



## Diagnosing intestinal parasites

Clinical reference guide for Fecal Dx™ antigen testing



## Screen every dog at least twice a year

The Companion Animal Parasite Council (CAPC) guidelines recommend including fecal antigen testing to diagnose hookworm, roundworm, and whipworm infections.<sup>1-3</sup> Fecal antigen testing can identify infections that can be missed by using other methods.<sup>4</sup>

### **Gain client compliance with CAPC recommendations**

CAPC recommends fecal screening at least twice a year for adult dogs but at least four times during the first year of a dog's life. A dog's health and lifestyle may warrant more frequent testing. Let clients know that simply being outside puts a dog at risk. Some parasites can burrow into a dog's skin or feet. Dogs can also swallow parasites while grooming, nursing, or eating contaminated soil or feces. Clients should also know that some infections can spread from pets to people.<sup>5</sup>

### **Recommend year-round, broad-spectrum parasite control**

A parasite-control program that is effective against intestinal parasites, heartworms, ticks, and fleas provides maximum value for your clients and the best protection for your patients. Make sure your clients understand that they need to keep their pets protected all year long.<sup>5</sup>

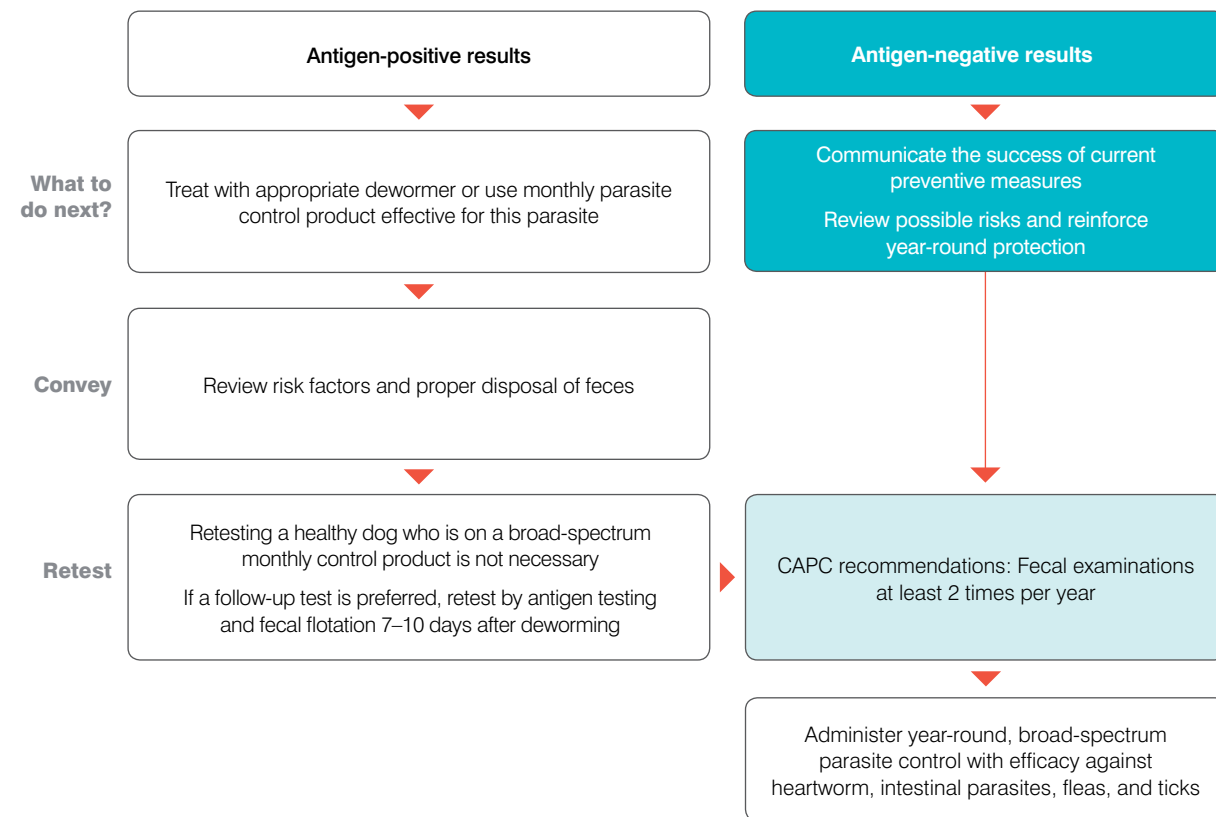
### **Diagnose and treat infections earlier with Fecal Dx™ antigen testing**

