

ProVetLogic Disease Bulletin



Baylisascariasis

Raccoon Roundworm Infection

Background:

Baylisascariasis (bay-liss-AS-kuh-RYE-a-sis) is a disease caused by a parasitic roundworm, commonly found in raccoons. Raccoons are the primary host for the worm's life cycle but other animal species can be affected. These worms have different life stages. Adult worms infest the intestines of raccoons and dogs. These adult worms lay millions of eggs, which are shed in the animal's feces. Eggs are incidentally ingested (fecal contamination of hands, food, etc.). Once ingested, the eggs hatch into a young (larval) worm which migrates through various organs and areas of the body of the host (animal or person). This causes damage to various body tissues such as the liver, heart, lungs, brain and eyes.

Baylisascariasis impact on animals and humans:

Over 90 species of mammals including raccoons, dogs, rabbits, rodents, birds and non-human primates can become infected with the *B. procyonis*.

Animals become infected by **ingesting** the *B. procyonis* eggs found in the environment or by eating an animal that is infected with the roundworm larvae.

Raccoons usually show no sign of the illness when infested with *B. procyonis*. Signs in other mammals or birds vary with the migration of the larval worms. Intestinal infestation is usually not fatal, while migration to the brain or spinal cord usually results in death.

Although rare in people, cases that have occurred have been severe. People become infected by **ingestion** of *B. procyonis* eggs. This can occur following contact with soil, water or inanimate objects contaminated with the roundworm eggs (items fecally contaminated by raccoons).

Prevention:

Avoid contact with raccoon feces or contaminated areas. This is especially important for young children who are most at risk. Raccoons have been known to use sandboxes as latrines, so keep them covered when not in use.

Washing hands after working or playing outdoors is good practice for preventing several diseases.

Protocol:

We recommend the following, when cleaning the contamination site:

1. Wear disposable gloves to help prevent cross contamination.
2. Wear a N95-rated respirator if working in a confined space to prevent accidental ingestion of eggs or other harmful materials.
3. Avoid stirring up dust and debris.
4. Wear rubber boots that can be scrubbed or cover your shoes with disposable booties that can be thrown away.
5. Remove material such as wood chips, brush and other material that may have become contaminated. This material should be burned, buried or sent to a landfill.
6. Remove the loose substrate down to the hard pack surface (dirt, concrete, etc.).
7. Although most chemicals do not kill the roundworm eggs and high heat, such as from a propane torch will kill the eggs, the following protocol may be a viable alternative when the use of heat may be a dangerous or difficult option:

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- a) Remove and discard all loose substrate, brush and other materials down to the hard pack surface.
- b) Using a hose-end foam gun applicator, apply a solution of 2 to 4 ounces of **ProVetLogic Kennel Care** per gallon of water to the entire floor surface, as well as wood structures, frames, posts, etc. **NOTE:** If the surface material can absorb water, it can absorb disease causing bacteria.
- c) Allow the solution to soak into the surface. After 3 to 5 minutes of dwell time rinse, brush and/or squeegee all standing puddles or heavy moisture.
- d) Allow the surface to dry thoroughly.
- e) Using a chemical pump spray applicator, apply a solution of 1-ounce **ProVetLogic Animal Facility Disinfectant** per gallon of water to the entire floor surface, as well as all animal and human touch points (play and exercise structures, gate handles, railings, etc.)
- f) **DO NOT RINSE!** Allow all surfaces to dry thoroughly before placing fresh wood chips and/or other substrate material back into the area.
- g) Tools, boots, equipment and all other items that are used in the cleaning process should be thoroughly cleaned with a 2 to 4 ounce per gallon solution of Kennel Care and then sanitize with a 1-ounce per gallon of Animal Facility Disinfectant and allowed to air dry.

Key Points:

Dogs may be infected with adult *B. procyonis* roundworms, but may not show symptoms. Have all pets de-wormed under a veterinarian's supervision and take precautions to avoid contact with their feces.

Raccoons and dogs are not the only hosts of *Baylisascaris*. *B. procyonis* infection has also been documented in kinkajous. Other animals such as coatis may be susceptible. When wild animals are kept as pets, there can be a risk of disease transmission to humans.