



LAC DPH Health Alert:
Human Infections with *Baylisascaris*
***procyonis* (Raccoon Roundworm)**
September 17, 2024



This message is intended for emergency medicine, primary care, urgent care, internal medicine, pediatric, neurology, ophthalmology, and infectious disease providers.

Please distribute as appropriate.

Key Messages

- Two human cases of *Baylisascaris procyonis* (raccoon roundworm) have been reported in Los Angeles County. *B. procyonis* is a rare but serious cause of neurologic and ocular disease in humans.
- *B. procyonis* is a parasite commonly found in the intestines of raccoons. Humans become infected when they consume parasite eggs in infected raccoon feces.
- Healthcare providers should consider baylisascariasis in patients, especially children, with neurologic or ocular involvement and eosinophilia.
- Immediately report any suspected cases of baylisascariasis to Public Health by phone.

Situation

The Los Angeles County Department of Public Health (LAC DPH) is investigating two unrelated cases of *Baylisascaris procyonis* (raccoon roundworm) in children residing in the South Bay area of Los Angeles County. One patient had reported exposure to raccoons and raccoon feces, while the other may have been exposed at one of a number of locations with raccoon activity, including parks and the beach (see [Press Release](#)).

Cases of human baylisascariasis are rare, with fewer than 10 cases reported in California since 1993. However, the parasite is prevalent in raccoons in the United States, with [one study](#) reporting 80% *B. procyonis* prevalence among California raccoons.

Humans become infected after ingesting infective eggs from the environment (see [Baylisascaris life cycle](#)). Persons most at risk of infection are children and individuals with severe developmental disabilities or pica/geophagia. Infections can be severe and even fatal, especially if the parasite invades the central nervous system. Treatment involves early administration of an anti-parasitic agent, such as albendazole, concurrent with corticosteroids to help reduce the inflammatory reaction.

While the risk to the public is low, the high prevalence of *B. procyonis* in raccoons, frequent raccoon activity in close proximity to humans, and the potential for severe disease are concerning. *Baylisascaris* infections cannot be transmitted from person to person.

LAC DPH asks healthcare providers to consider baylisascariasis in patients with neurologic or ocular symptoms and eosinophilia. In addition, discuss the importance of hand washing and [discouraging raccoon presence](#) in and around the home.

Actions Requested of Providers

- **Suspect:** Consider *B. procyonis* infection in patients, particularly children, with neurologic or ocular involvement and eosinophilia. A history of exposure to raccoons or raccoon feces exposure is highly suggestive but not necessary.
- **Treat:** If you suspect baylisascariasis, treat the patient immediately with albendazole (25-50 mg/kg daily for 10-20 days). If albendazole is not immediately available, mebendazole or ivermectin may be used in the interim.
- **Report:** Any suspected human case of *B. procyonis* infection immediately to Public Health. Public Health will provide support and help coordinate testing.
- **Test:** Submit serum and CSF specimens to the LAC DPH Public Health Laboratory (PHL) for testing at CDC. Submit only after approval from Public Health.
- **Prevent:** Discuss the importance of hand washing and discouraging raccoon presence in and around the home with patients and their families.

See the Baylisascariasis Overview below for further details.

Baylisascariasis Overview

Clinical Presentation

The larvae of *B. procyonis* are capable of invading the human spinal cord, brain, and eyes. Non-specific signs and symptoms including nausea, fever, and lethargy may appear as soon as one week post infection. The clinical presentation of baylisascariasis depends on the number and location of larvae in the body.

- Neural larva migrans often presents as acute eosinophilic meningoencephalitis. Symptoms can include weakness, lack of coordination, ataxia, irritability, seizures, altered mental status, stupor, and/or coma.
- Ocular larva migrans may present as diffuse unilateral subacute neuroretinitis,

photophobia, retinitis, and/or blindness.

- Visceral larva migrans can present with macular rash, abdominal pain, hepatomegaly, and pneumonitis.

Younger children as well as persons with developmental disabilities or pica are at higher risk for *B. procyonis* infection as they may be more likely to put contaminated objects (fingers, soil, sand, etc.) into their mouths. However, anyone can be infected if they accidentally consume infective eggs in soil, water, or objects contaminated with raccoon feces.

See CDC [Clinical Overview](#) for additional details.

Diagnosis

The diagnosis of baylisascariasis can be challenging. Clinical diagnosis includes eosinophilic pleocytosis, peripheral eosinophilia, and deep white matter abnormalities on MRI. Larva or larval tracks or lesions may be visible during ocular examinations.

There is no commercially available test for *B. procyonis*. Serological testing of serum and CSF for anti-*Baylisascaris* antibody titers can be performed at the U.S Centers for Disease Control and Prevention (CDC). Testing for other parasitic infections such as *Toxocara* spp. and *Angiostrongolis* spp. should also be considered.

Upon suspicion of baylisascariasis, clinicians should immediately contact LAC DPH Acute Communicable Disease Control (ACDC) who will approve testing, if indicated, and will provide instructions for the testing of serum and CSF by the CDC. Once approved for testing, specimens should be submitted to LAC DPH PHL for processing and transport to CDC.

See CDC [Diagnosis](#) for additional details.

Treatment

No drug has been found to be completely effective against baylisascariasis. Early

treatment with albendazole, a broad spectrum anthelmintic, may reduce serious damage caused by the infection. Treatment should be initiated as soon as possible after ingestion of infectious material, ideally within three days.

If baylisascariasis is suspected, immediate treatment with 25-50 mg/kg albendazole daily for 10-20 days is recommended. If albendazole is not immediately available, mebendazole or ivermectin may be used in the interim.

Concurrent corticosteroids treatment to help reduce the inflammatory reaction is indicated to attempt to control of the disease.

See CDC [Treatment](#) for additional details.

Prevention

The best way to prevent infection is to avoid contact with raccoon feces.

Patients and their families should be instructed on how to avoid exposure including [making their property less inviting to raccoons](#), [how to remove and clean raccoon feces](#), and washing hands well after being outside and before eating.

Resources for the public are available on the LAC DPH [ACDC](#) and [Veterinary Public Health](#) Raccoon Roundworm (*Baylisascaris procyonis*) websites.



Tips to prevent Raccoon Roundworm Disease

[English](#) | [Spanish](#)

Reporting

Any suspect case of human *Baylisascaris procyonis* infection should be reported immediately to Public Health.

Los Angeles County DPH Acute Communicable Disease Control:

- Weekdays 8:30 am–5:00 pm: call 213-240-7941.
- After-hours: call 213-974-1234 and ask for the physician on call.

Long Beach Health and Human Services:

- Weekdays 8am-5pm: call 562-570-4302.
- After hours: call the duty officer at 562-500-5537.

Pasadena Public Health Department:

- Weekdays 8am-5pm: call 626-744-6089.
- After hours: call 626-744-6043.

Additional Resources

CDC:

- [About Raccoon Roundworm](#) for general public
- [Clinical Overview](#) & [Clinical Treatment](#) for healthcare providers

LAC DPH:

- ACDC [Raccoon Roundworm Disease](#)
- Veterinary Public Health [Raccoon Roundworm \(Baylisascaris Infection\)](#)

CDPH:

- [Raccoon Roundworms \(Baylisascaris\)](#)

This communication was sent by Dr. Sharon Balter, Director, Acute Communicable Disease Control Program, Los Angeles County Department of Public Health.

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