

Raccoons and Brain Worms in Humans

Our topics for this week are:

- **Baylisascaris infestations in raccoons within the U.S.**
- **Possible effects of Baylisascaris in infested humans**
- **Treatment and prevention of Baylisascaris**

Brainworms are most often a song that you cannot get out of your mind, hearing in your mind throughout the day. Tangible brainworms are not as much fun. They are larvae of a parasite lost while migrating through your body, including your brain destroying tissue and its functions.

Incidence

Baylisascaris are intestinal parasitic worms found in several carnivorous wild animals. The most common are *Baylisascaris procyonis* is found in raccoons, and *Baylisascaris columnaris* is found in skunks. *Baylisascaris* can be transmitted to humans. In humans, the consequences of infection can be far more severe than in raccoons or skunks. Brain damage or blindness can result and children are most often affected. Most cases in humans in the United States have been in children and traced to exposure to raccoons. More than 80% of raccoons in some areas of the Northeast, Midwest, and West U.S. may carry *Baylisascaris*. In addition to the United States, infections in humans have been reported in Europe and Japan although animal infections are also known to occur in South America.

Transmission

People, their pets, and some wildlife other than raccoons become infected by ingesting infectious egg from raccoons. Raccoons like to live near humans and raid trash for food. They defecate in areas used by other raccoons, such as the base of trees, on logs, large rocks, decks, barn lofts, attics, and picnic tables. After exposure to the environment for about 2 to 4 weeks, the eggs become infective. Freshly passed eggs are not infective. Most infections are in children due to their desire to put dirt in their mouth. However, transmission can occur to any one puts dirt with microscopic *Baylisascaris* eggs in it in their mouth such as chewing on straw, eating off an unclean picnic table, moving firewood and not washing their hands before eating, among other possibilities of exposure. Eggs can survive in some environments for years.

Signs and Symptoms

The incubation period (time from exposure to symptoms) is usually 1 to 4 weeks. If present, signs and symptoms can include the following:

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

Treatment

If you think I am infected with *Baylisascaris*, you should consult your doctor. *Baylisascaris* infection is difficult to diagnosis in humans. There are no widely available tests, so the diagnosis is often made by ruling out other diseases

Your doctor can discuss treatment options with you. Albendazole is generally recommended, but no drug has been found to be completely effective against *Baylisascaris* infection in people.

Baylisascaris infection is not transmitted from one person to another. However, other people who may also have been exposed the environment contaminated with raccoon or exotic pet feces should consult with their doctor.

Prevention

Do not keep, feed, or adopt wild animals, including raccoons, as pets. Wash your hands after working or playing outdoors and immediately before eating outdoors.

Bayliscaaris eggs in fresh feces from raccoons are not infective. They require 2 to 4 weeks in the environment to become infectious. If raccoons inhabit your yard, raccoon fecal material or objects contaminated by their feces should be removed carefully and burned, buried, or sent to a landfill. Sandboxes should be covered when not in use. Lawn furniture should be thoroughly cleaned. You can treat decks, patios, and other surfaces with boiling water or a propane flame-gun but be sure to exercise proper precautions. Care should be taken to avoid contaminating hands and clothes.

Raccoons should be discouraged from being in your yard. This can be achieved by preventing access to food by keeping trash containers tightly closed, outdoor access to basements and attics should be closed off, sandboxes should be covered when not in use, bird feeders should be removed, and brush should not be kept piled.

If you have comments or you're interested in particular animal handling subjects, contact us at CBC@BetterAnimalHandling.com

Now let's recap the key points to remember from today's episode:

- 1. Raccoons with Baylisascaris do not appear sick.**
- 2. Humans with Baylisascaris can become blind, have brain deficits, or die.**
- 3. Racoons should be discouraged from entering your yard and never kept as pets.**

More information on animal handling can be found in my books, *Animal Handling and Physical Restraint*, *Concise Textbook of Small Animal Handling*, and *Concise Textbook of Large Animal Handling* all published by CRC Press and available on Amazon and from many other fine book supply sources.

Additional information is provided at: www.betteranimalhandling.com . This website has more than 200 past podcasts with notes on handling of dogs, cats, other small mammals, birds, reptiles, horses, cattle, small ruminants, swine, and poultry.

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.