CAPC recommends including fecal antigen testing to diagnose infections, treat patients earlier, and reinforce the proper use of parasite-control products. Fecal antigen testing identifies prepatent and single-sex infections, providing critical insights for patient management.<sup>1-3</sup>

# Fecal screening for healthy adult dogs

Diagnose hookworm, roundworm, and whipworm infections using **Fecal Dx™ antigen testing**. Because the testing detects antigens, positive results confirm the presence of worms in the intestinal tract. This allows you to diagnose infection when worms are not shedding eggs or are caused by worms of a single sex. Use the following algorithm to guide next steps based on your patient's Fecal Dx antigen testing results.<sup>4</sup>

## What to do with your Fecal Dx antigen testing results



### Did you know?

Treatment should be considered for patients that test positive by either antigen testing or egg detection.

#### Reasons for specimens that are antigen positive and egg negative:

- Absence of eggs during the prepatent period
- Infections caused by single-sex worms
- Intermittent egg shedding

#### Reasons eggs may be identified in specimens that are antigen negative:

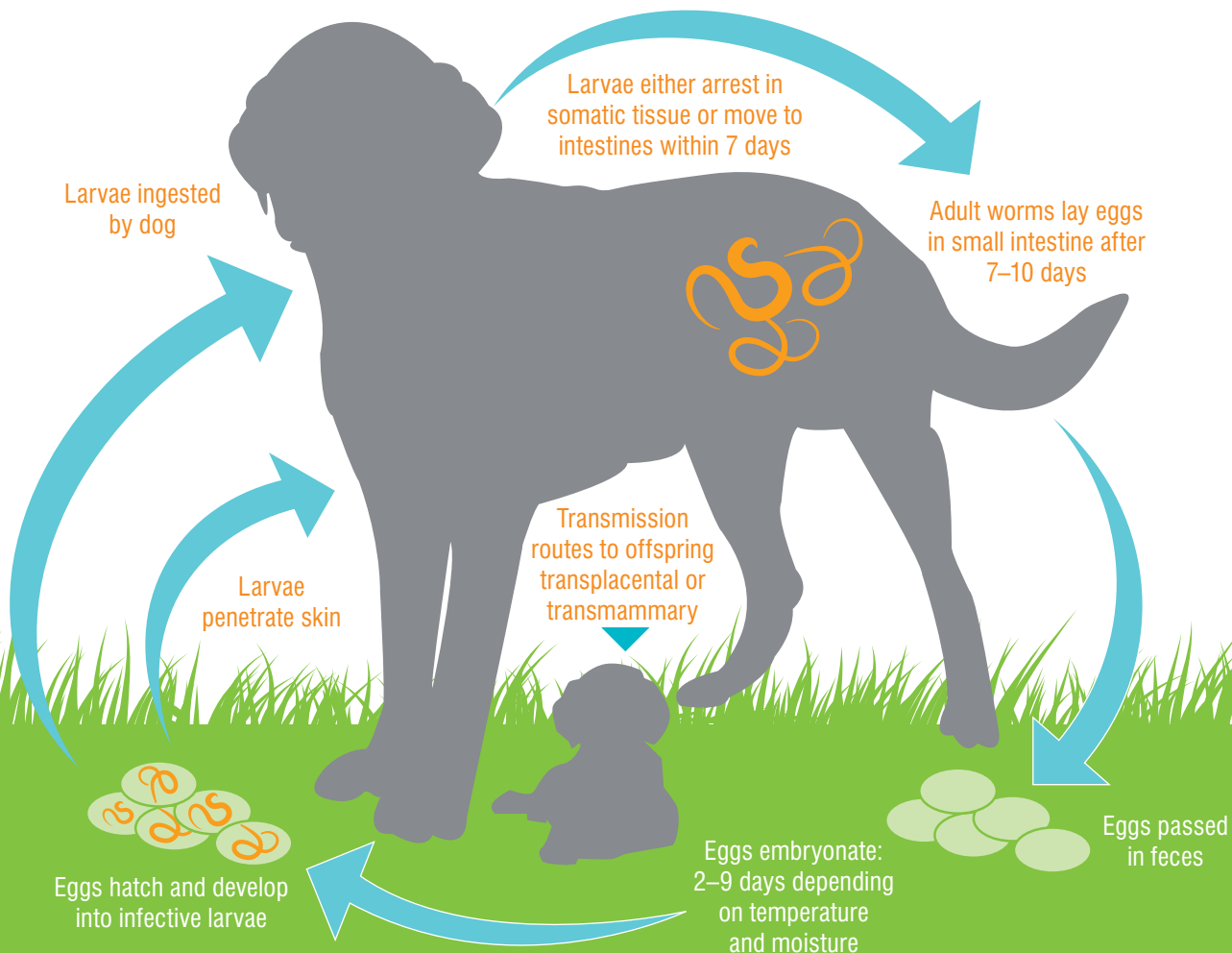
- Ingestion of infected feces (coprophagy)
- Antigen quantity is below the level of detection

