



PREVENTIVE MEDICINE

Understanding and Preventing External Parasites

Elizabeth Kowalski, CVT, FFCP
Sycamore, Illinois

Abstract

Veterinary nurses provide essential education to pet owners about external parasite risks and the importance of year-round prevention. This article reviews the most common external parasites affecting dogs and cats, basic preventive options, and talking points for effective client communication and product recommendations.



Take-Home Points

- The cat flea (*Ctenocephalides felis*) is the most common ectoparasite in dogs and cats, such that year-round prevention is required to maintain a flea-free environment. Geographic location and weather variables can influence the risk of infestations on domestic pets.
- Ticks pose a growing threat in the United States, with ranges expanding and the recent addition of a new species, the Asian longhorned tick (*Haemaphysalis longicornis*).
- Isoxazoline-class preventives (e.g., fluralaner, afoxolaner) are highly effective multitasking drugs that address all common ectoparasites, including fleas, ticks, and mange mites. However, patient selection and consideration of adverse event profiles are important.
- Veterinary nurses are key educators in parasite prevention and should stay informed about new products, label claims, and emerging parasite threats.

Effective client education is a critical skill for veterinary nurses in small animal practice. Parasite prevention, in particular, is a year-round effort that depends on client understanding and compliance. Among ectoparasites, the most significant threats to dogs and cats include fleas and various species of ticks and mites.

Pet owners may see ectoparasites as a nuisance rather than recognizing the health risks of infestation. Veterinary nurses are there to educate clients so that they understand the risks, the importance of preventive strategies, and drug selection reasoning (**BOX 1**).

FLEAS

The cat flea, *Ctenocephalides felis*, is the most prevalent ectoparasite of dogs and cats worldwide.¹ In various North American studies on free-roaming and pet dog and cat populations, fleas were identified on 30% to 92.5% of dogs and cats, with the majority being *C. felis*.¹ Fleas may cause flea allergy dermatitis and can transmit zoonotic pathogens, including *Bartonella henselae* and *Rickettsia felis*.¹

Client communication should emphasize that infestations can persist throughout the year, particularly indoors. Topical adulticides (e.g., fipronil, imidacloprid) with or without an insect growth regulator remain good options, as resistance has not been documented.¹ Oral extended-duration isoxazoline products (e.g., fluralaner) may improve compliance through simplified dosing.² Oral flea medications are also a superior choice for controlling anemia-related deaths and zoonoses in community canine and feline populations.

TICKS

Several tick species pose regional and national risks to dogs and cats. A nationwide surveillance study that collected more than 10 000 ticks from 1494 dogs and 336 cats across the United States found that 4 species, *Ixodes scapularis* (deer tick), *Amblyomma americanum* (lone star tick), *Dermacentor variabilis* (American dog tick), and *Rhipicephalus sanguineus* (brown dog tick), account for most infestations.³

When discussing parasite prevention with pet owners, veterinary nurses should explain the risks of tick exposure, particularly Lyme disease, ehrlichiosis, anaplasmosis, and other tick-borne infections in dogs,

BOX 1

Drug Selection Pearls

- While newer classes of medications have become powerhouses for parasite prevention and treatment in dogs and cats, they are not completely benign.
- Each medication has potential adverse effects, including neurologic adverse effects with isoxazolines. Pet owners must be counseled on the risks of adverse events, particularly in *MDR1* (multidrug-resistance 1) mutant dogs and cats.
- Veterinary teams must provide guidance to pet owners regarding online purchases, including the terms of manufacturer guarantees and the potential for counterfeit products.



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and that all pets in endemic areas are at risk. Tick ranges are expanding each year, and a new species, *Haemaphysalis longicornis* (Asian longhorned tick), is now established in the eastern United States.⁴ Regularly administered tick preventives, such as oral isoxazolines and topical fipronil or selamectin, can kill ticks after attachment. Routine tick checks and manual removal are also important strategies for disease prevention.⁴

MITES

Ear mites

Otodectes cynotis (ear mite) is the leading cause of otitis externa in cats.⁵ Aural hematomas, secondary bacterial infections, and hearing loss can occur in severe, long-term infestations. Prevalence rates range from 0.5% to 37% of cats studied worldwide.⁵ Young animals, especially kittens and feral cats, are at the highest risk.⁵

Client discussions should focus on the importance of routine examinations and preventive medications for outdoor cats. Selamectin and ivermectin are classic treatments; however, a single dose of oral or topical fluralaner demonstrated eradication of *O. cynotis* infestations in cats and dogs within 28 days.⁶ Lotilaner is also approved for use in the oral treatment of ear mites in cats.



CLIENT HANDOUT

Scan the QR code to access an educational resource that can be shared in the clinic and virtually.

Demodex mites

Demodex mites normally live in the hair follicles and sebaceous glands of dogs and cats. Clinical demodicosis arises when mite populations grow uncontrollably, typically on young, immunocompromised, or genetically predisposed animals (e.g., bully breeds).⁷ Patchy hair loss, scaling, crusting, erythema, and pruritus are typical clinical signs.

Isoxazolines have shown consistent efficacy in resolving demodicosis without the need for messy, toxic amitraz dips and can do so faster and more reliably than topical imidacloprid and moxidectin combinations.⁸ Client conversations should reassure owners that demodicosis is not contagious and is easily treatable when addressed early.

Sarcoptes mites

Sarcoptes scabiei mites cause sarcoptic mange or scabies, a highly contagious, zoonotic, and pruritic skin condition common in dogs.⁹ Veterinary nurses should maintain a high degree of suspicion for sarcoptic mange in itchy pets with crusted skin lesions on the head, belly, or legs; take appropriate examination room precautions; and emphasize to clients the importance of treatment and isolation to prevent disease spread, even when a skin scraping does not produce a definitive diagnosis. Selamectin, moxidectin, and isoxazoline-class medications are effective treatments.⁹

PRIORITIZING PREVENTION

Veterinary nurses are essential educators in the fight against ectoparasite infestations. As parasite control

Into Practice

- ✓ Review and update your clinic's current parasite control policies to ensure your team consistently recommends year-round protection for all pets.
- ✓ Recommend convenient dosing forms (e.g., oral, injectable, extended duration) to improve overall compliance and product efficacy.
- ✓ Use the CAPC Quick Product Reference Guide (go.navc.com/4oUhtIE) and parasite prevalence maps (go.navc.com/3ME80rB) to guide and support recommendations and stay informed.

recommendations frequently evolve, team members should seek continuing education on emerging threats, leverage industry and manufacturer representatives to learn about product label claims and coverage, and utilize resources (**CLIENT HANDOUT**) for consistent education that extends beyond the clinic. By keeping up with trends in parasitology, veterinary nurses can help improve treatment compliance and protect pets and families from parasitic infestations and related infections. **TVN**

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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.



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