

Maple bark disease

What is maple bark disease?

Maple bark disease is a respiratory disease caused by exposure to a tree fungus called *Cryptostroma corticale*. This fungus infects broadleaf trees, particularly maples. When trees are infected, the fungus forms mats of black spores on the surface of the bark. In trees, this condition is called 'sooty bark disease', which refers to the sooty appearance of the spores. Many tree diseases cause similar black colouration of the bark, so laboratory diagnostics are required to confirm infection with *Cryptostroma corticale*.

Breathing in *Cryptostroma corticale* spores over weeks or months can cause maple bark disease in humans. This is a type of chronic inflammation of the airways and lungs, caused by an excessive immune response. Most people recover completely once they are no longer exposed to the spores.

Where can *Cryptostroma corticale* be found in British Columbia?

Sooty bark disease was previously found only in eastern North America but has now spread to trees in other parts of the world, including Washington state and British Columbia. *Cryptostroma corticale* was detected in British Columbia for the first time in the summer of 2022, when the Canadian Forest Service and British Columbia's Ministry of Forests discovered affected trees in urban areas of the greater Victoria and Vancouver regions.

Heat and drought-stressed trees are more vulnerable to *Cryptostroma corticale* infection. Due to changing climate patterns and British Columbia's recent experience with dry, hot summers, *Cryptostroma corticale* may continue to spread within the province.

Who is at risk of maple bark disease?

There is little to no risk of developing maple bark disease from casual exposure to *Cryptostroma corticale* spores by the public. For example, walking near an infected tree or being exposed to wind-blown spores from a more distant tree has never led to human illness.

Repeated, prolonged, chronic or ongoing exposures to large amounts of *Cryptostroma corticale* spores are associated with the greatest risk of developing maple bark disease. In fact, it has only been reported in people who have occupational or hobbyist exposures to trees and bark. Those who may be at increased risk include:

- Wood workers (such as wood milling, wood stripping, wood processing, paper manufacturing, construction)
- Logging workers and foresters
- Arborists
- Horticulturists
- Certain hobbyists (for example orchid enthusiasts who frequently work with tree bark)

Maple bark disease is not transmitted between people or animals.

What are the symptoms of maple bark disease?

Common symptoms include:

- Shortness of breath
- Coughing

Less common symptoms include:

- Chest tightness
- Fever

- Chills
- Weight loss
- Malaise

Most people experience mild symptoms similar to seasonal allergies that go away once exposure stops.

Prolonged exposure to large amounts of *Cryptostroma corticale* spores and untreated maple bark disease can lead to lung fibrosis and loss of lung function.

If you experience symptoms after prolonged exposure to trees with sooty bark disease, please consult a health care professional.

How is it diagnosed?

Your doctor may ask for detailed information about your history of exposure to trees and bark, such as your occupational history, living situation and hobbies. There is no test that definitively identifies maple bark disease so your exposure history is helpful to differentiate maple bark disease from other similar lung diseases.

What is the treatment?

In most cases, removing the exposure to *Cryptostroma corticale* leads to complete recovery. More serious cases may require medications and other treatments.

What can I do to prevent maple bark disease?

People who work with potentially infected trees should use personal protective equipment, such as:

- A half-face respirator with a good seal around the face
- Goggles
- Gloves
- Boots

- Overalls

If you believe you have a tree with sooty bark disease in your yard, it's recommended to:

- Contact an arborist or plant health specialist to confirm the tree is infected with *Cryptostroma corticale* and safely remove the tree
- Report the tree at the iNaturalist sooty bark page where it can be reviewed by experts at the Pacific Forestry Centre
www.inaturalist.org/projects/sooty-bark-disease

If you believe you have had prolonged exposure to *Cryptostroma corticale* and have compatible symptoms, please seek the advice of a health care professional.

For more information

- Government of Canada: Sooty Bark Disease
<https://natural-resources.canada.ca/forest-forestry/insects-disturbances/sooty-bark-disease>
- iNaturalist: Sooty Bark Disease
www.inaturalist.org/projects/sooty-bark-disease
- Washington State Department of Health: Maple Bark Disease
<https://doh.wa.gov/node/12614>
- Washington State University: Sooty Bark Disease
<https://treehealth.wsu.edu/sbd>
- Forest Pathology: Sooty-Bark Disease of Maple: Sooty Bark Disease
<https://forestpathology.org/canker/sooty-bark-maple>
- Pacific Northwest Pest Management Handbook: Maple (*Acer* spp.)-Sooty Bark Disease
<https://pnwhandbooks.org/plantdisease/host-disease/maple-acer-spp-sooty-bark-disease>

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