# Hookworms

## From infection to presentation<sup>1</sup>

### *Ancylostoma caninum* life cycle

Prepatent period for adult dogs: **14–21 days**



### Clinical presentation

Pale mucous membranes and anemia; ill thrift, failure to gain weight; poor hair coat, dehydration; dark, tarry diarrhea; respiratory disease; foot lesions (dermatitis with erythema, pruritus, and papules)



### Did you know?

- Because hookworms have short prepatent periods and the potential for arrested larvae, even pets receiving monthly deworming may have adult worms in their intestinal tract between monthly doses. This stresses the importance of year-round monthly administration in all patients.<sup>1</sup>
- Puppies as young as 10–12 days of age may start shedding eggs if they've been infected through nursing.<sup>1</sup>
- Due to the zoonotic risk and reinfection potential in this parasite, it is important to detect infections before they start shedding eggs into the environment.<sup>1</sup>

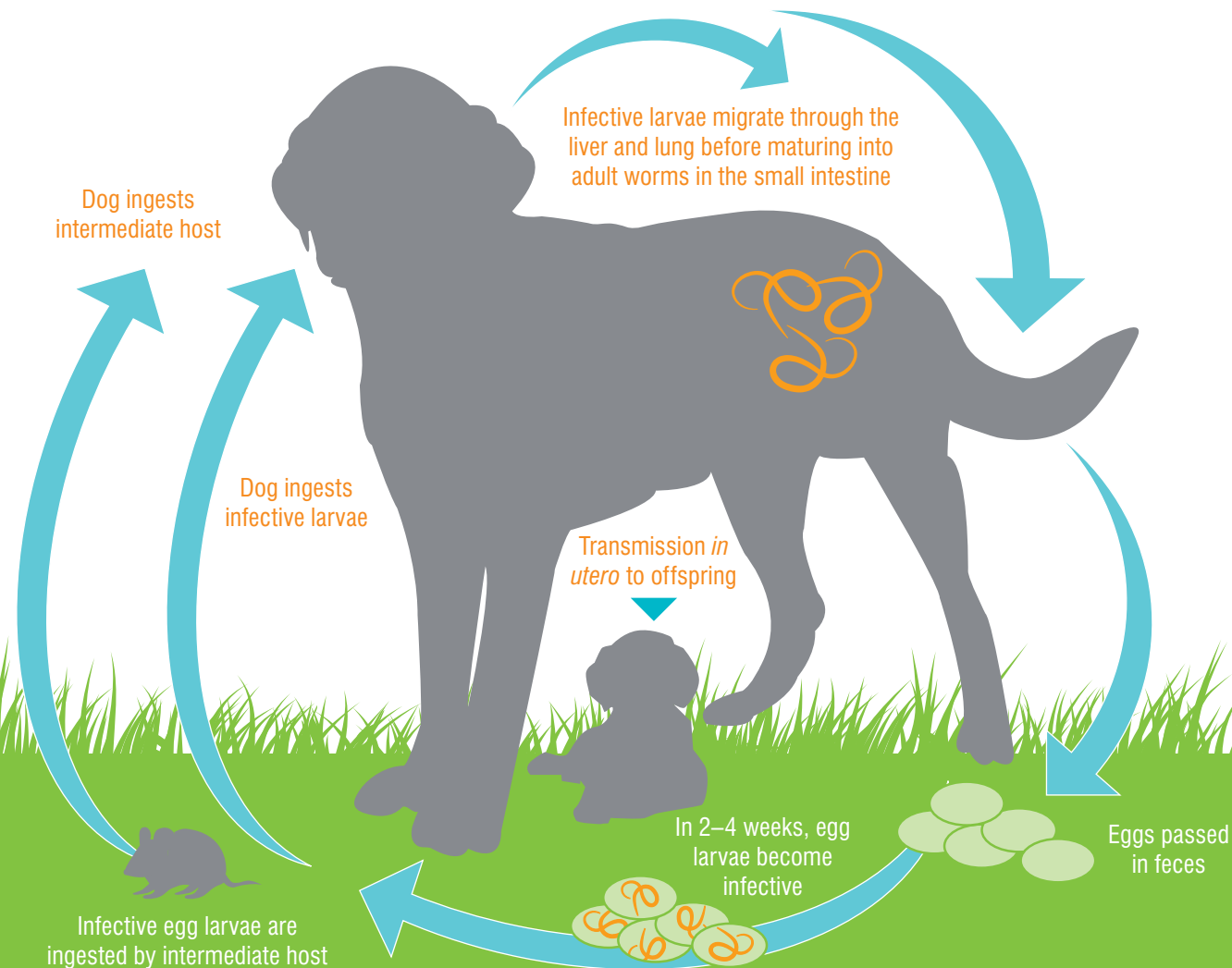


# Roundworms

## From infection to presentation<sup>2</sup>

### *Toxocara canis* life cycle

Prepatent period for adult dogs: **21–35 days**



### Clinical presentation

Diarrhea, vomiting, pot-bellied appearance, coughing. Dogs may cough up or vomit worms. Infections caused by *Toxocara canis* are more common and most severe in dogs less than one year of age.



