

Cryptococcus gattii

What is it?

- *C. gattii* is a fungus closely related to *C. neoformans*. It can infect animal and human pulmonary and central nervous systems.
- Until recently, *C. gattii* was only in certain subtropical and tropical environments. In 1999, it emerged on Vancouver Island, British Columbia (BC), Canada. Between 1999 and 2006, providers reported 176 cases in BC. *C. gattii* is found in native tree species on Vancouver Island and the surrounding soil and air, primarily from the east coast of the island. The lower BC mainland has also seen cases. The endemic area is now thought to extend along the Pacific Coast.
- Since 2006, providers report 1–9 human cases are each year, some with presumed in-state exposure.
- In the United States, 2004–2011, providers reported about 100 infections, nearly all in Washington or Oregon.

Clinical features

- The incubation period is long and variable. Symptoms can begin 2–14 months after exposure, with a median of 6–7 months.
- Cases may have pulmonary infiltrates, nodules or cavitory lesions. About 20% develop meningitis. A wide spectrum of illness from asymptomatic infection to respiratory failure is possible. Symptoms are nonspecific and include:
 - Fever and chills.
 - Shortness of breath.
 - Chest pain.
 - Neck pain/stiffness.
 - Cough.
 - Headache.
 - Decreased alertness.
- Most cases respond to antifungal medication. Consult an infectious disease specialist for treatment recommendations. Case-fatality rate is under 5%.

How does it spread?

- Inhaling *C. gattii* spores causes infection. It does not spread from animal to person or person to person.
- Disturbing the soil may increase the risk of infection.

Who is at risk?

- Unlike *C. neoformans* which primarily affects immunocompromised people, *C. gattii* usually causes disease in immunocompetent people.
- People over 60 years old, with underlying medical conditions or immune system compromise because of disease or medication may be at increased risk. Pediatric cases are rare.
- As risk is low even for people living in endemic areas, no special precautions or travel restrictions are in place.

How is it diagnosed?

- Suspect *C. gattii* in people with atypical pneumonia or fungal meningitis who live or travel where *C. gattii* is found.
- Cryptococcal infection may be diagnosed by microscopic examination or culture of tissue or body fluids such as blood, Cerebrospinal fluid (CSF) or sputum. Rapid antigen tests can use blood or CSF.
- **When Cryptococcus is in a respiratory specimen or CSF, do not assume it is *C. neoformans*. Order additional tests for speciation.**
- To differentiate *C. gattii* from the more common *C. neoformans*, culture the isolate on canavanine-glycine- bromothymol (CGB) agar.
- If your lab does not use CGB agar for all Cryptococcus isolates, consider adding this to your lab's protocol. You can also send isolates to the University of Washington Clinical Microbiology Lab for speciation.
- After consulting with the Health Department, submit isolates identified as *C. gattii* to Washington State Public Health Lab for genotyping.

Additional resource

Washington State Department of Health *C. gattii* webpage: doh.wa.gov/public-health-provider-resources/notifiable-conditions/cryptococcus-gattii

Report confirmed cases of *C. gattii* to the Health Department within 24 hours.

Disease Prevention & Management main line
(253) 649-1412, press 0

24-hour reporting line
(253) 649-1413

Confidential fax
(253) 649-1389