

Cryptococcal disease (*C. gattii*)

What is cryptococcal disease?

Cryptococcal disease, also known as cryptococcosis, is a fungal infection caused by the fungus *Cryptococcus neoformans* or *Cryptococcus gattii* (*C. gattii*). This document is about the disease caused by *C. gattii*.

Cryptococcus lives on trees and in the soil and releases spores in the air. Infection occurs when the spores are inhaled. Wild and domestic animals can sometimes get infected with *C. gattii* as well.

The infection itself is not spread from animals to humans or from humans to animals. People infected with *Cryptococcus* are not infectious to others.

What are the symptoms?

Most people who are exposed to the fungus may not become ill. In people who become ill, symptoms appear months after exposure and can last for several months.

Symptoms of cryptococcal infection can include:

- Prolonged cough lasting for weeks or months
- Shortness of breath
- Headaches
- Fever
- Vomiting
- Weight loss

If you experience any of these symptoms especially for long periods of time, talk to your health care provider. Your health care provider can request tests if you show symptoms, but tests will not be performed just to see if you have been exposed.

What is the risk of this disease?

Each year in B.C., 10 to 25 people become sick from *C. gattii*, and about 16 per cent die. Some people are at a slightly higher risk of cryptococcal disease including those who:

- Are 50 years of age or older
- Take medications that suppress their immune system
- Have a weakened immune system due to diseases such as human immunodeficiency virus (HIV), cancer, or have had organ transplants
- Have chronic lung disease
- Smoke

How is this disease diagnosed?

If you live or visit an area where *C. gattii* is found and you develop symptoms consistent with cryptococcal disease, see your health care provider. Your health care provider can test for *Cryptococcus* infection in a blood, lung or spinal fluid sample.

Is there a treatment available?

Yes. Treatment consists of 6 to 12 months of antifungal medications. In most cases the disease can be treated successfully.

Is there anything I can do to prevent this disease?

The fungus is present in the environment and there are no particular precautions that you can take to avoid exposure to *Cryptococcus*. However, you can be alert for long lasting or severe symptoms and consult your health care provider for early diagnosis and treatment. If you are a smoker, you can decrease your risk by quitting smoking.

There is no vaccine to prevent cryptococcal disease.

Where is this fungus found?

Cryptococcus is found naturally in the environment around the world.

C. gattii first appeared in British Columbia in 1999. In B.C., it has been found on the east coast of Vancouver Island and has occasionally been detected in the lower mainland or southeastern part of mainland B.C. It is unclear how *C. gattii* arrived in B.C. and other areas of the Pacific Northwest in the U.S.

Can I tell which trees contain the fungus?

No. You cannot tell which trees contain the fungus by looking at them. The fungus is tiny and cannot be seen with the naked eye. The trees that have the fungus growing on them do not look diseased. The fungus can only be identified by testing environmental samples in a laboratory.

Should trees in my neighbourhood be tested?

Testing of trees and soil has been done in a number of areas on Vancouver Island and in

the Vancouver Coastal and Fraser Health regions to help determine the general distribution of the fungus. It is not possible or even useful to test trees in specific neighbourhoods. The fungus could be present in an area even if some trees from that area test negative.

Is there anything I can do to protect my trees from the fungus?

No specific environmental measures against this type of fungus exist. There are no fungicides or other chemicals that can be applied to trees to protect them. Cutting down trees on private property is not recommended because it will not prevent exposure to the fungus.

Is it safe to live and travel on Vancouver Island and in the Vancouver Coastal and Fraser Health Regions?

Yes. The risk of contracting the disease is very low and in most cases the disease can be treated. The benefits of outdoor enjoyment far outweigh the risks of cryptococcal disease.



BC Centre for Disease Control
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