



Rat Lungworm Disease:

What Clinicians Need to Know

Rat lungworm, or **neuroangiostrongyliasis**, is a disease caused by a parasite *Angiostrongylus cantonensis* (*A. cantonensis*) that causes eosinophilic meningitis.

Where is it found?

- Rat lungworm disease is **endemic** to the State of Hawai'i & **exists on all islands**
 - In recent years, more cases have occurred on Hawai'i Island
- The parasite has also been found in Southeast Asia, the Pacific Islands, Africa, the Caribbean, Australia, Europe, and the US mainland (Louisiana, Florida, Georgia)

Who is at risk?

- Individuals:
 - **Living in or recent travel** to an endemic area, or
 - With **direct contact or ingestion of snails or slugs** (intentional or unintentional)
- Children <5 years old

Signs & Symptoms

- ***Clinical presentation can vary with each individual**
- Incubation period: ranges from a few days to >6 weeks
- Median time from exposure to symptoms presentation: 1–3 weeks
- Symptoms usually last between 2–8 weeks, but can last for longer

	Earlier Symptoms* Within hours to a few days of ingestion	Symptom Progression* Ranging from a few days to a few weeks after exposure
Adults	<ul style="list-style-type: none">• Nausea with/without vomiting• Abdominal pain• Diarrhea• Lethargy and insomnia• Fever• Cough• Pruritus (itching) with/without rash• Hypersensitivity to touch including burning pain with itchiness	<ul style="list-style-type: none">• Severe and constant headache• Muscle pain, neck stiffness• Paresthesia and hyperesthesia frequently described as itching, pain, tingling, crawling or burning sensations• Diplopia (double vision)• Photophobia (light sensitivity)• Limb weakness• Bowel or bladder dysfunction• Seizures
Children	<ul style="list-style-type: none">• Rash• Fever• Irritability• Drowsiness/lethargy• Vomiting (in children 3-18 years)• Poor appetite• Nonspecific abdominal pain• Muscle twitching• Convulsions or seizures• Increased sensitivity to touch• Weakness of arms and legs (in children <3 years)• Headache (in children 3-18 years)	<ul style="list-style-type: none">• Aversion to touch or being held• Developmental regression in sitting, crawling, walking, talking (in children <3 years)

How is it diagnosed?

- Exposure history, including travel to endemic areas
- Clinical signs and symptoms suggesting neuroangiostrongyliasis
- Laboratory finding of eosinophils in cerebrospinal fluid (via lumbar puncture)
 - **A more sensitive RT-PCR assay to diagnose neuroangiostrongyliasis is now available at DOH State Lab**
 - **The assay can be performed on CSF; there is no minimum CSF eosinophil threshold requirement to order this test**

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How is it treated?

- Treatment may include high dose corticosteroids and anthelmintics (albendazole)
 - See [2021 Guidelines for the diagnosis and treatment of neuroangiostrongyliasis: updated recommendations](#)
- **It is not necessary to wait for lab results before initiating treatment**



Photo credit: Dr. Rob Cowie, UH Manoa

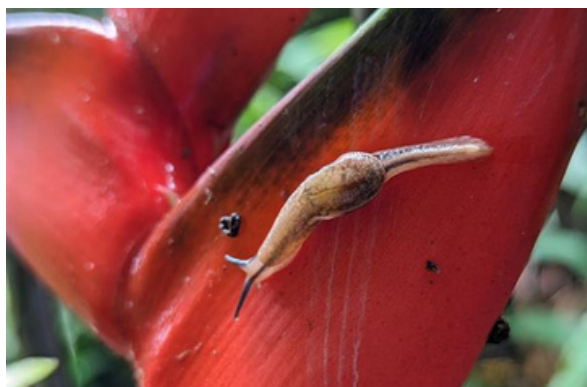


Photo credit: Dr. Randi Rollins, UH Manoa

If you suspect rat lungworm disease in a patient:

Call the DOH Disease Reporting Line (808-586-4586) to **report a suspect case** and request neuroangiostrongyliasis testing at DOH State Lab

**Scan for DOH
Rat Lungworm
Website:**