### Did you know?

- One female roundworm can produce 85,000 eggs per day, and these hard-shelled eggs can survive in the environment for years.<sup>2</sup> With Fecal Dx™ antigen testing, you can detect infections before worms start laying eggs.
- Due to the zoonotic risk and reinfection potential in this parasite, it is important to detect infections before they start shedding eggs into the environment.
- In puppies under 6 months of age, studies have shown more than 30% are infected and shedding *Toxocara canis* eggs.



### Did you know?

- A female whipworm can produce as many as 2,000 eggs per day, and these infective whipworm eggs can survive in the environment for several years.<sup>3</sup> With Fecal Dx™ antigen testing, you can detect infections before worms start laying eggs.
- Due to their extended prepatent period, it's unlikely to find eggs being shed in very young puppies,<sup>3</sup> but Fecal Dx antigen testing can identify these positive patients during the prepatent period for earlier diagnosis and treatment.



### Clinical presentation

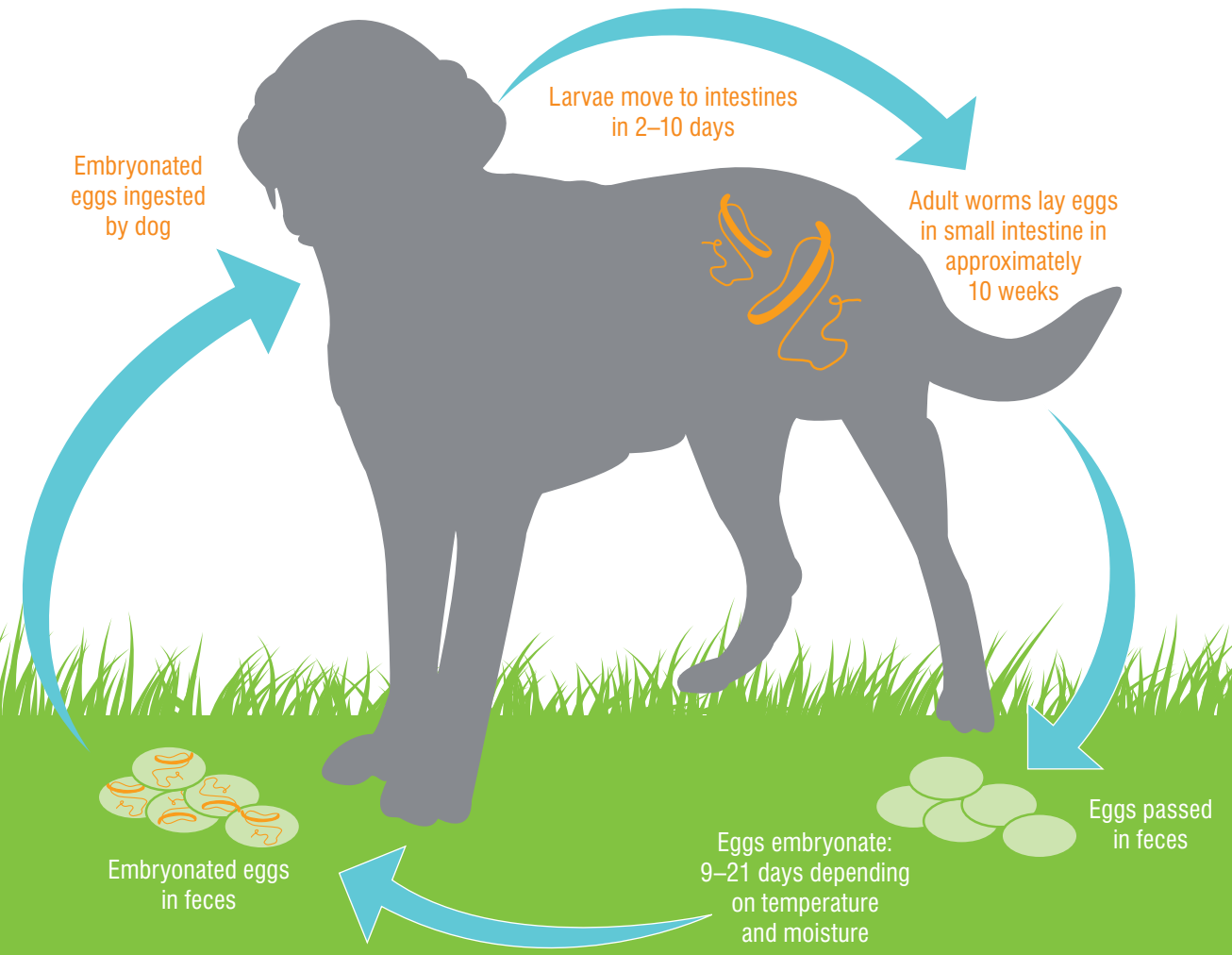
Many infections are asymptomatic or subclinical. When present, symptoms include diarrhea streaked with mucus and fresh blood, weight loss, dehydration, anemia. Extreme cases can result in death.

