

UW Health: Warns of toxic fungal infection that causes serious respiratory illness in Wisconsin

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As people take to the woods for the gun deer hunting season this weekend, there is a serious respiratory illness to be vigilant about – and it's not COVID-19.

Blastomycosis is a dangerous respiratory virus that develops when a person breathes in the airborne spores of *Blastomyces dermatitidis*.

It can infect humans and animals, including dogs. This toxic fungus is present in the Great Lakes states and the Mississippi and Ohio River valley areas, but it is uniquely endemic in Wisconsin, especially in northern parts of the state, according to Dr. Bruce Klein, pediatric infectious disease physician, UW Health Kids, professor of pediatrics, University of Wisconsin School of Medicine and Public Health.

“Wisconsin sees among the highest rates of blastomycosis in the United States,” Klein said. “The fungus grows in damp acidic soils, particularly along river and stream banks, among leaves, pine needles and decaying wood.”

Wisconsin's annual blastomycosis rates range from 10 to 40 cases per 100,000, and is particularly present in northern counties of the state, while only approximately 1 or 2 cases per 100,000 are reported annually in other states where blastomycosis is present, according to the [Centers for Disease Control and Prevention](#).

With flu season ramping up and the COVID-19 virus still infecting hundreds of people across the state each day, Wisconsinites who spend time outdoors should

be aware of this respiratory illness as well, especially because it is treatable, Klein said.

“Some people experience only mild flu-like symptoms such as fever and cough, but others may develop pneumonia, and some may die if the fungus colonizes and overwhelms the lungs in the absence of treatment,” Klein said. “There is no vaccine to prevent blastomycosis and symptoms usually appear between three weeks and three months after a person breathes the fungal spores.”

If a person has symptoms, they will be needed to be seen by a doctor and treated with antifungal medication, according to Klein.

The fungus is hard to avoid because it is so common in the environment, but people with weakened immune systems might want to avoid activities that involve disrupting soil in these areas, he said.

Klein has been studying blastomycosis for nearly 40 years. His early investigations in the 1980s led Wisconsin to become the first state in which blastomycosis was named a Category 2 legally required, reportable disease; a change that greatly facilitated future outbreak monitoring, Klein said.

Klein and his research team’s work on an outbreak in Marathon County in 2009-10 discovered that people of Hmong ethnicity are genetically more susceptible to blastomycosis. Klein’s research team is currently investigating a range of genetic factors that may make some people more susceptible to the disease.

“The findings of this research can benefit all Wisconsin residents,” Klein said, “All those who spend time outdoors, possibly encountering *Blastomyces dermatitidis* spores as they hike, canoe, camp, hunt or just walk along riverbanks.”