventiveguidelines_ppph.pdf. Published 2011. Accessed October 13, 2021.
3. American Animal Hospital Association, American Veterinary Medical Association. AAHA-AVMA canine preventive healthcare guidelines. AVMA website. https://www.avma.org/sites/default/files/resources/caninepreventiveguidelines_ppph.pdf. Published 2011. Accessed October 13, 2021.
4. Saleh MN, Sundstrom KD, Duncan KT, et al. Show us your ticks: a survey of ticks infesting dogs and cats across the USA. *Parasit Vectors*. 2019;12(1):595.
5. Rust MK, Blagburn BL, Denholm I, et al. International program to monitor cat flea populations for susceptibility to imidacloprid. *J Med Entomol*. 2018;55(5):1245-1253.
6. Drake J, Carey T. Seasonality and changing prevalence of common canine gastrointestinal nematodes in the USA. *Parasit Vectors*. 2019;12:430.
7. Leal B, Zamora E, Fuentes A, Thomas DB, Dearth RK. Questing by tick larvae (Acari: Ixodidae): a review of the influences that affect off-host survival. *Ann Entomol Soc Am*. 2020;113(6):425-438.
8. Bucur I, Gabriël S, Van Damme I, Dorny P, Johansen MV. Survival of *Taenia saginata* eggs under different environmental conditions. *Vet Parasitol*. 2019;266:88-95.
9. O’Lorcain P. The effects of freezing on the viability of *Toxocara canis* and *T. cati* embryonated eggs. *J Helminthol*. 1995; 69(2):169-171.
10. Bowman DD. Helminths. In: *Georgis’ Parasitology for Veterinarians*. Elsevier; St. Louis, MO; 2021;242.