# Whipworms

## From infection to presentation<sup>3</sup>

### *Trichuris vulpis* life cycle

Prepatent period for adult dogs: **74–90 days**



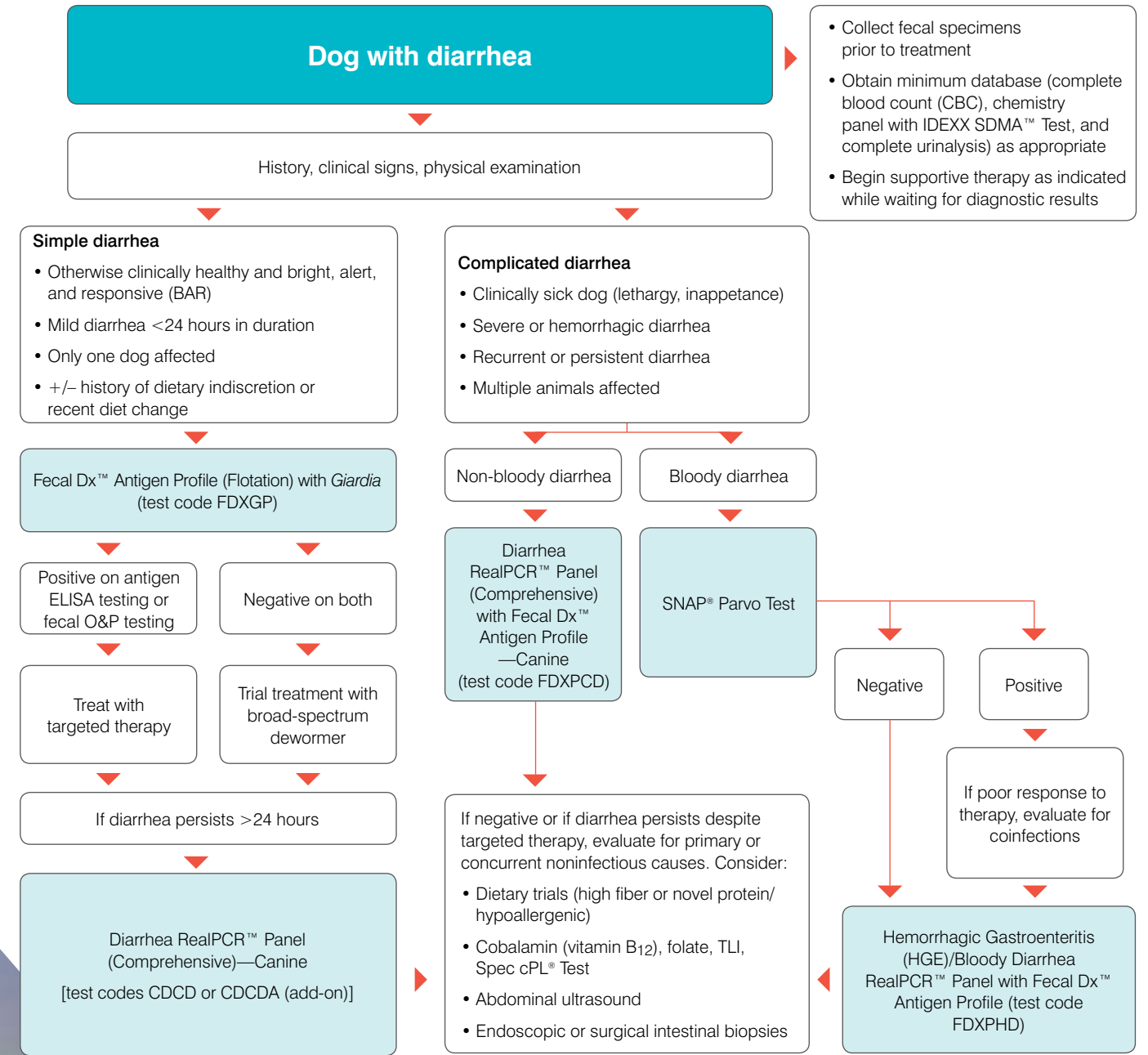
# Fecal screening for sick dogs

**Rule out infectious diseases by differentiating between simple and complicated diarrhea and testing accordingly.** Testing recommendations vary based on the duration and severity of diarrhea and the health and dietary habits of the dog or dogs affected. In simple diarrhea cases of short duration, a *Giardia* antigen by ELISA or the SNAP® *Giardia* Test is recommended in addition to Fecal Dx™ antigen testing and fecal flotation by centrifugation. A more comprehensive diarrhea RealPCR™ panel is recommended in complicated diarrhea cases. Use the following algorithm to guide next steps when assessing sick dogs that present with diarrhea.



## Did you know?

RealPCR™ testing expands the scope of detection beyond nematode parasites, coccidia, and *Giardia*, allowing you to detect other important gastrointestinal pathogens, including viruses, bacteria, enterotoxins, and difficult-to-detect protozoa (e.g., *Cryptosporidium*).



# How to minimize the threat of infection

In addition to regular veterinary examinations and diagnostic screening, encourage your clients to follow CAPC guidelines.<sup>6</sup>



## Food and water

- Pets should be fed commercial or cooked food.
- Raw diets are not recommended.
- Make sure pets have access to fresh water.



## Outdoor activity

- Limit access to wildlife and contaminated feces.
