

Blastomycosis and Ringworm: there may be a fungus among us!

Blastomycosis is a systemic fungal infection that is caused by *Blastomyces dermatitidis*. Dogs appear to be the most susceptible to this disease, although cases have been reported in people and cats.

How are animals and people infected?

Fungal spores are most commonly found in wet, sandy, acidic soils rich in organic matter. Many reported cases in North America have been near the Ohio and Mississippi River valleys. Infection occurs when spores are inhaled into the lungs. After spores are inhaled, they reproduce and spread throughout the body to involve many organs, including eyes, bones, skin, lymph nodes, brain and testes.

What are the signs of blastomycosis?

Signs of blastomycosis depend on what organs are affected. Some common signs are coughing, difficulty breathing, eye inflammation, fever, lack of appetite, draining skin lesions and enlarged lymph nodes.

How is blastomycosis diagnosed?

Tissue and/or fluid samples containing the *Blastomyces* organism conclusively diagnose the disease. Sources may include draining fluid from an open wound, sputum from a coughing dog or aspirate from a nodule or lymph node. Other tests that can be helpful in determining diagnosis are blood tests, radiographs and urinalysis.

What is the treatment?

Treatment involves administering antifungal medications, the most common being itraconazole (Sporonox). In more severe cases, intravenous fluids, oxygen and pain medication may also be necessary. Some patients require several months of therapy to successfully treat this disease and even then, relapses are not uncommon. Sadly, many severe cases of blastomycosis are unlikely to survive.

How can I protect myself and my pet?

Protection and prevention can be challenging since soil or water areas that may harbor the organism may be near your home or workplace. Studies have shown that infected animals rarely pose a threat to people, because once the organism is inside the body it takes on a different form that is not considered contagious. However, use of protective clothing (gloves) and thorough hand washing should follow any contact with an infected animal. Children, elderly people and people with decreased immune capacity may be at a greater risk so it is advised if your animal is infected, consult with your physician.

Ringworm is not a worm - it is a fungus. Its name comes from the red, raised, ring-like lesion it causes on the skin. Typically, this fungus affects the superficial layers of the skin, hair and nails.

How are animals and people infected?

This fungus is spread through direct skin contact with spores. Infected animals are continuously dropping spore-covered hairs and skin cells into the environment. Children and people/pets with immune problems are most susceptible.

What are the signs of ringworm?

The most commonly seen signs are red, circular lesions with scaly patches (often on the head, ears, tail and feet), broken and brittle hair, and partial or patchy hair loss.

How is ringworm diagnosed?

There are several ways to diagnose ringworm: identification of typical ringworm lesions on the skin, some species of this fungus fluoresce when put under an ultraviolet or Wood's lamp, and hair or skin samples are taken and put onto a culture media and left to incubate for 3-4 weeks.

What is the treatment?

There are several ways to treat ringworm, which can include topical and/or systemic therapies. Topical treatment is often in the form of creams or lotions, such as Ketoconazole or Miconazole, applied to the affected areas. Gloves should be worn by the person administering treatment. Systemic treatment is usually oral anti-fungal medication, such as Itraconazole (Sporonox) or Griseofulvin. In some cases, another oral flea medication called lufenuron (Program) can be effective against ringworm. Treatment can also include cleaning and disinfecting the environment. Vacuum cleaning carpets daily and surface cleaning with diluted bleach can be helpful in eliminating ringworm.

How can I protect myself and my pet?

Minimize exposure by avoiding contact with infected pets. Wear protective clothing and wash hands frequently if contact is necessary. Ringworm is not a life-threatening disease but it can be difficult to completely get rid of. If you notice red, ring-shaped lesions on your skin, seek medical attention from your physician.