



Blastomycosis

Disease Fact Sheet

What is blastomycosis?

Blastomycosis is an uncommon, but potentially deadly fungal infection caused by *Blastomyces dermatitidis*. It mainly affects the lungs and skin. People infected with *B. dermatitidis* may have no symptoms, while others may have symptoms that range from mild respiratory symptoms to a very serious illness affecting multiple organ systems.

How does a person develop blastomycosis?

Blastomycosis can develop when a person inhales spores of *B. dermatitidis* and the lungs become infected. In nature, the fungus can live in moist soil where decomposing plant matter (leaves, wood, etc.) is plentiful. The fungus grows and produces the infecting spores only under specific conditions of humidity, temperature, and nutrition. These conditions are commonly found near lakes and rivers in Wisconsin. The spores become airborne when the soil is disturbed during activities such as hunting, hiking, gardening, excavating, and brush clearing. Participating in these activities in areas that commonly have the spores can increase a person's risk of inhaling the spores and becoming ill. Blastomycosis cannot be transmitted from person to person or from animal to person.

Dogs can develop blastomycosis because they are low to the ground and dig in the soil, increasing their exposure to the fungus. Infected dogs cannot transmit the disease to humans, but can indicate an area is contaminated with the fungus.

What are the signs and symptoms of blastomycosis?

Only about half of the people infected with *B. dermatitidis* will develop symptoms. The symptoms of blastomycosis are influenza-like and may include fever, chills, cough, muscle aches, and pain in the joints, back, or chest. In very serious cases of blastomycosis, the fungus can spread to other parts of the body, such as the skin, joints, bones, organs, and central nervous system. People who smoke, have respiratory disease, or have conditions that weaken their immune system are at higher risk of developing illness.

How long does it take to develop blastomycosis?

The time between a person's fungus exposure and onset of symptoms is usually between 2 and 15 weeks.

How is blastomycosis diagnosed?

Blastomycosis symptoms of cough, fever, and body aches are similar to flu symptoms, making it easily misdiagnosed. The best way to diagnose the infection is to perform a fungal culture. The fungus may be found in sputum, skin, or infected tissue. A doctor may order a chest x-ray, CT, or MRI to look for possible infection. Blood or urine specimens may also be used for a screening test to determine if a person has had a blastomycosis infection, but these tests are not as reliable or accurate as the fungal culture.

How is blastomycosis treated?

Blastomycosis is treated with antifungal medicine. Usually several months of treatment are required. Itraconazole is commonly used for patients with mild to moderate illness. For people with severe illness, amphotericin B is often given. Antibiotics are used to treat bacterial infections, and are not effective for treating blastomycosis.

How common is blastomycosis?

Blastomycosis is an uncommon disease. In the United States, blastomycosis occurs along the Mississippi and Ohio River Valleys, in the Midwest and southeastern states. Although cases of blastomycosis have been reported from all areas in Wisconsin, it occurs more often in the northern, central and southeastern counties. Wisconsin averages 90-120 reported cases a year. Most cases of blastomycosis that occur are isolated events. Outbreaks or clusters of cases are rare. The actual area supporting growth of the spores may be small (a rotting log or a few yards of soil) and may only be infectious for a short time.

How can blastomycosis be prevented?

It is difficult to identify *B. dermatitidis* in the environment. Until more is known about the existence of *B. dermatitidis* in nature, it cannot be successfully controlled and tested for in the environment. Avoiding activities that cause the disruption of soil, brush, or leaf litter will reduce a person's risk of illness. The best way to prevent severe disease from blastomycosis is to seek medical care when experiencing any of the symptoms listed above, especially if you live in an area where the fungus is common.