

***Baylisascaris* Infection**

(bay-liss-ass-kuh-ris)

Raccoon Roundworm Infection

What is *Baylisascaris* infection?

Baylisascaris, an intestinal raccoon roundworm, can infect a variety of other animals, including humans. The worms develop to maturity in the raccoon intestine, where they produce millions of eggs that are passed in the feces. Released eggs take 2-4 weeks to become infective to other animals and humans. The eggs are resistant to most environmental conditions and with adequate moisture, can survive for years.

How do humans become infected?

People become infected when they accidentally ingest infective eggs in soil, water, or on objects that have been contaminated with raccoon feces.

When humans ingest these eggs, they hatch into larvae in the person's intestine and travel throughout the body, affecting the organs and muscles.

Who is at risk for infection?

Anyone who is exposed to environments where raccoons live is potentially at risk. Young children or developmentally disabled persons are at highest risk for infection when they spend time outdoors and may put contaminated fingers, soil, or objects into their mouths. Hunters, trappers, taxidermists, and wildlife handlers may also be at increased risk if they have contact with raccoons or raccoon habitats.

How common is *Baylisascaris* infection in raccoons?

Fairly common. Infected raccoons have been found throughout the United States, mainly in the Midwest, Northeast, middle Atlantic, and West coast. Infection rarely causes symptoms in raccoons. Predator animals, including dogs, may also become infected by eating a smaller animal that has been infected with *Baylisascaris*.

How do raccoons become infected?

Raccoons become infected in one of two ways:

- Young raccoons become infected by eating eggs during foraging, feeding, and grooming.
- Adult raccoons acquire the infection by eating rodents, rabbits, and birds infected with the larvae of *Baylisascaris*.

How common is *Baylisascaris* infection in humans?

Infection is rarely diagnosed. Fewer than 25 cases have been diagnosed and reported in the United States as of 2003. However, it is believed that cases are mistakenly diagnosed as other infections or go undiagnosed. Cases have been reported in Oregon, California, Minnesota, Illinois, Michigan, New York, and Pennsylvania. Five of the infected persons died.

What are the symptoms of *Baylisascaris* infection in humans?

Symptoms of infection depend on how many eggs are ingested and where in the body the larvae migrate (travel to). Once inside the body, eggs hatch into larvae and cause disease when they travel through the liver, brain, spinal cord, or other organs. Ingesting a few eggs may cause few or no symptoms, while ingesting large numbers of eggs may lead to serious symptoms. Symptoms of infection may take a week or so to develop.

Symptoms include

- Nausea
- Tiredness
- Liver enlargement
- Loss of coordination
- Lack of attention to people and surroundings
- Loss of muscle control
- Coma
- Blindness

Other animals (except raccoons) infected with *Baylisascaris* can develop similar symptoms, or may die as a result of infection.

What should I do if I think I have ingested *Baylisascaris* eggs?

If you suspect you have been infected, consult your health care provider immediately. Be sure to report that you have recently been exposed to raccoons or their feces.

How is infection diagnosed?

Infection is difficult to diagnose and often is made by ruling out other infections that cause similar symptoms. Information on diagnosis and testing can be obtained through [DPDx](#) or your local health department.

How should I clean up raccoon feces?

You should clean up very carefully. To eliminate eggs, feces and material contaminated with raccoon feces should be removed and burned, buried, or sent to a landfill. Care should be taken to avoid contaminating hands and clothes. The use of gloves and facemask will help prevent cross contamination. Treat feces-soiled decks, patios, and other surfaces with boiling water. Always wash hands well with soap and running water, to help further reduce possible infection.

Is treatment available?

Early treatment might reduce serious damage caused by the infection. Should you suspect you may have ingested raccoon feces, seek immediate medical attention.

How can I prevent infection in myself, my children, or my neighbors?

- Avoid direct contact with raccoons -- especially their feces. Do not keep, feed, or adopt raccoons as pets! Raccoons are wild animals.
- Discourage raccoons from living in and around your home or parks by
 - o preventing access to food
 - o closing off access to attics and basements
 - o keeping sand boxes covered at all times, (becomes a latrine)
 - o removing fish ponds – they eat the fish and drink the water

- o eliminating all water sources
- o removing bird feeders
- o keeping trash containers tightly closed
- o clearing brush so raccoons are not likely to make a den on your property.
- Stay away from areas and materials that might be contaminated by raccoon feces. Raccoons typically defecate at the base of or in raised forks of trees, or on raised horizontal surfaces such as fallen logs, stumps, or large rocks. Raccoon feces also can be found on woodpiles, decks, rooftops, and in attics, garages, and haylofts. Feces usually are dark and tubular, have a pungent odor (usually worse than dog or cat feces), and often contain undigested seeds or other food items.
- **To eliminate eggs, raccoon feces and material contaminated with raccoon feces should be removed carefully and burned, buried, or sent to a landfill.** Care should be taken to avoid contaminating hands and clothes. Treat decks, patios, and other surfaces with boiling water or a propane flame-gun. (Exercise proper precautions!) Newly deposited eggs take at least 2-4 weeks to become infective. Prompt removal and destruction of raccoon feces will reduce risk for exposure and possible infection.
- Contact your local animal control office for further assistance.

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the disease described above or think that you may have a parasitic infection, consult a health care provider.

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