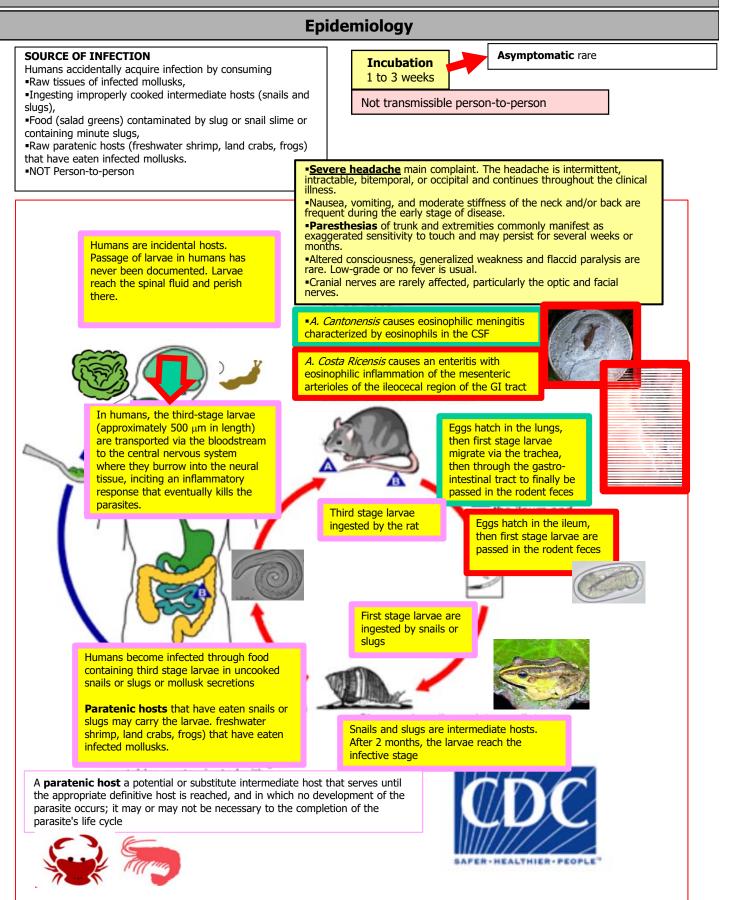
Angiostrongylus cantonensis / Eosinophilic meningitis



Diagnosis

LABORATORY TESTING •Elevation of the initial CSF pressure above 200 mm of water •Grossly opalescent or turbid (rice water), but not purulent, fluid. •CSF contains between 500 and 2000 leucocytes/mm ³ •High percentage of eosinophils, typically 25% to 75% . The eosinophilic pleocytosis reaches a peak around one or two week of illness and gradually resolves over several months. •CSF protein is elevated •CSF glucose is usually normal . •Peripheral eosinophilia ranging from 15% to 50% persists for about 3 months. •No correlation between the degree of eosinophilia in the peripheral blood and the percentage of eosinophils in the CSF. •Serum biochemistry, electroencephalography, and cerebral angiography results are usually normal.	 DIFFERENTIAL DIAGNOSIS Invasion of the central nervous system by helminthic parasites is the most common cause, but other diseases may cause eosinophilic meningitis Coccidioides immitis disseminated disease present with eosinophilic meningitis. Cryptococcosis is much less common. Neurosyphilis, tuberculous meningitis Rocky Mountain spotted fever Viral meningitis due to acute coxsackie B4 virus or chronic lymphocytic Gnathostomiasis, baylisascariasis. In endemic areas, Schistosoma japonicum, Paragonimus westermani, P. heterotrema, Taenia solium cysticerci. Malignancies, Hodgkin's disease, non-Hodgkin's lymphoma, and eosinophilic leukemia Medications, ciprofloxacin, ibuprofen, intraventricular vancomycin, gentamicin, iophendylate dye used in myelography, Ventriculo-peritoneal shunts due to an allergic reaction to the shunt material. Sarcoidosis neurologic Idiopathic hypereosinophilic
Trestment	

Treatment

TREATMENT

Analgesics and sedatives give only minimal relief. Headache usually subsides dramatically, but temporarily, following lumbar puncture.
 Careful removal of CSF at intervals of 3 to 7 days is therefore recommended until there is definite clinical and laboratory improvement. In more critical cases, corticosteroids may be employed to reduce cerebral pressure or to treat those with cranial nerve involvement.
 Corticosteroids do not appear to benefit mild cases.

•A. cantonensis is susceptible to **broad-spectrum anthelminthics**, e.g., thiabendazole, mebendazole, albendazole, and ivermectin. However, these drugs should not be used—clinical deterioration or death can result from a reaction to dead or dying worms in the brain.

PREVENTION

Proper cooking of mollusks or paratenic hosts, and proper washing of vegetables. Freezing of mollusks and crustaceans at -15° C for 12 hours will destroy infective larvae of *A. cantonensis*

Geographical Distribution

OCCURRENCE IN LOUISIANA: EARLY DAYS

•First reported in the United States in 1985

Probable introduction by infected rats from ships docking in **New Orleans**, Louisiana, during the mid-1980s.

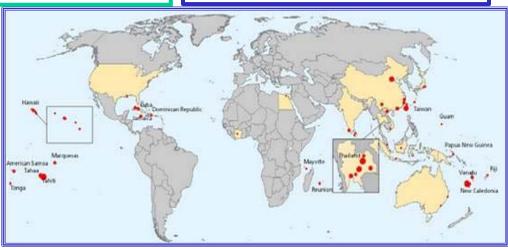
Reported in nonhuman primates and a boy from New Orleans, and in a horse from Picayune, Mississippi, a distance of 87 km from New Orleans.
 Parastrongylus cantonensis reported in a lemur (*Varencia variegata*)

rubra) from New Iberia,

•Wood rat (*Neotoma floridanus*) and 4 opossums (*Didelphis virginiana*) from Baton Rouge

RODENT SURVEY OF NEW ORLEANS

Study done in May 2015– February 2017;
696 rats trapped, 265 infected = 38%, 36% in roof rats and 44% in Norway rats
Significant differences by neighborhood (low in French quarters, high in Bywater)
Average intensity of infection range from 3 to 42 lung worms per rat infected



meningitis.

HUMAN CASE IN LOUISIANA

In March 2006, a 22 year-old living in Lafourche Parish had

was hospitalized suspected of having meningitis for muscle,

neck and back aches and hypersensitivity to touch. The CSF

showed 304 WBC / μ L with 36% eosinophils, high protein

and low glucose. He was diagnosed as having eosinophilic

eaten, on a dare, two raw legs from a green tree frog. He