What is it?
Hookworms are a common infection in dogs caused by a type of parasitic worm called *Ancylostoma* or *Uncinaria*. Young pups are infected through their mother’s milk, and also from eating hookworm larvae from the feces of infected dogs. After this happens, the young hookworm larvae travel to the dog’s intestine, mature, and begin to shed eggs. These eggs are defecated into the environment. They are not immediately able to infect another dog, but after a few days, these eggs mature and can infect another dog if they are eaten.

Who gets it?
Infection is most common in young dogs and dogs who are outdoors frequently. Dogs whose lifestyles increase their risk of contact with dog feces and feces-contaminated environments, are at greater risk (e.g. shelters, dog parks, breeding facility, kennel).

Can people get sick with it?
Yes. Hookworm is the most common cause of cutaneous larval migrans (itching and pain in the skin), a condition that occurs when people have contact with hookworm larvae in the environment. This is most common in the tropics or southern USA/gulf states, particularly in sandy areas such as beaches and sandboxes.

How is it spread?
(Transmission & Infection Risk)
In puppies, transmission from the bitch through milk is common, and accounts for the high risk of infection and re-infection in breeding facilities. Feces ingestion, or living in a fecal contaminated environment is another common source of infection and re-infection. In hunting or outdoor dogs, eating hookworm-infected prey can be another route of infection.

What should I look for? (Signs of Disease)
Adult infected dogs typically do not show any signs of disease, and may be subclinically infected (i.e. have hookworms but not have any obvious signs of disease). Puppies with small numbers of hookworms may not have obvious signs of disease. Puppies with a heavy worm infection may
be very ill, with anemia, diarrhea and failure to thrive. Young puppies with severe worm infections may die suddenly in their 2nd or 3rd week of life.

The most common signs of illness in puppies are:

• Anemia which may be severe. Puppies are pale, have dark feces (due to digested blood), and are weak.
• Weight loss, failure to thrive, ‘poor do-er’
• Diarrhea

How is it diagnosed?

Diagnosis is made by recognizing signs of infection and completing a fecal exam (flotation) to confirm infection. Unfortunately, in very young pups severe infection can occur before worms shed eggs into a dog’s feces and this can make diagnosis difficult.

How can I stop this from happening to my dog and other dogs?

Infection Control: Following a regular schedule for deworming (anti-parasite) treatments is very important. Puppies should be dewormed at 2, 4, 6 and 8 weeks of age, and then moved to a preventive schedule. A regular deworming schedule is also very important for outdoor dogs that hunt. Most drugs that are used for heartworm prevention also control hookworms.

Strict protocols should be followed for removal of feces and cleaning for kennels, shared runs, and breeding areas, especially those with dirt flooring. Because hookworm larvae must mature for a few days in the environment to become able to infect dogs (or people), regular removal of feces will greatly reduce any risk. Regular fecal testing of older puppies and adult dogs for intestinal parasites is advised.

Risk Prevention

Leashing dogs and confining them to yards will limit feces consumption, and infected prey ingestion. Prompt removal of feces, and reducing sharing of kennels, or bedding with unfamiliar dogs at canine group events is recommended.
Outbreak management

When a number of dogs in a group or event become infected, it is recommended to immediately contact someone with experience in veterinary infectious disease risk assessment and outbreak management to help control the further spread of infection, particularly with larger dog group events and facilities that house groups of dogs together.

Zoonotic alert

Humans can be infected with hookworm larvae. Typically this is due to travel and exposure in high-risk areas (sandy tropical beaches), not wearing gloves/shoes while gardening, and in children due to playing in sandboxes that are contaminated with animal feces.

Additional Resources

Companion Animal Parasite Council
Infectious Disease in Dogs in Group Settings
Worms and Germs Blog

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