

# What You Need To Know About Blastomycosis

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Over the last few years, Blastomycosis dermatitidis (Blasto), an uncommon, environmentally acquired fungal disease, has made its presence known in McGregor Bay, Killarney and on Manitoulin Island. It has resulted in disease and the death of a few people and several animals.

**A rare and treatable disease, Blasto can easily be misdiagnosed and untreated, resulting in death.**

**IT IS OFTEN THE PATIENT'S KNOWLEDGE AND ACTIONS THAT RESULT IN ENSURING AN ACCURATE DIAGNOSIS AND APPROPRIATE TREATMENT.**

**WHAT IS BLASTOMYCOSIS?** Blastomycosis, nicknamed Blasto, is an uncommon disease which can occur after exposure to spores of the *Blastomyces dermatitidis* (*B. dermatitidis*) fungus. *B. dermatitidis* is found around the world but mainly in North America, with Lake of the Woods being the global hotspot. This fungus grows as a mould on rotting wood, acidic soil, sand, and in water (docks, beaver lodges, beaver dams).

## KEY POINTS

1. The disease can be successfully treated but **if people ignore their symptoms, procrastinate about seeing a physician, if treatment is delayed, or if Blasto goes undiagnosed and thus untreated, it can be fatal in both humans and animals.**
2. **The most important way to prevent serious disease and consequences is to know the symptoms and tell/teach your doc about Blasto.** It is rare so they don't all know about it.
3. **Symptoms most often appear 45 days** but can appear within 3 to 15 weeks after exposure.
4. **A Blasto infection can mimic a viral upper respiratory infection so if you are having symptoms, inform your physician that you spend time in an area where Blasto is endemic.** Symptoms include a persistent dry cough progressing to a productive cough, swollen glands, fever, night sweats, fatigue, lethargy, chills, body ache, shortness of breath. As the disease progresses, or if inoculation Blasto occurred, enlarging, raised skin lesions with ulcerating centres appear, loss of appetite, weight loss can occur. **It is possible to be infected without symptoms.** Evidence may be found when having a routine chest x-ray.
5. **When Blasto is mistakenly diagnosed as an upper respiratory infection, antibiotics may be given, which then increases the seriousness of the patient's condition.**

Antibiotics kill the good bacteria that fight Blasto and as a result, promote the hearty growth of Blasto.

**6. Blasto is nicknamed “the great mimicker” since it is sometimes misdiagnosed as cancer** by physicians with little or no experience with Blasto. Blasto can easily go unrecognized, especially by older physicians, or physicians practising in areas where it seldom occurs. People have had body parts removed unnecessarily with an incorrect cancer diagnosis.

**7. How are Humans and Animals Exposed to Blasto?** Infection often results from disturbing plant debris during activities such as gardening, working under your shed or cottage, working with rotted wood, beaver lodges, etc.

**a. The spores are released when it is damp, after a rain, for example and are inhaled.** Dry summers result in fewer cases of Blasto.

**b. Pets are frequently exposed to Blasto since their faces are close to the soil.** The above points also apply to pets.

**c. “Inoculation Blastomycosis”, although possible, is very rare.** It occurs when where the spores have been introduced through the skin from a scratch or puncture by an object, such as a stick, which had spores on it.

**d. You cannot “catch” Blasto from an animal or another person.**

**8. To reduce your risk:**

**a.** Keep your cottage and shed well ventilated underneath. Use caution when working under your cottage or shed where the damp conditions may favour *B. dermatitidis*. Spores are released after rain so risk of exposure will be even higher then. Digging in the soil, tearing out your old dock, and removing an inconvenient beaver lodge from your dock, are just a few activities where one might be exposed.

**b.** Consider taking steps which may protect you reducing your risk of exposure in these situations. An N95 mask may prevent inhaling the spores. Make sure you adjust it, as per the instructions, so there are no gaps. They are cheap and can be bought at Canadian Tire, for example, and should not be confused for a regular dust mask. It must say N95 on the package. N95 masks were used when SARS reared its ugly head.

**c.** It may help to wear gloves, long sleeves, pants, and proper footwear to avoid skin trauma while working in areas which may pose a risk. Certainly if you are removing a crib, dock or beaver lodge from the water, for example, you’d want to wear work boots and work gloves anyway, to prevent injuries that result in even more serious diseases for which you are more at risk than Blasto, such as tetanus and septicaemia, both of which can be fatal.

**9. You cannot eliminate Blasto from your property.**

**10. Who is at risk?** Each of us has a different tolerance to the spores. Many of us are exposed and will never contract the disease. The old, young and immunocompromised are more susceptible to becoming infected when exposed than are younger and healthy individuals.

**11. Let's Put this into Perspective.** Many activities we engage in at the cottage put us at greater risk than the risk we face of becoming infected with Blasto. Sustaining a fall on the rocks, using a chain saw while wearing your shorts and sandals, fighting fires while wearing flip flops and clothes made from synthetic fibres, swimming in lake water with an open skin lesion, and being an aging baby boomer in McGregor Bay where there may be no quick access to an Emergency Department, all present a far greater risk to us than Blasto.

**12. INFORMATION FOR PHYSICIANS** (with thanks to the following websites)

**Diagnosis:** Since symptoms can arise long after exposure, it is important when taking history to ask about possible exposure to B. dermatiditis during the past several months, and to test for it. Blastomycosis will not be identified through viral or bacterial testing; specific testing for fungal infection must be requested.

**Diagnostic testing is done by blood and urine testing, CT scans, chest x-rays, laboratory examination of fluid from the respiratory tract, tissue biopsy.**

<https://www.cdc.gov/fungal/diseases/blastomycosis/diagnosis.html>

**Guidance for laboratory testing in Ontario** can be found here by searching "fungal" in the [Public Health Laboratory Specimen Collection Guide](#).

**Treatment information can be found**

here <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2863359/> and

here <http://cid.oxfordjournals.org/content/46/12/1801.full.pdf+html>.

**A little more detail can be found at [www.mcgregorbayassociation.ca](http://www.mcgregorbayassociation.ca) under the Natural Hazards tab. Click on *What You Need To Know About Blastomycosis*.**

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