

Cryptococcal Disease (*C. gattii*)

What is cryptococcal disease?

Cryptococcosis is a fungal infection. The majority of infections in people are caused by *C. gattii* and *C. neoformans* species. In B.C., *Cryptococcus gattii* can be found living on trees and in the soil.

Infection spreads through the air when people breathe in fungal spores in areas where the species are found. Wild and domestic animals can sometimes be infected with *Cryptococcus* as well. However, the disease 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?

Symptoms of cryptococcal infection can include:

- headaches;
- fever;
- vomiting;
- weight loss;
- shortness of breath; and/or
- a cough lasting for weeks.

Symptoms appear months after exposure and can last for several months. In some cases, more severe infections in the lungs, brain or skin can develop. If you experience any of these symptoms especially for long periods of time, talk to your health care provider for advice and treatment. 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 *Cryptococcus 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 HIV, cancer, or have had organ transplants;
- have chronic lung disease; or
- smoke.

Fungal infections can affect anyone but are uncommon for most people without medical problems.

How is this disease diagnosed?

If you live or visit an area where *C. gattii* is found and you develop symptoms consistent with cryptococcosis, 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 can be taken 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 species are found naturally in the environment around the world.

In B.C., the *C. gattii* species of the fungus lives on trees and in the soil. It has been found on the east coast of Vancouver Island since at least 1999, and has occasionally been detected in the Vancouver Coastal and Fraser Health Regions. More recently, but to a lesser extent, it has also been found in the southeastern part of mainland B.C. It is unclear how *Cryptococcus 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 tree 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. All areas where the fungus has been found remain open to the public.

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An agency of the Provincial Health Services Authority