- Keep dogs on a leash or behind a fence.
- Keep cats indoors.
- Cover sandboxes after use.



## Hygiene

- Do not handle animal feces or urine with bare hands.
- Wash hands immediately after incidental contact with feces.
- Promptly pick up and dispose of feces from public areas.
- Promptly remove feces from the yard.
- Dispose of animal waste according to local municipal regulations.





Strengthen **the bonds.**<sup>™</sup>



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**References**

1. CAPC guidelines: hookworms. Companion Animal Parasite Council website. [www.capcvet.org/guidelines/hookworms](http://www.capcvet.org/guidelines/hookworms). Accessed November 8, 2017.
2. CAPC guidelines: ascarid. Companion Animal Parasite Council website. [www.capcvet.org/guidelines/ascaris](http://www.capcvet.org/guidelines/ascaris). Accessed November 8, 2017.
3. CAPC guidelines: *Trichuris vulpis*. Companion Animal Parasite Council website. [www.capcvet.org/guidelines/trichuris-vulpis](http://www.capcvet.org/guidelines/trichuris-vulpis). Accessed November 8, 2017.
4. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA.
5. Pets and Parasites. CAPC Guidelines. [www.petsandparasites.org/resources/capc-guidelines](http://www.petsandparasites.org/resources/capc-guidelines). Accessed November 8, 2017.
6. Pets, parasites and people. Pets and Parasites website. [www.petsandparasites.org/resources/pets-parasites-and-people](http://www.petsandparasites.org/resources/pets-parasites-and-people). Accessed November 8, 2017.

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