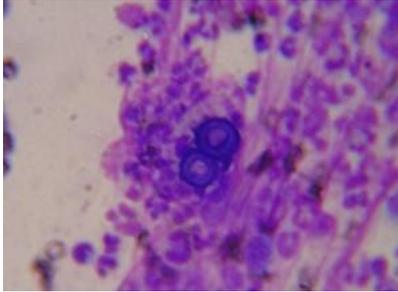


What You Need To Know About Blastomycosis

by Elizabeth Quinn



Blastomycosis dermatitidis, an uncommon, environmentally acquired fungal disease, made its presence known once again in our vacation paradise when two cottagers from McGregor Bay became ill with it. It's something we all want to learn about.

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. It is important that you know about Blasto and that you make sure you are assessed for it if you experience symptoms. A Blasto infection can mimic a viral upper respiratory infection so inform your physician that you spend time in an area where Blasto is endemic. It frequently goes unrecognized, especially by physicians in the city where it seldom occurs. As a result, it may not be diagnosed and the necessary curative medications may not be administered. American cottagers from the southern states are especially vulnerable to this happening.

If a Blasto infection goes undiagnosed, here's what can happen: Once the spores have been inhaled, they may grow in the lungs in the form of yeast. This primary infection is often treated as a bacterial pneumonia and antibiotics are often given. Antibiotics kill bacteria including the good bacteria our bodies need as part of our immune system's defense *against* yeast. Without these good bacteria to protect us, *B. dermatitidis* in its yeast form, thrives and flourishes. The lung infection worsens. Skin lesions may appear as a secondary infection. The yeast can continue to grow and affect all parts of the body. In addition, Blasto is nicknamed "the great mimicker" since it is sometimes misdiagnosed as cancer by physicians with little or no experience with Blasto. In the case mentioned above, he was given a diagnosis of "advanced lung cancer" which caused 3 weeks of anguish and uncertainty for him, his wife and his family.

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 younger and healthy individuals are.

HOW SERIOUS IS BLASTOMYCOSIS? The risk of getting this infection is very low. There are many fungi that are far more hazardous to us than *B. dermatitidis*. If an accurate diagnosis of Blasto is made, antifungal medications are given and the disease can be successfully treated.

If people ignore their symptoms, procrastinate about seeing a physician and treatment is delayed, or if Blasto goes undiagnosed and untreated, it can be fatal in both humans and animals.

HOW DOES ONE GET INFECTED? The fungus can only grow under quite specific conditions of humidity, temperature and nutrition and produce the infecting spores. The mould releases spores after it has been wetted. After a damp summer, this may be one reason why we are hearing about Blasto, many of us for the first time. Dry weather is not *B. dermatitidis* friendly.

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. Dogs, of course, are always sniffing and digging in the soil so are frequently exposed to Blasto.

There have been a few cases reported of "inoculation Blastomycosis", 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 however, this is very rare.

CAN I GET RID OF THIS FUNGUS FROM MY PROPERTY? No. The presence of *B. dermatitidis* is probable in soil that is rich in organic material and debris such as animal feces, plant fragments, insect remains and dust and where the substrate is moist, lacks exposure to direct sunlight and is acidic. There is no way to remove this matter, the fungus or the spores from your soil. It's like trying to remove mildew from your bathroom. The spores are always there, even if you can't see them. Given the right conditions, they will grow. It's like trying to eliminate all the ants on your island to get rid of your ant issues. It can't be done.

WHAT DOES IT LOOK LIKE? The texture is membranous and downy to woolly. The surface color is white to beige. Many fungi have this appearance and are not Blastomyces so if you see mould this on your woodpile or elsewhere, it may or may not be Blastomyces but it is best to exercise caution.

SO HOW DO I PROTECT MYSELF FROM GETTING BLASTO? The most important way to prevent serious disease and consequences is to *know the symptoms and tell your doc about Blasto*. This can't be emphasized enough. It's your best protection. 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.

Take steps to protect yourself by reducing your risk of exposure in these situations. Wear an N95 mask to help prevent inhaling the spores. Make sure you adjust it, as per the instructions, so there are no gaps. They 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.

The use of gloves, long sleeves, pants and proper footwear to avoid skin trauma should be worn 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 septicemia, both of which can be fatal.

Practising the above precautions may reduce your risk but it does not guarantee you will not be exposed or contract Blasto. You can work all day under your cottage, masked and covered up, and then as you sit on your deck, without your mask enjoying happy hour, your dog roots in the soil or your neighbour digs in her garden. Spores float by on the late afternoon breeze. In spite of your precautions, you've just been exposed.

Blasto is a common infection in dogs, cats and other animals. They may get infected through an open sore but mostly it's by inhaling the spores as they sniff and dig in the soil. Even if they are leashed and you are with them constantly, this is impossible to prevent.

CAN I GET IT FROM MY ANIMAL OR ANOTHER PERSON? No. The yeast form of *B. dermatitidis* occurs in the body while the mould form of this fungus occurs in our environment. Blasto is only caused by the spores released by the mould form of *B. dermatitidis*.

WHAT ARE THE SIGNS AND SYMPTOMS? Blasto symptoms mimic those of a common viral upper respiratory tract infection and dogs manifest Blasto in a similar way to humans.

Symptoms but may become evident in 3-15 weeks but most often appear 45 days after exposure, long after you've been back in the city. Blastomycosis may not come to mind unless you make a point to remember this information.

- 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 Blastomycosis occurred, enlarging, raised skin lesions with ulcerating centres appear, loss of appetite, weight loss

It is possible to be infected without symptoms. Evidence may be found when having a routine chest x-ray.

Protect yourself and your animal from unpleasant and serious consequences.

- Know the signs and symptoms of Blastomycosis.
- See a physician promptly if you experience symptoms.
- Inform your physician that you spend time in an area where *Blastomyces dermatitidis* exists.
- Use precautions to reduce your risk of exposure, as mentioned above.

HOW SIGNIFICANT IS MY RISK? Practising the above precautions may reduce your risk but it does not guarantee you will not be exposed or contact Blastomycosis.

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 Blastomycosis. Sustaining a fall on the rocks, using a chain saw while wearing your shorts and sandals, and swimming in lake water with an open skin lesion all present a far greater risk to us than Blastomycosis. Being an aging baby boomer in Georgian Bay, where there may be no quick access to an Emergency Department, puts you at even greater risk, but that's a whole other article!